Cancelled

Title: COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR

Document number: JAXA-QTS-2000D

Cancellation date: 15 March 2021

JAXA

JAPAN AEROSPACE EXPLORATION AGENCY

		r 2020		Parts Speci	fication	Registration No. 1150-				
NOTICE OF CHANGE COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR										
Page	Paragraph	Line		Change de	escription		Rationale for			
F-11	F.3.6.2		g) Namo assuran h) Namo registero	Betore e and seal of quality ice manager e and seal of ed inspector	Afte g) Name of qua assurance mai h) Name of reg inspector	er ality nager jistered	change The seal			
F-11	F.3.6.4		j) Name assuran k) Name register	and seal of quality ace manager e and seal of ed inspector	g) Name of qua assurance mai h) Name of reg inspector	ality nager jistered	requirement is deleted for duplicate information.			
F-12	F.3.6.5		h) Name seal of e manage	e, department and quality assurance er	h) Name and d of quality assu manager	lepartment rance				
F-27 F	Format F-15		Omitted		As shown in At	tachment 1.	The seal requirement is			
F-28 F	Format F-16	ormat F-16 C			As shown in At	tachment 2.	deleted because electronic			
F-30 F	-30 Format F-17			l	As shown in At	tachment 3.	approval replaces			
F-32 F	Format F-20		Omitted		As shown in At	tachment 4.	party (reviewer, judge, development officer, Chief witness, and assistant witness)			
F-37 F	Format F-25		Omitted		As shown in At	tachment 5.	The seal			
F-38 F	Format F-26		Omitted		As shown in At	tachment 6.	deleted for			
F-39 F	Format F-27		Omitted		As shown in At	tachment 7.	information.			

JAXA-QTS-20 Notice 2 2 October 20	000D 020	JAXA Parts Specification	Registration No. 1150-2
Attachment 1 Review comment	s and judgr	nent:	
Review comments	Example: As a result assurance at a minimu Reviewed b	of a review of items such as developrogram, the quality assurance pro um, the application is considered to py:	opment tests, the quality ogram plan and organization, o satisfy all requirements.
Judgment	Example: Application Judged by:	No (issued on dd,	/mm/yyyy) is judged appropriate.
The application is a	approved as	follows.	
Certification nu	umber	Approval date(dd/mm/yyyy)	President's seal for approval
Format F-15			

JAXA-QTS-2000D Notice 2 2 October 2020			JAXA Parts Specification				Registration No. 1150-2						
At	ttachment 2												
	CORRELATION TABLE BETWEEN QUALIFICATION TEST ITEMS AND DEVELOPMENT TEST ITEMS												
			Qualificatio	n te	st item			Develop	ment test item				
	Croup	Test	Testitem		Requirement	Test method	Crow	Test	Test method				
	Group	order	Test item		paragraph	paragraph	Grou	order	paragraph				
	Α	1											
		2											
		3											
		4											

tests and it

Format F-16

ttachment 3						
	RE	PORT OF DEV	ELOPM	ENT TES	т	
. Summary of developme	ent test	S				
Product(s)	Pa	art number	Prod	uction site	e(s)	Contact information
Title and document num applicable specification standard	ber of and	f Qualification covera		Approval age Implemen Develc		proval number of the elementation Plan for Development Test
Test site					Deve	lopment officer
Test period						

JAXA-QTS-2000D Notice 2 2 October 2020	JAXA Parts Specification	Registration No. 1150-
achment 4		
Review comments and judgme	nt:	
Review comments by witness of qualification test results	on	
	This application is consider	ed appropriate.
Overall review comments by th witness	e Chief witness:	
	Assistant witness:	
Judgment	Example: Application No appropriate.	(dd/mm/yyyy) is judged
	Judged by:	
The application is approved.		
Certification number	Approval date (dd/mm/yyyy)	President's seal for approval
Certification number of	Date of the last certification	
	(33/11/1/33/33/)	

JAXA-QTS-2000D Notice 2 2 October 2020	JAXA Parts Specification	Registration No. 1150-2
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Attachment 5

Product(s)			Part num	nber		(QML r	manufacturer
Detail specifica	tion	Qu	alification	coverage			Produ	uction site(s)
	3300)							
Manufacturing con	ditions							
Current certification no. (dd/mm/yyyy	on /)			Nam assura	e of qualit nce mana	y ger		
Effective period of current certification				Name of regis inspector		red		
Product	Pa	t number	Quant delivered	ity of products	Cus	tomer	r	Remarks

	JAXA-Q ⁻ Not 2 Octob	TS-2000 ice 2 oer 2020)D)	F	J Parts S	AXA pecifica	ation	Re	gistratior	ו No. 1150-2
At	tachment 6									
		REPOF	RT OF	QUALITY C	ONFO	RMAN	CE INSPE	ECTION S	STATUS	
	Product	.(s)				Detai	l specificat number	ion		
	Part num	nber				Ma c	nufacturing onditions	g		
	Lot num (production	ber ı date)				Insp	ection peri	od		
	Name of q assurance m	uality nanager				Name i	e of registe nspector	red		
	Inspection	Criteri	a for	Sample size	No) of	Test res	ults		Judament
	item	pass	/fail	number)	defe	ctives	Max.	Min.	Avg.	

JAXA-QTS-2000D Notice 2 2 October 2020	J Parts S	AXA pecification	Registration No. 1150-2
Attachment 7			
REPORT OF	QUALITY ASSU	JRANCE PROGRA	AM UPDATE
Product(s)	Part n	number	QML manufacturer
Title and document number of o	letail specification	Pro	duction site(s)
Document number and established date of Quality Assurance Program Plan			
Period covered			
Name and department of quality assurance manager			
	Description	of change(s)	
Document number La	st update date	Updated conter	nts Impact(s) on Quality Assurance Program Plan
Format F-27		8	

JAXA-QTS-2000D	
Notice 1	
6 September 2019	

JAXA Parts Specification

NOTICE OF CHANGE

COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR

1 dig Line Before After change 6 3.4.1.1 End of line Not available In the case of withdrawal of the application after submission and before starting the qualification test, the applicant shall submit Notice of Qualification Test Termination (Format F-13). Added the requirement regarding withdrawal of application. 10 3.4.4 1 send a QML Certificate to Added the Certificate format F-30) to 14 6.1 End of line Not available The applicable specification shall be revised in the following cases; a) A notice of change contains 10 or more pages or the 10 th issue of notices of change for a revision of the specification has become necessary. Added the requirement for revising applicable specification is cancelled on the revision date, the validated period shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/ managements are obsolete and difficult to apply. Added the requirement for cancelling applicable specification for the following reasons; a) the requirement of the requirement for cancelling applicable specification for the applicable specification for the applicable specification for the applicable specification for the applicable specification is cancelled without being revised, the cancelled date shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirement for the applicable specification for the applicable specification for the applicable specification for t	Page	Paragraph	Line		Change description	Rationale for
6 3.4.1.1 End of line Not available In the case of withdrawal of the application after submission and before starting the qualification frequirement regarding withdrawal of qualification Test Termination (Format F-13). Added the requirement regarding withdrawal of application. 10 3.4.4 1 send a QML Certificate (Format F-30) to Added the certificate format F-13). 10 3.4.4 1 send a QML Certificate (Format F-30) to Added the Certificate format to 14 6.1 End of line Not available The applicable specification shall be revised in the following cases; a) A notice of change contains 10 or more pages or the 10 th issue of notices of change for a revision of the specification has become necessary. Added the requirement for revising applicable specification is not cancelled on the applicable specification is not cancelled on the revision date, the validated period shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established. Added the requirement for cancelling applicable specification shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established.	i ugo	i alagiaph	LINC	Before	After	change
10 3.4.4 1 send a QML Certificate to send a QML Certificate (Format F-30) to Added the Certificate format 14 6.1 End of line Not available The applicable specification shall be revised in the following cases; a) A notice of change contains 10 or more pages or the 10 th issue of notices of change for a revision of the specification has become necessary. b) The modifications to the applicable specification extend to 50% or more. Added the requirement for revising applicable documents 15 6.3 End of line Not available When the previous revision of the applicable specification is not cancelled on the revision date, the validated period shall be clearly stipulated on the cover page of the revised specification. When the specification is cancelled without being revised, the cancelled date shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancell the applicable specification for the following reasons; a) the requirements of the technologies/ managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established. Added the	6	3.4.1.1	End of line	Not available	In the case of withdrawal of the application after submission and before starting the qualification test, the applicant shall submit Notice of Qualification Test Termination (Format F-13).	Added the requirement regarding withdrawal of application.
146.1End of lineNot availableThe applicable specification shall be revised in the following cases; a) A notice of change contains 10 or more pages or the 10 th issue of notices of change for a revision of the specification has become necessary. b) The modifications to the applicable specification extend to 50% or more.Added the requirement for revising applicable documents156.3End of lineNot availableWhen the previous revision of the applicable specification is not cancelled on the revised specification. When the specification is cancelled without being revised, the cancelled date shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/ managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established.Added the	10	3.4.4	1	send a QML Certificate to	send a QML Certificate (Format F-30) to	Added the Certificate format
 15 6.3 End of line Not available When the previous revision of the applicable specification is not cancelled on the revision date, the validated period shall be clearly stipulated on the cover page of the revised specification. When the specification is cancelled without being revised, the cancelled date shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established. 	14	6.1	End of line	Not available	 The applicable specification shall be revised in the following cases; a) A notice of change contains 10 or more pages or the 10th issue of notices of change for a revision of the specification has become necessary. b) The modifications to the applicable specification extend to 50% or more. 	Added the requirement for revising applicable documents
c) the intended purpose has been achieved. d) JAXA concluded that the specification should be cancelled.	15	6.3	End of line	Not available	 When the previous revision of the applicable specification is not cancelled on the revision date, the validated period shall be clearly stipulated on the cover page of the revised specification. When the specification is cancelled without being revised, the cancelled date shall be clearly stipulated on the notice of change. JAXA will stop the issue of or cancel the applicable specification for the following reasons; a) the requirements of the technologies/ managements are obsolete and difficult to apply. b) the replacement for the applicable specification has been established. c) the intended purpose has been achieved. d) JAXA concluded that the specification should be cancelled. 	Added the requirement for cancelling applicable specification

JAXA-QTS-2000D Notice 1 6 September 2019 JAXA Parts Specification

Daga	Deregraph	Line	Change description		Rationale for
гаус	Falaylapli	LINE	Before	After	change
F-25	Format F-13		Omitted	As shown in Attachment 1.	Changed format
F-42	Format F-30		Omitted	As shown in Attachment 2.	Added new format
All forms	Name of era on submission date, etc.		Heisei	Date shall be written in either Christian era or Japanese era (Reiwa) (Note this change only affects format written in Japanese)	Addressed change of era

JAXA-QTS-2000D Notice 1	JAXA Parts Specification	Registration No. 1150-1						
6 September 2019	•							
Attachment 1								
NOTICE OF QUALIFICA	NOTICE OF QUALIFICATION TEST TERMINATION / APPLICATION WITHDRAWAL							
		Document No.						
		Date:						
(President's name)								
Japan Aerospace Explora	ation Agency							
	,	Applicant						
	Address: Company	seal						
	Representative:	seal						
	Telephone numbe	er:						
I am submitting this form t	to notify (termination of the Qualific	cation tests /						
withdrawal of Qualification	test application) ⁽¹⁾ due to the follo	wing reason.						
1. Product(s):								
2 Part number:								
3 Manufacturer:								
J. Manuacurer.	Qualification Tast Application: IA							
	(Date of Apprication) (Date of Approval)	d/mm/www) (If applicable)						
5 Reason for terminatic	(u	attached if necessary):						
J. Reason for terminatio	ni/williorawal (Exila page call be a	allacheu il necessary).						
6. Test report (for termin	hation of the test) (Extra page can	be attached if necessary):						
$N_{\rm refr}^{(1)}$ Or $r_{\rm ref}^{(1)}$								
	necessary words within the parently	TESIS.						
Format E 13								
1 UIIIIal F-13								
	2							

Notice 1 6 September 2019	JAXA Parts Specification	Registration No. 1150-1
		Attachmen
(Certified person's name)	D D	ocument No. ate:
Company name	(President President Japan Aei	's name) rospace Exploration Agency
	CERTIFICATE	
This is to certify that th JAXA-qualified part base Space Use (Articles 15-42	e parts (or part family) below s d on Qualification Provision for ?).	satisfied the standards as a Common Parts/Materials for
1. QML Manufacturer:	XXX Corporation	
 QML Manufacturer: Manufacture site: 	XXX Corporation XXX Corporation located at 2-1-	1 XX City, XXX #####
 QML Manufacturer: Manufacture site: Applicable specificati Resistors, General S Resistors, Chip, Fixe (JAXA-QTS-2050/E3) 	XXX Corporation XXX Corporation located at 2-1- ons for qualified part name and pa pecification for (JAXA-QTS-2050; d, Film, High Reliability, Space Us 301B; Established in dd/mm/yy)	1 XX City, XXX ##### art number: Established in dd/mm/yy) se, Detail Specification For
 QML Manufacturer: Manufacture site: Applicable specificati Resistors, General S Resistors, Chip, Fixe (JAXA-QTS-2050/E3 Quality Assurance Pr XX Quality Assurance document #: 01-01 (r 	XXX Corporation XXX Corporation located at 2-1- ons for qualified part name and pa pecification for (JAXA-QTS-2050; d, Film, High Reliability, Space Us 801B; Established in dd/mm/yy) ogram Plan (manufacture condition e Program Plan for Space Use Re evision #)	1 XX City, XXX ##### art number: Established in dd/mm/yy) se, Detail Specification For ons): Manufactured based on esistors, XXX Corporation
 QML Manufacturer: Manufacture site: Applicable specificati Resistors, General S Resistors, Chip, Fixe (JAXA-QTS-2050/E3 Quality Assurance Pr XX Quality Assurance document #: 01-01 (r Qualification Number 	XXX Corporation XXX Corporation located at 2-1- ons for qualified part name and pa pecification for (JAXA-QTS-2050; d, Film, High Reliability, Space Us 801B; Established in dd/mm/yy) ogram Plan (manufacture condition e Program Plan for Space Use Re evision #) : YYYYY	1 XX City, XXX ##### art number: Established in dd/mm/yy) se, Detail Specification For ons): Manufactured based on esistors, XXX Corporation
 QML Manufacturer: Manufacture site: Applicable specificati Resistors, General S Resistors, Chip, Fixe (JAXA-QTS-2050/E3 Quality Assurance Pr XX Quality Assurance document #: 01-01 (r Qualification Number Qualification date: c 	XXX Corporation XXX Corporation located at 2-1- ons for qualified part name and pa pecification for (JAXA-QTS-2050; d, Film, High Reliability, Space Us 301B; Established in dd/mm/yy) ogram Plan (manufacture condition e Program Plan for Space Use Re evision #) : YYYYY	1 XX City, XXX ##### art number: Established in dd/mm/yy) se, Detail Specification For ons): Manufactured based on esistors, XXX Corporation

Registration No. 1150

JAXA-QTS-2000D 7 July 2016

Superseding JAXA-QTS-2000C Cancelled 7 July 2016

COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR

JAXA JAPAN AEROSPACE EXPLORATION AGENCY This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

The release date of the English version of this specification: June 1, 2021

JAXA-QTS-2000D 7 July 2016			J A X A Parts Specification	Page	— i —		
	Revision Record						
Rev.	Date		Major changes				
NC	3 Dec. 1999	Original					
А	31 Mar. 2003	Revised for tra	ansition to the QML certification sy	stem.			
В	31 Mar. 2004	Revised for im • Clarified the • Clarified the inspection. • Added provis to the QML ce	Revised for improvements. • Clarified the definition of "failure." • Clarified the definitions of Groups A, B and C of the quality conformance nspection. • Added provisions required for transition from the QPL certification system to the QML certification system.				
С	2 Oct. 2006	Incorporated of QTS-2000B. M • Paragraph 3 • Paragraph 3 parts. • Appendix A, numbers. • Appendix E, Application for • Figure E-2: O • Appendix G, for Application • Appendix K, items. Paragraph K.3 to scheduled r	orporated changes contained in Notices of Change 1 and 2 of JAXA- S-2000B. Major additions and modifications are as follows. aragraph 3.2.2: Modified to allow JAXA to prepare detail specifications. aragraph 3.4.1.10: Added a certification requirement on JAXA-developed ts. ppendix A, Paragraph A.3.1.4: Changed "NASDA" to "JAXA" in part mbers. ppendix E, Paragraph E.5.3.4: Clarified the provision for review of the plication for Certification Retention. igure E-2: Clarified the flowchart for initial certification. ppendix G, Section G.3: Added a provision on issuing Notice of Change Application Data Sheet. ppendix K, Paragraph K.3.5.1.5: Added material changes to the review ms.				
D Reflected Change Notices 1 through 3 of JAXA-QTS-2000C in to text. • Reflected Change Notices 1 through 3 of JAXA-QTS-2000C in to text. • Replaced "Common parts/materials" with "Qualified parts" in the text after certification. • Appendix C: Deleted the reference paragraph number of ISO9001. • Paragraph 1.3: Defined "Certification" and "Qualified parts". • Paragraph 1.4: Defined "Obligation of JAXA" and "Responsibility and obligation of the QML manufacturer". • Paragraph 1.5: Reviewed the following definitions. I) Registered inspector r) QML manufacturer v) Quality assurance manager • Paragraph 1.5: Added the following definitions. z) Anomaly aa) manufacturer				to text. e text after 01. y and			

JAXA-QTS-2000D 7 July 2016

Rev.	Date	Maior changes
D	7 July 2016	 Paragraphs 3.3.3 and C.4.2: Deleted the definition of quality assurance manager since it is defined in paragraph 1.5 Terms and Definitions. Paragraph 3.3.4: Deleted the definition of registered inspector since it is defined in paragraph 1.5 Terms and Definitions. Paragraph 3.3.5: Clarified that QML manufacturer does not just submit TRB status report but JAXA will review the activity status, and added that JAXA will notify the QML manufacturer the review results and that this is a part of the review for retention of certification. Paragraph 3.3.6: Modified the expression using the word "qualification" defined in JMR-004 "Reliability program standards" and JMR-005 "Quality assurance program standards". Paragraph 3.4.1.2 and 3.4.2: Deleted the description of audit since it is defined in paragraph 3.3.6 and instead, listed the paragraph number to be referred. Paragraph 3.4.1.2: Clarified that the QML manufacturer may start its production of the sample for qualification test upon approval of the qualification test application. Paragraph 3.4.2.1: Clarified the target period of the TRB Status Report accompanied with application for retention of certification. Paragraph 3.4.5: Modified the de-certification conditions to be consistent with JAXA regulations. Clarified that JAXA informs QML manufacturer of its de-certification with the request for return of the QML certificate. Paragraph 3.4.6: Added paragraph describing consolidating of the effective period of the certification if the manufacturer have more than one qualified parts. Paragraph 3.4.7: Added paragraph describing consolidating of the effective and the stopsige. Paragraph 3.4.6: Clarified that JAXA could stop shipment on the products of QML manufacturer in case of nonconformance. Also clarified the conditions to bu conditions to lift the stop shipment and disposition of the products in the storage. Paragraph A.3.2.2: Corrected error from paragraph 3.4 t

JAXA-QTS-2000D 7 July 2016

Rev. Date	Major changes
D 7 July 2016	 Paragraph C.4.11.1: Removed the facility for analysis from the change list to be determined due to the facility for analysis not directly associated with production and shipment of qualified parts. Paragraph C.5.1 b) Changed the time to review quality assurance program plan from "at the time of certification" to "after application for certification is submitted". Paragraph D.3: Modified role and responsibility of the Quality Assurance Manager. Paragraph D.4: Modified role and responsibility of the registered inspector. Paragraph D.5: Modified qualification and selection criteria for registered inspector. Paragraph D.7: Deleted paragraph D.7 due to the contents herein included in role and responsibility of registered inspector. Paragraph E.5.3.4 a) Clarified that JAXA reviews the application and supporting documents. Paragraphs F.3.5.1, F.3.6.1, Formats F-14, and F-24: Modified to clarify that JAXA does not certify an individual part but the capability of the manufacturer. Formats F-14 and F-24: Added a sentence clarifying that the applicant will agree to be bound by the obligation specified in paragraph 1.4 at the application. Paragraph K.3.2.2 (), e), f): Added to clarify that TRB's responsibility includes planning phase of failure analysis, corrective action, and changes to tests and inspections. Paragraph K.3.6.2: Added a provision in which QML manufacturer can be exempt from submitting TRB status report in the case of no production of qualified parts. Paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "paragraph K.3.6.3 b), c): Added reference paragraphs "paragraph C.4.9" and "pa

JAXA-QTS-2000D	J A X A Parts Specification	Page	— iv —			
7 July 2018	Faits Specification					
Contents						
1. GENERAL			1			
1.1 Objective			1			
1.2 Scope			1			
1.3 Certification and Qualifi	ed Parts		1			
1.3.1 Certification			1			
1.3.2 Qualified Parts			1			
1.4 Obligations			1			
1.4.1 Obligations of JAX	Α		1			
1.4.2 Responsibilities an	d Obligations of QML manufacture	r	2			
1.5 Terms and Definitions .			2			
1.6 Classification of Qualified	ed Parts		4			
2. APPLICABLE DOCUMENT	S		4			
2.1 Applicable Documents.			4			
2.2 Order of Precedence			4			
3. REQUIREMENTS			4			
3.1 General Requirements			4			
3.2 Detail Requirements			5			
3.2.1 Requirements for E	Each Product Type		5			
3.2.2 Detail Requiremen	ts		5			
3.3 Requirements for a Qua	ality Assurance Program		5			
3.3.1 Establishment of a	Quality Assurance Program		5			
3.3.2 Quality Assurance	Program Plan		5			
3.3.3 Quality Assurance	Manager		5			
3.3.4 Registered Inspect	or		5			
3.3.5 TRB			5			
3.3.6 Audit of the Quality	Assurance Program		6			
3.4 QML Certification Requ	lirements		6			
3.4.1 Initial Qualification			6			
3.4.2 Retention of Qualif	ication		9			
3.4.3 Regualification						
3.4.4 QML Certificate						
3.4.5 De-Certification						
3.4.6 Stop Shipment of t	he Qualified Parts					
3.4.7 Arranging the Cert	ification Periods					
3.5 Part Number and Marki	ing					
3.5.1 Part Number						
3.5.2 Marking						
3.6 Nonconformance						
3 6 1 Failure Analysis			12			
3.6.2 Emergency Notific	ation					
3 6 3 Catastrophic Failure						
4. QUALITY ASSURANCE PR	ROVISIONS					
4.1 Implementation of the (Quality Assurance Program					
4.2 Change Control for the	Quality Assurance Program		12			

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- v -			
7 July 2016 4.3 Requirements for Tests 4.3.1 Qualification Test 4.3.2 In-Process Inspecti 4.3.3 Quality Conformand 4.3.4 Products Stored for 4.4 Changes to Tests and In 5. PREPARATION FOR DELIN 6. CONTROL OF APPLICABLE 6.1 Establishment and Revi 6.2 Changes	Parts Specification and Inspections on ce Inspection Long-Term Inspections /ERY E SPECIFICATIONS sion of Detail Specifications ble Specification	Page	- v - 			
Appendix A Preparation of Applicable Specifi Appendix B This appendix has been cancelle Appendix C Requirements for Quality Assura	cations d. nce Program					
Appendix D Quality Assurance Manager and	Registered Inspector					
Appendix E Certification Procedures						
Appendix F Application Form and Procedures	S					
Appendix G Preparation of Application Data Sheet						
Appendix H Supplementary Requirements for Tests and Inspections						
Appendix J This appendix has been cancelle	d.					
Appendix K TRB Guidelines						

JAXA-QTS-2000D	JAXA	Daga	, di
7 July 2016	Parts Specification	Page	- vi -
Appendix 7			
Procedure after Revision of OTS	2000		
	-2000		

-

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 1 -			
	COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR						
1. (GENERAL						
1.1	Objective The purpose of this specification is to define the general, certification and quality assurance requirements for parts and materials which are frequently used (hereinafter referred to as "common parts/materials") for electronic equipment installed on space systems.						
1.2	1.2 Scope This specification is applicable for preparation and maintenance of documents related to certification, quality assurance and applicable specifications of common parts/materials, of which reliability and quality shall be controlled by the Japan Aerospace Exploration Agency (herein after referred to as "JAXA").						
1.3	Certification and Qualified	Parts					
1.3.1	Certification Certification is that JAX such common parts/ma specified in the applicat quality control and the c parts/materials.	A recognizes that a manufacturer terials which satisfy the reliability a ble specifications by confirming the qualification test results using a sa	has the capability and quality requir conditions of pro mple of common	y of supplying ements oduction and			
1.3.2	Qualified Parts Qualified parts are the o assurance provisions sp certified QML manufact	common parts/materials which will pecified in applicable specifications urer.	be supplied unde s which are fulfille	er the quality ed by the			
1.4	Obligations						
1.4.1	 Obligations of JAXA a) JAXA establishes and requirements of quations b) JAXA determines we and a sample are control and decides whether certification. c) JAXA reviews the quation of the second decide, and control and control and control and provide the second of the second decide of the	nd maintains the applicable specifi lity, tests and inspections for quali hether the qualification test results onformance to the requirements of r to certify the manufacturer based uality control system of the QML n firms that the system is maintained causes of anomaly and nonconfor vides the technical supports such	ications as well a ification therein. s using quality co the applicable s d on its application nanufacturer perion d. mance of the qua as quality evalua	s defining the ntrol system pecifications, on for odically and alified parts tion.			

	JAX/ 7	A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 2 -			
	 e) JAXA issues "Shinraisei Gijutsu Jouhou" (Reliability Technical Alert Information) when anomaly or nonconformance of the qualified parts which are considered pervasive is found, and notifies all relevant parties. f) JAXA verifies the measures proposed by the manufacturer, and corrective actions with the verification results when nonconformance of the qualified parts is found. 							
1.4.2	R	esponsibilities and Ob	ligations of QML manufacturer					
	 a) QML manufacturer is responsible for that the delivered products conform to the requirements of applicable specifications. QML manufacturer shall explain to the customers as needed that JAXA is not responsible for that the delivered products conform to the requirements in detail specifications. b) QML manufacturer shall address the issues when anomaly or nonconformance is 							
	c) d)	found in the qualifie In the case of certifi the customers for th its de-certification. In the case of suspe	d parts. cation removal, the de-certified QN he products and the customer cons ending the shipment of the qualifier	ML manufacturer sidering a purchas d parts, the QML	shall notify se at once of manufacturer			
4.5	Τ	shall notify the purc	nasers at once of the suspension of	of the shipment.				
1.5	Tern The a) b) c)	ns and Definitions following terms and d FMAT: FMAT stands QML: The QML (Qua the QML system. Th production sites, proc (titles and specification QML certification: Ce specification system Parts/Materials (JAX)	efinitions are used in this docume for Failure Mechanism and Assura lified Manufacturers List) is a list o e list provides information such as duct(s) names, qualification covera on numbers) and contact information rtification of common parts/materia defined in the General Specification	nt: ance Technique. of manufacturers of the names of ma age, applicable sp on. als in accordance on for Space Use	certified on anufacturers, becifications with the Common			
	d) e)	QPL: The QPL (Qual list provides informati the names of manufa characteristics, applic QPL certification: Cer specification system	ified Products List) is a list of certified ion on parts and materials certified acturers, production sites, product in cable specifications (titles and num rtification of common parts/materia defined in the Common Parts etc.,	fied parts and ma I on the QPL syst names, summary nbers) and contac als in accordance Space Developn	terials. The em including of part at information. with the nent Use,			
	f)	TRB: The TRB (Tech established by the maintenance, revision program and as well	nology Review Board) is a multi-fu anufacturer to review and determin ns and implementation of and chan as corrective actions.	unctional organiza ne the validity of nges to the qualit	ation establishment, y assurance			
	g)	Retention of qualifica qualified parts conduct	ation: A process to renew the QML certification status of the ucted at the end of certification period.					
	h)	Defect: A state in whi requirements for spec	ch qualified parts are unable to ful cified applications.	Ifill the intended a	pplications or			
	i)	Failure: The loss of the	ne ability of a qualified part to perfo	orm its required fu	unctions.			

JAX 7	A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 3 -		
 Failure analysis: The detailed analysis of reliability data such as life, numbers of failed parts, failure conditions and degree of deterioration to physically characterize the failure status. 						
 Requalification: A qualification process performed to change the qualification coverage. 						
I)	Registered inspector: manufacturer certainl requirements of the q in the production dep	A person who is registered with J y fulfills the functionality, performa ualified parts, independent from a artment of the manufacturer by ac	AXA to verify tha ince and quality a ny quality assura ting as an inspec	it the assurance ince section stor of JAXA.		
m)	Initial qualification: A p	process to obtain QML certification f	or new common	parts/materials.		
n)	Field data: The test d products which are m similar design, proces product group) to be	ata, actual failure rate and noncon anufactured in the same productionses and quality assurance progra qualified.	formance inform on line and with tl m as the product	ation of the he same or t(s) (or		
o)	Applicable specification detail specifications a	ons: Applicable specifications inclupplicable to qualified parts.	ude generic spec	ifications and		
p)	Qualification test: A s performed to verify the	eries of tests to obtain QML certifi at the parts meet the requirements	cation. The tests s of applicable sp	s are pecifications.		
q)	Qualification coverag performance and tech defined in the applica	e: Qualification coverage is a scop nnology which are represented by ble specifications.	be of characterist a test vehicle. It	ics, shall be		
r)	QML manufacturer: A	A manufacturer that obtained QML certification				
s)	Catastrophic failure: <i>A</i> qualified parts.	A failure leading to loss of function	ality and/or perfo	rmance of		
t)	Test vehicle: A device manufactured using t	e or sample that represents the pro he manufacturing line to be qualifi	oduct(s) (or produ ed.	uct group)		
u)	Quality conformance performed by the QM functionality, perform	inspection: Tests specified in the a L manufacturer to confirm that the ance and quality.	applicable specifi qualified parts n	cation and neet specified		
v)	Quality assurance ma establish, implement, qualified parts as a re	anager: A person who has the resp maintain and control the quality a epresentative of the manufacturer.	oonsibility and au ssurance prograi	thority to m of the		
w)	Quality assurance pro	ogram: A program that includes all ure and deliver qualified parts.	quality assuranc	e activities		
x)	Quality Assurance Pr program is document	ogram Plan: Papers in which the c ed.	complete quality a	assurance		
у)	Nonconformity: The p of the applicable spec lack and malfunction.	performance of the qualified parts i cifications. Nonconformance inclu	nconsistent with des failure, devia	requirements ation, defect,		
Z)	Anomaly: Any sign of	suspected functional problems				
aa)	Manufacturer: A com of the parts and mate products.	pany which performs most of fabri rials purchased or provided, and r	cation process an nanufactures the	nd assemble finished		

	JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 4 -
1.6	Cla Qua acc a) b)	ssification of Qualified alified parts, defined in cordance with this spec Established reliability High reliability parts:	Parts the applicable specifications whic ification shall be classified as follo parts: See "Terminology" (Sectior See "Terminology" (Section 7).	h are developed ws: n 7).	in
2.	APPL	ICABLE DOCUMENTS	5		
2.1	Ар	olicable Documents			
	The The awa a) b) c) d) e) f) g) h) i)	e documents listed belo e issues of these docur ard or application. JIS Z 8201 JIS Z 8202 JIS Z 8203 JIS Z 8301 JIS Z 8401 JIS Z 8401 JIS Z 9015-1 ISO 9001:2000 ANSI/NCSL Z 540-1 ISO 14644-1:1999 ISO 14644-2:2000	ow form a part of this specification nents are the latest issues availab Mathematical Symbols Quantities and Units – Part 0: Part 13: Solid State Physics SI Units and Recommendatio Multiples and of Certain Othe Rules for the layout and draft Standards Guide to the Rounding of Nur Sampling Procedures for Insp Sampling Plans Indexed by A for Lot-by-Lot Inspection Quality management Systems Calibration Laboratories and I Equipment – General Require Cleanrooms and Associated 0 Part 1: Classification of Air Cl Cleanrooms and Associated 0 Part 2: Specifications for Test Continued Compliance with IS	to the extent spe ole at the time of o c General Principl ons for the Use of r Units ing of Japanese I mbers bection by Attribur acceptable Quality s – General Requ Measuring and Ta ements Controlled Enviro eanliness Controlled Enviro ting and Monitorir SO 14644-1	ecified herein. contract les through their ndustrial tes – Part 1: y Level (AQL) uirements est nments – nments – ng to Prove
2.2	Orc In t spe a) b) c) d)	der of Precedence he event of a conflict b ecifications, the followin Detail specification Generic specification This specification Applicable document	etween the text of this specificatio og order of precedence shall apply s of this specification (paragraph 2	n and the applica : 2.1)	ıble
3.	REQI	JIREMENTS			

3.1 General Requirements

General Requirements for qualified parts shall be defined in accordance with the requirements specified in this specification.

JAXA-QTS-2000D JAXA Page -			_ 5 _	
	7 July 2016	Parts Specification	Faye	- 3 -
3.2	Detail Requirements			
3.2.1	Requirements for Each	Product Type		
	The generic specification for each part group. JA accordance with Append	ons shall define the general require XA shall develop and establish the dix A.	ements of the qua generic specificat	alified parts ion in
3.2.2	Detail Requirements			
	Detail specification sha are not covered in the a create and establish de	Il define detailed requirements for applicable generic specification. T tail specifications in accordance w	individual qualifie he manufacturer ⁄ith Appendix A.	ed parts which or JAXA can
3.3	Requirements for a Qualit	y Assurance Program		
3.3.1	Establishment of a Qua	lity Assurance Program		
	To obtain a QML certific specification, the manu- compliance with Appen requirements for space supply of the product w an official certification(so the documents used for	cation of common parts/materials i facturer shall establish a quality as dix C to assure that the product(s) use and that the manufacturer is a ith a consistent quality. If the man s) such as ISO 9001 or an equivale the certification as part of the Qua	n accordance wit surance program meets the quality able to sustain pro- pufacturer has alro ent, the manufact ality Assurance F	th this n in y oduction and eady obtained ure may use Program.
3.3.2	Quality Assurance Prog	gram Plan		
	The quality assurance p Plan which shall cover a review. After a QML ce quality assurance activi change to the quality as accurate program statu	program shall be documented as the all the details of the program and s ertification is granted, the manufact ty in compliance with the Quality A ssurance program shall be immedi s in the Quality Assurance Program	ne Quality Assura shall be submitted turer shall implem Assurance Progra ately documente m Plan.	ance Program d to JAXA for nent the im Plan. Any d to insure
3.3.3	Quality Assurance Man	ager		
	The manufacturer shall with JAXA in accordance	designate a quality assurance ma ce with Appendix D of this specifica	nager and registe	er this person
3.3.4	Registered Inspector			
	The manufacturer shall JAXA in accordance wi	designate a registered inspector a the Appendix D of this specification	and register this p	person with
3.3.5	TRB			
	The purpose of introduc self-initiative to the QMI quality assurance requi provided authority over demonstrate its validity industrial structures, the	cing the TRB to the QML certificati L manufacturer in verifying the fun rements of the qualified parts. The the verification method change an . To flexibly respond to technical p e QML manufacturer is also author	on system is to ir ctionality, perforn e QML manufactu id responsibility to progresses and re rized to optimize	ncorporate nance and urer is o evolution of

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7 July 2016 Parts Specification Page - 6	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 6 -
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manufacturing lines, test and inspection methods. The TRB shall deliberate and determine the validity of the establishment, implementation, maintenance and revisions (changes), among other things, to the quality assurance program. In case of nonconformance, the TRB shall determine the corrective actions and assess their results. The TRB shall be a multi-functional group. The organization and management details shall be as specified in Appendix K. The QML manufacturers shall report their TRB activities to JAXA annually in compliance with Appendix K for JAXA to review proper operation of TRB. This review forms a part of retention of qualification as specified in paragraph 3.4.2. JAXA may skip the review if the manufacturer has already notified JAXA of exemption of preparation and submission of TRB status report in accordance with paragraph K.3.6.2.

JAXA reviews the TRB status report at each submission and notifies the QML manufacturer of the results.

3.3.6 Audit of the Quality Assurance Program

JAXA reserves the right to audit the quality assurance program established during the certification process and when necessary. Audits shall be conducted at the manufacturer's site. In the audit, JAXA evaluates the content and implementation status of the quality assurance program based on a comprehensive examination of the production, inspection, test with the equipment, and any accompanying technical documents. If requested, the manufacturer will make available to JAXA the most current documents and/or materials related to the quality assurance program during the audit. If JAXA requests improvements, the manufacturer shall take appropriate actions.

3.4 QML Certification Requirements

To be listed on the QML and supply their products as QML common parts/materials, a manufacturer is required to obtain QML certification. The QML certification consists of three types of qualification processes as follows.

- a) Initial qualification
- b) Retention of qualification
- c) Requalification

The qualification procedures are defined in Appendix E. The application procedures and forms to obtain a QML certification are defined in Appendix F.

3.4.1 Initial Qualification

The initial qualification is a process to initially obtain a QML certification. The manufacturer shall develop a detail specification of the products to be certified and establish a quality assurance program in compliance with Appendix C. After the quality assurance program has been reviewed, the manufacturer shall produce test vehicles or samples which represent the products within the qualification coverage and shall perform the qualification test required in the applicable specifications. After completion of the qualification test, the manufacturer shall apply for the QML certification and obtain an approval from JAXA. If the application is determined acceptable, JAXA approves the application and shall add the manufacturer to the QML.

For initial qualification, the manufacturer shall submit the following applications to JAXA:

a) Application for Qualification Test

JAXA-QTS-2000D		JAXA	Page	7
	7 July 2016	Parts Specification	Faye	- / -
b) Application for QM		L Certification		
3.4.1.1	Application for Qualif	ication Test		
	The manufacturer sh	all submit the Qualification Test Ap	oplication accom	panied with
	the following docume	nts as specified in Appendix E:	rdance with Ann	andix F
	b) Detail specificati	on: In accordance with Appendix A	A.	
	c) Quality Assurance	ce Program Plan: In accordance w	ith paragraph 3.3	3.2.
	 d) Notice of Quality Appendix F. 	Assurance Manager/Registered I	nspector: In acco	ordance with
	e) Application Data	Sheet (preliminary): In accordanc	e with Appendix	G.
	f) Field data (if app (paragraph 1.5).	blicable): In accordance with item r	i) of Terms and L	Jefinitions
3.4.1.2	Approval of Application	on for Qualification Test		
	JAXA shall review the audit of the quality as Qualification Test Ap	e application with the supporting desurance program specified in para plication submitted by the manufaction submitted by the manufaction	ocuments and pe agraph 3.3.6 base cturer. If the app	rform an ed on the lication is
	manufacturer of the a	approval. The manufacturer may st	tart manufacturin	g the
	evaluation element or the sample for the qualification test upon receiving the			g the
	approved qualification	n test application from JAXA.		
3.4.1.3	Changes to Qualifica	tion Test		
	After approval of the procedures shall be a	Qualification Test Application, cha approved by JAXA in accordance v	nges to the quali with paragraph E	fication test .5.2.7.
3.4.1.4	Witnessing of Qualific	cation Tests		
	Upon approval of the for the qualification te job title and affiliation manufacturer such as manufacturer's perfor Implementation Plan	Qualification Test Application, JA2 est and notify the manufacturer of t . The witness shall coordinate the s the schedule. The witness is res rmance of the qualification test in o for Qualification Test.	XA shall designation the witness include witness with the ponsible for mon compliance with t	te a witness Jing name, itoring the he
3.4.1.5	Implementation of Qu	ualification Test		
	In the qualification ter limits of the product of repeatedly with a con- specified in the Imple witness. If, after com- confirm what the mar performed without the qualification test with approval of the Quali	st, the manufacturer shall verify the group to be certified and prove their isistent quality. Qualification tests mentation Plan for Qualification To upletion of the qualification tests, the nufacturer is to demonstrate as state JAXA witness. If the manufacture in 3 months after the approved state fication Test Application.	e design and per ir ability to supply shall be perform est and in the pre ne JAXA witness ited above, the te rer does not initia int date, JAXA sha	formance the product ed as esence of the is able to ests may be te the all revoke

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	- 8 -
3.4.1.6	Termination of Qualifi In the event of nonco occurrence, the manu if the qualification tes Qualification Test Ter	cation Test nformance, erroneous tests or an Ifacturer shall report the event to t t is to be terminated, the manufac mination in accordance with parag	excess of the allo he JAXA witness turer shall submit graph E.5.2.8.	owable failure . As a result, a Notice of
3.4.1.7	 Application for QML 0 After all the qualification Plan for Qualification Certification in accord the qualification test. application: a) Report of Qualified b) Quality Assurance c) Application Data d) Test data and rest 	Certification on tests are completed in accorda Test, the manufacturer shall subn lance with Appendix E within 30 d The following documents shall be cation Test (Appendix F) ce Program Plan (the latest version Sheet (the latest version prepared cords	ance with the Imp hit an Application ays following con accompanied w n) d for registration)	lementation for QML npletion of ith the
3.4.1.8	8 Approval of QML Certification JAXA shall approve an application when the Application for QML Certification meets all the requirements in this specification and applicable specifications. QML manufacturer is allowed to supply products within an approved qualification coverage in accordance with detail specifications registered with JAXA.			cation meets QML ion coverage
3.4.1.9	 in accordance with detail specifications registered with JAXA. 9 Transition from QPL Certification to QML Certification In the event of transition from QPL certification to QML certification, the QPL manufacturer may submit the Application for QML Certification without the qualification test, provided that there are no changes in the test items and criteria workers, materials, production processes and facilities. The detailed requirement transition shall be as follows. a) Qualification Test Application Submittal of a Qualification Test Application may not be required. However, detail specifications and Notice of Quality Assurance Manager/Registered Inspector shall be attached to the Application for QML Certification. b) Correlation table of the qualification test items and criteria in QPL certification and QML certification The QPL manufacturer shall prepare a table correlating the qualification test items and criteria specified in the respective applicable specifications of QP certification and QML certification. It shall demonstrate that the qualification for QPL certification conforms to that of QML certification. c) Quality conformance inspection within the effective period of QPL certification may be performed as Group B inspection of the quality conform inspection required for the first production lot of QML certification. 		QPL ne id criteria, quirements for However, the istered ertification ation test ns of QPL alification test ertification PL conformance	

JAXA-Q ⁻	TS-2000D	JAXA	Page	_ 9 _
7 July	y 2016	Parts Specification	l ugo	
d) e)	On-site audit The quality assu specified on the review documen manufacturer's s QPL products ma If the QPL products certification, the QML certification products shall be	rance program shall be audited at certification application. The prim- tation relating to the Quality Assur- ite. anufactured in the transition to the cts were manufactured at the time products were considered to be m n period. The activity status includi e included in the next periodical TF	the manufacture ary purpose of thi ance Program Pl QML certification of transition to th anufactured durin ng the delivery st RB status report.	r's site as is audit is to an at the n ne QML ng the initial atus of such
3.4.1.10 Cer For JAX imp (pai mea In a a) b)	rtification of JAXA- parts/materials de XA-developed part olementation of qua ragraph 3.4.1.7) m asurements condu addition, the follow Qualification Tes Qualification Tes Qualification tests Cross-reference A cross-reference shall be prepared qualification tests On-site audit The quality assu specified in para	Developed Parts eveloped under a contract with JA as), Qualification Test Application (alification test (paragraph 3.4.1.5), hay be replaced by attaching deve ucted under the contract to the App ing provisions shall apply. A Application at Application is not required. Detains ce Manager/Registered Inspector of s shall be attached to an Application table between qualification and de e table between the qualification and d to verify compliance of the devel s. rance program shall be audited at graph 3.3.6 on the certification application appl	XA (hereinafter reparagraph 3.4.1.7 and Qualification lopment test resublication for QML all specification ar required for apply on for QML Certification test it and development test it opment tests with the manufacture polication.	eferred to as 1), n Test Report ilts and Certification. d Notice of <i>r</i> ing fication. tems test items n the r's site as
3.4.2 Reten Reten certific The C specif manu and re of cer supply manu certific If it re assura manu	ntion of Qualification cation and shall be QML certification p fication in consider facturer shall have esults of the qualit tification audited. y the qualified part facturer shall reflection from JAXA. evealed that the qual ance program, JA facturer to perform	n is a process for the QML manufa e completed within the effective pe- eriod is less than 3 years and defin- ration of characteristics unique to a e their quality assurance program a y conformance inspection conduct This audit is intended to verify the t(s) with the same quality level as ct the results of this review and re alified parts are not produced as a XA may revoke the QML certification n requalification procedures.	acturer to renew t riod of the QML of ned in the generic each product grou specified in parag red within the effe manufacturer's a initially certified. quest retention of specified in the qu on or request the	the QML certification. up. The QML graph 3.3.6 ective period ability to The f the QML uality

JAXA-QTS-2000D		JAXA	Daga	10
	7 July 2016	Parts Specification	Page	- 10 -
2424	Application for Contifi	ection Detention		<u> </u>
3.4.2.1	Application for Certifi	cation Retention		
	The QML manufactur	er shall submit an Application for	Certification Rete	ntion to
	JAXA commencing b	etween 30 and 60 days prior to the	e expiration date	of the
	certification period in	accordance with paragraph E.5.3.	The following d	ocuments
	shall be accompanied	d with the application. Submittal o	f the Report of Q	uality
	Conformance Inspec	tion Status may be omitted when o	contained with the	TRB Status
	a) Pepert of Quality	Conformance Increation Status	norograph E 2 6	2)
	a) Report of Quality	Program Plan (the latest version	paragraph F.3.0.	2)
	b) Quality Assurance	set (name was the 5.2.7)	1)	
	c) TRB Status Rep	ort (paragraph F.3.7)		
	1) Report of Q	ualification and Delivery Status (pa	aragraph F.3.6.4))
	2) Report of Q	uality Assurance Program Update	(paragraph F.3.6	<u>3.5)</u>
	3) Nonconform	nance information (paragraph F.3.	9)	
	JAXA will audit the T	RB status report for the last one ye	ear of activities su	ubmitted as a
	part of retention of ce	ertification application documents in	n accordance wit	h paragraph
	3.3.5.			
3.4.2.2	Approval for Certifica	tion Retention		
	IAXA shall approve t	he application when it meets all th	e requirements o	f this
	specification and ann	licable specifications. The retention	on of the OML ce	rtification
	becomes effective or	the day following the last day of t	he current certific	ration period
	and remains offective of	until the day encodified in the game		ation period
	and remains effective	a unui the day specified in the gene	enc specification.	
3.4.3	Requalification			
	The requalification proc	ess for the QML manufacturer to o	hange the qualif	ication
	coverage for the qualifie	ed parts shall be performed in acco	ordance with para	agraph E.5.4.
	The TRB is authorized	to change test items required for re	equalification by a	assessing the
	impact due to proposed	l product/process changes. In this	case, the rationa	ale for the
	changes shall be docur	nented in the Implementation Plan	for Requalification	on Test.
3.4.4	QML Certificate			
	JAXA shall send a QML	Certificate to the QML manufactu	irer upon comple	tion of the
	initial qualification, reter	ntion of qualification or requalificati	on. The QML Ce	ertificate shall
	specify the name of the	OMI manufacturer manufacturing	n facility titles an	d document
	numbers of applicable s	specifications and the Quality Assu	irance Program F	Plan the
	certification date and th	e effective period	inanioo r rogram r	
		shall present the cortificate if requ	losted by IAXA c	
	of the qualified parts.	shan present the certificate if feqt	iesieu by JAAA (
3.4.5	De-Certification			
	JAXA may revoke the C	MI certification if any of the follow	ving events a) th	rough i)
	occurs If the OMI cert	ification is cancelled IAXA shall r	ntify the OML ma	anufacturer of
	the cancellation and roc	α	nd the informatio	n on the
		lucer for return of the LAVA ON		
	relevant product(s) shall	II DE TETHOVEU HOTT THE JAAA QIVIL		

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	JAXA-QTS-2000D	JAXA	Dogo	11
	7 July 2016	Parts Specification	Faye	- 11 -
	 a) The Application for the expiration date b) The Application for retention of the qua c) A review for qualifi quality assurance q d) The QML manufac e) An uncorrectable of part(s). f) Applicable specific g) Although applicable specification is req h) There is false state i) All supplies of the of parts. 	Certification Retention was not su of the certification period. Certification Retention fails to me alification. cation retention or an audit reques program has been implemented im turer applies for cancellation of the lefect is discovered in the manufact ation(s) is cancelled. e specification(s) is modified and r uired, the applicable tests are not ement in the test results or in the a qualified parts are no longer availa turer is found to have no ability to	ubmitted within 30 et the requirement ted by JAXA indi- properly. e QML certification cturing process of equalification for performed. pplication of the able. manufacture the) days prior to nts for cates that the n. f the qualified the new qualified parts. qualified
3.4.6	Stop Shipment of the Q In the case of stop supp JAXA in accordance wi JAXA (See paragraph 3	ualified Parts bly of the qualified parts, the QML th paragraph F.3.8 unless this stop 3.6).	manufacturer sha o shipment is imp	all notify osed by
3.4.7	Arranging the Certificat In the case of having ce manufacturer may aggr timing of certification re certification retention m in paragraph 3.4.2.1. He	ion Periods ertifications for more than one appl regate those different certification p tention or recertification. For that p ay be submitted anytime regardles owever, the current certification pe	icable specification periods in one pe purpose, the applices of the specifices period cannot be estimation	ons, the QML riod at the ication for timing stated xpired.
3.5	Part Number and Marking	I		
3.5.1	Part Number The part number shall k specified in the applical	be identified as qualified parts for s ble specifications in accordance wi	pace use and sh ith paragraph A.3	all be 5.1.4.
3.5.2	Marking Each product shall be n specified in the applical product is used in a nor	narked with the part number, lot nu ble specifications. All markings sh rmal configuration.	umber and other i all be easily visib	items as le when the
3.6	Nonconformance The QML manufacturer sh anomaly or nonconformar inspections conducted by by the purchaser, during p	nall report the anomaly or nonconf nce of a qualified part(s) is found d the QML manufacturer, during inc production, tests or inspection proc	ormance to JAXA uring the tests ar oming inspection cesses performed	at once if nd/or s performed at the unit or

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	- 12 -

system manufacturers' or at JAXA's test or assembly facilities. For nonconformance in the quality conformance inspection, the lots containing the failed product(s) shall be disposed as specified in the applicable specifications.

JAXA can impose a stop shipment on the qualified parts if JAXA determined that the reported failure was attributed to nonconformance of the qualified parts.

The QML manufacturer shall stop shipment of the qualified parts immediately upon JAXA's decision. After stop shipment was imposed and the products stored at the QML manufacturer' site are to be shipped, the QML manufacturer shall consult with JAXA. At the completion of investigating the cause and corrective actions, the QML manufacturer shall submit the nonconformance report including the results of the investigation and the corrective action to JAXA. If JAXA approves the corrective actions, the stop shipment order will be lifted.

3.6.1 Failure Analysis

If the nonconformance is a failure of the qualified part(s), the QML manufacturer shall perform the failure analysis program defined in the quality assurance program.

3.6.2 Emergency Notification

In the event of the qualified part(s)- or lot-specific nonconformance, the QML manufacturer shall immediately report to JAXA the details of the nonconformance, the part numbers and the lot numbers.

3.6.3 Catastrophic Failure

If catastrophic failures are discovered during the qualification test, quality conformance inspection or inspection after long-term storage, the manufacturer shall immediately report the failure to JAXA.

4. QUALITY ASSURANCE PROVISIONS

4.1 Implementation of the Quality Assurance Program

The manufacturer is responsible for implementing the quality assurance program established in accordance with paragraph 3.3.

4.2 Change Control for the Quality Assurance Program

The manufacturer shall implement and control any changes to the quality assurance program in accordance with paragraph C.4.11.

4.3 Requirements for Tests and Inspections

The manufacturer shall perform the tests and inspections shown below to verify the functionality, performance and quality assurance requirements of the qualified part(s) defined in Section 3.

- a) In-process inspection
- b) Qualification test
- c) Quality conformance inspection

JAXA-QTS-2000D	JAXA	Daga	10
7 July 2016	Parts Specification	Page	- 13 -

4.3.1 Qualification Test

The qualification test is performed to qualify product(s) as a QML certified part(s) and to verify that the product(s) is in accordance with the requirements specified in the applicable specifications. The details or the qualification test shall be clearly defined in the applicable specifications.

4.3.2 In-Process Inspection

The in-process inspection is performed during the manufacturing processes to detect defects that could significantly affect the reliability and quality of the product(s), and to examine characteristics which cannot be measured with finished products. Data of in-process inspections may also be used for the quality conformance inspection during the production process. Details of the in-process inspection shall be defined in the applicable specifications.

4.3.3 Quality Conformance Inspection

The quality conformance inspection shall be performed to verify that the certified products meet the performance, characteristics and quality as confirmed by the qualification test. The quality conformance inspection shall be classified in following three groups. Inspection items and methods shall be defined in the applicable specifications.

4.3.3.1 Quality Conformance Inspection during the Production Process

The quality conformance inspection shall be performed during each production process for all qualified parts.

4.3.3.2 Quality Conformance Inspection within the Effective Period of Certification

The quality conformance inspection shall be performed for the first production lot within the effective period of certification. Inspection samples shall be taken from products which have completed the inspections specified in paragraph 4.3.3.1. The manufacturer shall report the inspection results to JAXA in the TRB status report or application for certification retention.

4.3.3.3 Quality Conformance Inspection at Restarting Production

The quality conformance inspection shall be performed at the time of restarting the production when the manufacturer acquires the retention of the QML certification without production within the effective period of the certification and the quality conformance inspection. Inspection samples shall be taken from products which have completed the inspections specified in paragraph 4.3.3.1. The manufacturer shall complete the inspections specified in paragraph 4.3.3.2 and this paragraph prior to delivery. The inspection results shall be reported to JAXA in the TRB status report or application for certification retention.

JAXA-QTS-2000D	JAXA	Daga	14
7 July 2016	Parts Specification	Page	- 14 -
4.3.4 Products Stored for Lo	ong-Term		
4.3.4.1 Disposition of Lots 1	or Long-Term Storage by Manufact	urer	
When products have been stored longer than specified in the applicable specifications after the completion of the quality conformance inspection, the applicable inspection shall be repeated prior to delivery. Lots that fail this inspection shall be subjected to 100% inspection and only acceptable products may be shipped The date of the inspection shall be marked on the package.			
4.3.4.2 Storage by Purchas	er		
Storage conditions in the applicable sp	and/or shelf life requirements for the ecifications.	e purchaser shall	be specified
4.4 Changes to Tests and Ir	spections		
The manufacturer is allo specifications when ade TRB determines that the	wed to change the tests and inspec quate data and technical rationale for changes do not affect the reliability	tions defined in the changes ex or the changes ex of the products.	he generic kist and the
5. PREPARATION FOR DEL	IVERY		
 For delivery from the QML accordance with this speci have required markings. T the qualified parts. The QI of the quality assurance pritems as minimum: a) Part name b) Part name b) Part number c) Applicable specification d) Lot identification code e) Customer's name f) Manufacturer's name g) Quantity of packages h) Inspection date (day, fi) i) Inspection results j) ESD sensitive (if spective) k) Beryllia used (when used) 	manufacturer to the purchasers, the fication shall be properly packaged he packaging materials shall not af //L manufacturer shall develop a pa ogram. The marking on packages s ns ns month, year) fied) sed)	e qualified parts s as qualified parts fect the quality ar ckaging specifica shall include the f	supplied in , and shall nd reliability of ation as part following
If the qualified parts require taken. In addition, an "ESI qualified parts contain bery provided on the package. specifications.	e electrostatic discharge protection,) sensitive" marking shall be provide Ilia (beryllium oxide, BeO), a "Beryl Details of the packaging shall be de	an appropriate a ed on the packag lia used" marking efined in the appli	ction shall be le. If the shall be cable
6. CONTROL OF APPLICAB	_E SPECIFICATIONS		
Applicable specifications a (issuance of change notice shall be identified by the a	e controlled with regard to establish s) and cancellation. Revision of the oplicable specification number follow	hment, revisions, e applicable spec ved by a capital le	changes ifications etter in an

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– 15 –

alphabetical sequence beginning with A. The capital letters I, O, and Z shall not be used as revision symbols. Certification of the qualified parts manufactured, stored and procured under a cancelled version of the applicable specifications prior to the cancellation date shall remain effective after the cancellation date.

6.1 Establishment and Revision of Detail Specifications

A detail specification shall be established and changed in accordance with Section A.4. The detail specification shall be as defined in the applicable generic specification. To make a change to or delete a test(s) or inspection(s) in accordance with paragraph 4.4, the details of the test(s) or inspection(s) and grounds for the change shall be described in the detail specification in accordance with paragraph A.4.2. In this case, the detail specification shall be revised or newly established and registered with JAXA.

6.2 Changes

A change notice shall be issued in accordance with Section A.5 for minor changes to generic specifications or detail specifications. Minor changes are those listed below.

- a) Correction of typographical errors in text
- b) Changes in terminology
- c) Changes in figures and tables

When they can be effectively handled, a change notice shall be issued for minor changes other than those above.

The notice of change shall remain valid until the applicable specification is revised. The notices of change shall be identified by a sequential number for each applicable specification.

6.3 Cancellation of Applicable Specification

When the applicable specifications are revised, the previous version including all applicable notices of change shall be cancelled on the date the new revision is established. The qualified parts manufactured in compliance with the cancelled version of the applicable specifications prior to the cancellation data shall remain as certified products after the cancellation date.

6.4 Registration

Detail specifications, Application Data Sheet and notices of changes shall be prepared and established by QML manufacturer and registered with JAXA. JAXA shall issue general specifications and their change notices, detail specification and their change notices, and application datasheet and their change notices with providing a registration number to each specification/change notice.

6.5 Publication

General specifications, generic specifications, detail specifications and Application Data Sheets shall be stored in the database of JAXA Qualified EEE Parts and Materials and published on the Internet.
	JAXA-QTS-2000D	JAXA	Davia	10		
	7 July 2016	Parts Specification	Page	- 16 -		
	-			L		
7. T	. TERMINOLOGY					
a) ISO 9001 (Quality mana	agement systems – Requirements): ISO 9001 estat	lishes the		
	requirements for a quali	ty management system in which th	e concept of qual	ity assurance		
	is taken one step further	by covering the improvement of ci	ustomer satisfacti	on.		
b) DPA (Destructive physic	cal analysis): Inspections or analysis	ses performed de	stroying the		
	device to confirm the co	ompliance with the applicable desig	gn and process re	equirements.		
с) JAXA-developed parts:	Qualified parts developed under a	contract with JA	XA.		
d) Spacecraft: A generic te	erm referring to satellites, space ex	kperiment equipn	ient, space		
	stations and their launc	h vehicles.				
е) Inspection lot: An inspe	ction unit for a quality conformance	e inspection. As	a rule, an		
	inspection lot is a produ	iction lot.				
f)	In-process inspection: I	nspections which are performed d	uring the manufa	cturing		
	process to detect defec	ts which could significantly affect t	he reliability and	quality of the		
	product and to examine	the characteristics and attributes	of the product wh	nich cannot		
	be measured using finis	shed products.				
g) On-site audit: An audit of	of the quality assurance program p	performed by JAX	A at the		
	manufacturer's site.					
h) Failure rate level: Nume	Failure rate level: Numerical representation of a degree of reliability based on failure rate.				
i)	Sales volume and custo	omers' list: A list of the number of s	shipments and pr	imary		
	customers of certified p	roducts.				
j)	High reliability parts: Qua	alified parts whose failure rate level	is not specified in	the applicable		
	specification, however, v	vhose quality is assured by means of	of stringent desigr	ı control,		
	process control and qual	ity conformance inspections for eac	h production lot.			
k) Established reliability pa	arts: Qualified parts whose failure	rate is specified i	n the		
	applicable specification	and whose quality is assured by n	neans of stringer	it design		
	control, process control	and quality conformance inspection	ons for each proc	luction lot.		
1)	Non-JAXA-developed p	arts: Common parts/materials dev	eloped by a man	utacturer at		
	their own expense to ac	quire QML certification without a c	JAXA contract.	untional in		
n n	1) Production lot: A production	ction unit whose products can be d	considered as ide			
	Productor The OML ave	tom partifica a group of production	ency and reliabilit	y. o toot		
n n) Products: The QML sys	tem certilles a group of products in	epresented by the			
	detail appoifications and		s allowed to deve	op new		
	coverage The term "pr	a supply products as certilled products	d as opposed to '	faincation		
	OPL cortification to hold	outres understand this concept	as opposed to			
) Application Data Sheet:	A sheet summarizing test data ar	d applications a	mong other		
0	things of the qualified r	A sheet summanzing test data an	iu applications, a	mong other		
n) Part group: A class of c	ommon narts/materials that have i	particular configu	ration and		
P	features in common su	ich as integrated circuits resistors	and canacitors	For example		
	the part group number (22 consists of 20 of EEE parts and	d 2 materials	r or example,		
a) Part type: Part identifica	ation further classifies the part grou	in The part type	e is described		
Ч	such as "Microcircuits (CMOS 32 bit MPU monolithic silic	on high reliability			
	"Resistors, fixed, film, h	igh reliability, space use", and "Ca	pacitors, multiple	laver, fixed.		
	ceramic dielectric. high	reliability space use"	,			
	,					

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	- 17 -
8. APPENDIX Appendix A Appendix B Appendix C Appendix D Appendix E Appendix F Appendix F Appendix H Appendix J Appendix K Appendix Z	Preparation Deleted Requirement Quality Ass Qualification Application Preparation Supplement Deleted TRB Guide Procedure	n of Applicable Specifications ents for Quality Assurance Program surance Manager and Registered on Procedures Procedures and Formats n of Application Data Sheet ntary Requirements for Tests and elines after Revision of QTS-2000	n Inspector Inspections	

JAXA-QTS-2000D	J A X A	Page	- Δ-i -	
7 July 2016	Parts Specification	i age	- 7-1 -	
	APPENDIX A			
PREPARATION OF APPLICABLE SPECIFICATIONS				
A.1. Scope			A-1	
A.2. General			A-1	
A.2.1 Sub-Tier Specificat	tions and Organization of Applicab	le Specifications	A-1	
A.2.1.1 Sub-Tier Spec	cifications		A-1	
A.2.1.2 Organization			A-1	
A.2.1.3 Management.			A-1	
A.2.2 Document Number	of Applicable Specifications		A-2	
A.2.2.1 Generic Speci	fication		A-2	
A.2.2.2 Detail Specific	ation Number		A-2	
A.2.2.3 Cancellation of	f Applicable Specification		A-3	
A.2.2.4 Numbering of	Notice of Change		A-3	
A.2.3 Title			A-4	
A.2.3.1 Reliability Lev	el		A-4	
A.2.3.2 Nomenclature	of Common Parts and Materials		A-4	
A.2.3.3 Sub-Tier Spec	cifications		A-4	
A.2.4 Description Rules	of Applicable Specification		A-4	
A.2.4.1 Paragraph Nu	mbering		A-4	
A.2.4.2 Numbering of	Figures, Tables and Pages		A-5	
A.2.4.3 Notes			A-5	
A.2.4.4 Unit Symbol			А-б	
A.2.4.5 Mathematical	Symbols and Formula		A-6	
A.2.4.6 Rounding of N			A-6	
			A-0	
A.2.4.0 Tolefances			A-7	
A.3.1 General			Δ-7	
			Δ-7	
A 3 1 2 Definition of T	erms		Δ-8	
A 3 1 3 Classification	of Part Group		A-8	
A 3.1.4 Part Number			A-8	
A.3.2 Applicable and Oth	er Related Documents		A-9	
A.3.2.1 Applicable Do	cuments		A-9	
A.3.2.2 Reference Do	cuments		A-9	
A.3.2.3 Order of Prece	edence		A-9	
A.3.2.4 Detail Specific	ations		A-9	
A.3.3 Requirements			A-10	
A.3.3.1 General Requ	irements		A-11	
A.3.3.2 Certification			A-11	
A.3.3.3 Quality Assura	ance Program		A-12	
A.3.3.4 Materials			A-12	
A.3.3.5 Design and Co	onstruction		A-12	
A.3.3.6 External View	, Physical Dimensions, Mass and	Marking	A-12	

JAXA-QTS-20	000D	JAXA	Page	- A-ii -
7 July 201	6	Parts Specification	i ago	,,,,,
A.3.3.7 W	/orkmanship			A-12
A.3.3.8 S	pecifications			A-12
A.3.3.9 S	creening			A-13
A.3.3.10 E	lectrical Perf	ormance		A-13
A.3.3.11 M	lechanical Pe	erformance		A-13
A.3.3.12 E	nvironmenta	Performance		A-13
A.3.3.13 D	urability			A-13
A.3.4 Quality	y Assurance	Provisions		A-13
A.3.4.1 G	eneral Requ	irements		A-14
A.3.4.2 C	lassification	of Tests and Inspections		A-14
A.3.4.3 In	-Process Ins	pection		A-14
A.3.4.4 Q	ualification T	est		A-14
A.3.4.5 Q	uality Confor	mance Inspection		A-15
A.3.4.6 T	est Method	· · · · · · · · · · · · · · · · · · ·		A-16
A.3.4.7 Lo	ong-Term St	orage		A-18
A.3.4.8 C	hange of Tes	sts and Inspections		A-18
A.3.5 Prepa	ration for Del	livery		A-18
A.3.6 Notes.				A-18
A.3.7 Appen	dix			A-19
A.4. Detail Spec	cification			A-19
A.4.1 Gener	al			A-19
A.4.1.1 S	cope			A-19
A.4.1.2 P	art Number			A-19
A.4.1.3 S	pecifications			A-19
A.4.1.4 M	liscellaneous			A-19
A.4.2 Applic	able Docume	ents		A-19
A.4.3 Requi	rements			A-20
A.4.4 Quality	Assurance	Provisions		A-20
A.4.4.1 G	, eneral			A-20
A.4.4.2 C	hange of Tes	sts and Inspections		A-20
A.4.5 Prepar	ration for Del	ivery		A-20
A.4.6 Notes.		,		A-20
A.5. Notice of C	hange			A-20
A.5.1 Scope				A-20
A.5.2 Gener	al Requirem	ents		A-20
A.5.3 Instruc	tions for Pre	paration		A-21
A.6. Formats of	Applicable S	becifications		A-21
		F		
Example: Forma	at A-1 Gener	ic Specification		A-22
Example: Forma	at A-2 Detail	Specification		A-26
Example: Forma	at A-3 Notice	of Change		A-36
		5		

This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-1 –	
	APPENDIX A				
	PREPARATION OF APPLICABLE SPECIFICATIONS				
A.1.	 A.1. Scope This appendix establishes the rules for preparation of applicable specifications as required in paragraph 3.2 of JAXA-QTS-2000. 				
 A.2. General JAXA-QTS-2000 specifies general requirements for common parts and materials. In order to acquire certification by JAXA for common parts and materials in accordance with JAXA-QTS-2000, applicable specifications shall be prepared to define detail requirements. 					
A.2.1 Sub-Tier Specifications and Organization of Applicable Specifications					
A.2.1.	A.2.1.1 Sub-Tier Specifications				

Applicable specifications shall be composed of the following sub-tier specifications.

- a) Generic specifications: Generic specifications define general requirements common to qualified parts of the part type.
- b) Detail specifications: Detail specifications define requirements unique to the group of the qualified parts.

Note: Notices of change shall document partial changes of generic specifications or detail specifications. A notice of change shall constitute a part of generic specification or detail specification.

A.2.1.2 Organization

Unless otherwise specified, applicable specifications shall be organized as shown in Table A-1.

Sub-tier specification	Contents		
	(1) Cover		
	(2) Table of contents		
Generic specification	(3) Main body		
	(4) Appendix (prepared for each matter relevant to the main body, or for each part type designation)		
	(1) Cover		
Detail apposition	(2) Table of contents		
Detail specification	(3) Main body		
	(4) Appendix (If necessary)		

Table A-1. Organization of Applicable Specifications

A.2.1.3 Management

- a) Applicable specifications shall be properly established, changed, revised or cancelled.
- b) Generic specifications shall be prepared and issued by JAXA.

JAX	A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-2 –		
	 c) Detail specifications shall be prepared and established by the QML manufacturers or JAXA and registered with JAXA. d) The applicable specification shall be published on the Internet and posted on the public website as part of the Database of JAXA Qualified EEE Parts and Materials. A.2.2 Document Number of Applicable Specifications 					
A.2.2.1	Generic Specification The document number be provided as follow	er of applicable specifications to be s.	e established by	JAXA shall		
	JAXA-QTS- <u>2xxx</u> (1) (1) Generic specifica (2) Revision letter	□ (2) tion number				
A.2.2.1.1	Generic Specification The generic specification generic specification	on Number cation number shall be a four-digit on number is provided with "2010."	t number for whic	h the first		
A.2.2.1.2	Revision Letter A revision letter shi be identified by "A" letter. a) Where a gene Example: JAX	all be assigned in an alphabetical \cdot . Alphabets of "I", "O" and "Z" sha ric specification is revised. A -QTS-2040 \rightarrow JAXA -QTS-2040	order. The first re Il not be used as)A	evision shall a revision		
A.2.2.2	Detail Specification N The detail specification provided as follows. JAXA-QTS- <u>2xxx / A</u> (1) (2) (1) Generic specifica (2) Appendix letter of (3) Individual identifi	lumber on number to be established by a r $\frac{XXX}{(3)}$ (4) ation number of generic specification	nanufacturer sha	ıll be		
	(4) Revision letter					
A.2.2.2.1	Generic Specification The generic specific specification. How	on Number cation number shall be the numbe ever, no revision letter shall be inv	er of the applicabl	e generic		
A.2.2.2.2	Appendix Letter of The appendix lette generic specificatio cases.	Generic Specification r shall be provided to identify the a on. The appendix letter shall not b	pplicable append e used for the fol	dix of the lowing		

JAX	(A-QTS-2000D 7 July 2016	J Parts S	A X A Specification	Page	– A-3 –	
	a) The applicable generic specification has no appendixes.b) Appendixes of the applicable generic specification are not prepared for each part type.					
A.2.2.2.3	Individual Identification The individual identification shall be a three-digit number. The first digit shall identify the manufacturer, and the other two digits shall be assigned by the manufacturer. $\frac{X}{x} = \frac{XX}{x}$ 2-digit number assigned by each manufacturer 1-digit number to identify the manufacturer					
A.2.2.2.4	2.2.4 Revision Letter					
	 be identified by "A". Alphabets of "I", "O" and "Z" shall not be used. a) When a detail specification is revised. Example: JAXA-QTS-2040/A101 → JAXA-QTS-2040/A101A b) When the applicable detail specification is revised to reflect changes in the generic specification. Example: JAXA-QTS-2040/A101A → JAXA-QTS-2040/A101B c) When the applicable detail specification is not affected by changes in the generic specification. Example: JAXA-QTS-2040/A101A → JAXA-QTS-2040/A101B c) When the applicable detail specification is not affected by changes in the generic specification. Example: JAXA-QTS-2040/A101A → JAXA-QTS-2040/A101A 					
A.2.2.3	Cancellation of Applicable Specification When an applicable specification is revised, the previous version shall be automatically cancelled on the date of the revision. The document number of the cancelled specification and date of cancellation shall be indicated on the cover of the revised specification.					
	Example: Where revised as "r	evision A".	JAXA-QTS-2001A 1 July 1989 Superseding JAXA-QTS-2001 Cancelled 1 July 1989	4		
A.2.2.4	 Numbering of Notice of Change The document number of a change notice shall be assigned as follows. The number and revision letter of the applicable specification to be changed shall be also indicated. 					

J.	AXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-4 –
	Example: JAXA-QTS-2000A NOTICE <u>1</u> (1) (1) Serial number pr	ovided for each notice		
A.2.3	Title Unless otherwise speci	fied, the title shall be provided as f	ollows.	
	<u>A, B,</u> Space Use, <u>C</u> (1) (2) (3)			
	 Nomenclature of q Reliability level Sub-tier specification 	ualified parts on		
A.2.3.1	.1 Reliability Level Reliability level shall be indicated as either "established reliability" or "high reliability".			
A.2.3.2	Nomenclature of Qua The nomenclature of standards such as JI	lified Parts qualified parts shall be determined S standards.	d in accordance v	vith public
A.2.3.3	Sub-Tier Specificatio Sub-tier specification specification".	ns s shall be indicated as either "gen	eral specification'	' or "detail
A.2.4	Description Rules of Ap Applicable specification description rules.	plicable Specification s shall be prepared in accordance	with the followin	g
A.2.4.1	Paragraph Numberin a) In the main body	g v, the paragraph number shall be p	provided as follow	/S.
	1. 2. 1.1 1.1 1.1	2.1 .1 2.1.1	e, combination of thin four numbers	numbers 3.



JAX	(A-QT 7 July	FS-2000D / 2016	J A X A Parts Specification	Page	– A-6 –
	b)	Symbols of notes supplementary e sequential numb	s for figures or tables link figures o xplanation and shall be given in th er starting "1" for each figure or ta	or tables to corres ne form of " ^(x) ", wh ble.	ponding here X is a
		Example: Note: ⁽¹⁾ Shall ap	ply to qualification tests.		
A.2.4.4	Unit	Symbol			
	Unle a) b) c) d) e) f) g) h) i) j)	ess otherwise spe JIS Z 8202-0 JIS Z 8202-1 JIS Z 8202-2 JIS Z 8202-3 JIS Z 8202-4 JIS Z 8202-5 JIS Z 8202-6 JIS Z 8202-7 JIS Z 8202-8 JIS Z 8202-9 JIS Z 8202-9	cified, unit symbols shall comply v Quantities and Units - Part 0: Quantities and Units - Part 1: Quantities and Units - Part 2: Phenomena Quantities and Units - Part 3: Quantities and Units - Part 3: Quantities and Units - Part 4: Quantities and Units - Part 5: Quantities and Units - Part 5: Quantities and Units - Part 6: Electromagnetic Radiations Quantities and Units - Part 7: Quantities and Units - Part 7: Quantities and Units - Part 8: Molecular Physics Quantities and Units - Part 9: Physics Quantities and Units - Part 10: Ionizing Radiations	vith the following General Principle Space and Time Periodic and Rel Mechanics Heat Electricity and M Light and Relate Acoustics Physical Chemis Atomic and Nucl	standards. es ated agnetism d try and ear ons and
	l) m) n)	JIS Z 8202-12 JIS Z 8202-13 JIS Z 8203	Quantities and Units - Part 12 Quantities and Units - Part 13 Quantities and Units - Part 13 SI Units and Recommendatio Multiples of Certain Other Un	:: Characteristic N :: Solid State Phy ns for the Use of its	Numbers rsics their
A.2.4.5	Mati Unle the t a)	hematical Symbo ess otherwise spe following standard JIS Z 8201 Ma	ls and Formula cified, mathematical symbols and d. thematical Symbols	formula shall cor	nply with
A.2.4.6	Rou Unle follo a)	inding of Numbers ess otherwise spe wing standard. JIS Z 8401 Gui	s cified, numbers shall be rounded ide to the Rounding of Numbers	n accordance wi	th the
A.2.4.7	Forr Unle stan a)	mats of Specificat ess otherwise spe idard. JIS Z 8301	ions cified, specification formats shall o Rules for the Layout and Draf Standards	comply with the fo	ollowing Industrial

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-7 –
A.2.4.8 Tolerances Tolerances shall be in a). Example: 2000 ⁺⁷² ho 2.54mm±0	ndicated as follows in accordance ours .25mm	with paragraph A	A.2.4.7, item
 A.3. Generic Specification As a minimum, the following specification in accordance appendixes shall be defined a) Revision record b) General c) Applicable documents d) Requirements e) Quality assurance proof f) Preparation for delivered g) Notes h) Appendix 	ng requirements shall be defined i e with this specification. Commor ed in the main body, if any. s ovisions ery	n the main body of requirements to	of generic all
 A.3.1 General The following items sha a) Scope b) Definition of terms c) Classification of pa d) Part number 	ll be defined. rt group		
A.3.1.1 Scope a) The text of this p Example: This specification assurance provis referred to as "re on space system This specification Space Use, Gen manufacturing lin a) NASDA-QTS	aragraph shall be in the following n establishes the general requirem sions for space use, high reliability esistors") which are used for electr ns. n complies with JAXA-QTS-2000 (eral Specification for) which is bas ne system, and supersedes the fol -55182G Resistors, Fixed, Film, Use, General Specifica	format. nents and quality r, resistors (hereir onic equipment in Common Parts/N sed on the qualifie lowing specificati High Reliability, S tion for	nafter nstalled Materials, ed ion. Space
b) If the above form necessary modif	hat cannot adequately define the s ication shall be made.	cope of the spec	ification, any

JA	XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-8 –	
A.3.1.2	 Definition of Terms a) Unless otherwise specified, the definition of terms shall conform to public standards such as JIS. b) Special terms, which are not covered in public standards such as JIS, and ambiguous terms shall be listed and defined in the specification. c) If there are so many terms to be defined, the definitions of those terms may be provided in the notes paragraph or in appendixes. In this case, the reference to a paragraph containing the definitions of terms shall be provided here. 				
A.3.1.3	Classification of Part Group The qualified parts may be further divided into part groups per configuration and/or functionality. Example: The classification of resistors shall be specified in Table 1. Table 1. Classification of Part Groups				
	Part group	Appendix of this specification	Equivalent QPL spe	ecification	
	Resistors, fixed, film	А	NASDA-QTS-55	5182G	
	Resistors, fixed, film, insulated small	В	NASDA-QTS-39	9014D	
A.3.1.4	Part Number The part number sh a) Use the existin if any. Example 1: JA>	all be assigned as follows. g part number and associated info (A ⁽¹⁾ <u>RNS55</u> <u>J</u> <u>1</u> Style Characteristic No res	ormation in the follo 001 <u>E</u> minal Resistan istance tolerance	owing format, ce	
	(see 1.3.1) (see 1.3.2) (see 1.3.3) (see 1.3.4) Note: ⁽¹⁾ "JAXA" indicates the part is certified for space use and may be abbreviated "J."				
	When a QPL specification is superseded by a generic specification, part numbers used in QPL specification may be also used in the generic specification.				
	Example 2: NASDA ⁽¹⁾ <u>CKS05</u> <u>BX</u> <u>100</u> <u>K</u> Style Characteristic Nominal Capacitance capacitance tolerance (see 1.3.1) (see 1.3.2) (see 1.3.3) (see 1.3.4)				
	Note: ⁽¹⁾ "NASD abbrev	A" indicates the part is certified for ated "N."	space use and ma	ay be	

J.	AXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-9 –	
	b) Otherwise, use Example: JAXA	the following format. ⁽¹⁾ <u>2345</u> / <u>A</u> <u>101</u> Generic Appendix Individu specification letter identifica number (acc 1, 2, 1) (acc 1, 2, 2) (acc 1, 2)	<u>(-A6G8)</u> ual Characteris ation identifier	stic	
	Note: ⁽¹⁾ "IAXA"	indicates the part is certified for sr	2.3) (See 1.2.4) / he	
	abbrevi	ated "J".			
	Example: Use t	he JEITA parts' numbering system	n for semiconduct	or devices.	
A.3.2	 Applicable and Other R This section shall spect a) Applicable document b) Reference document c) Order of precedent d) Detail specification 	elated Documents ify the following items. ents ents ice			
A.3.2.1	Applicable Documer	ts			
	a) The text of this	paragraph shall be in the following	format.		
	Example: The documents specified herein available at the designate an is NASDA-QTS-1 MIL-STD-23450	is listed below form a part of this sp n. The issues of these documents time of contract award or applicati sue, the issue shall be specified in 2345 (Title) 5 (Title)	ecification to the e are the latest ver on. If it is necess the detail specifie	extent sion sary to cation.	
	b) A revision letter specified.	shall not be given unless a particu	lar version needs	to be	
A.3.2.2	 Reference Documents The following document shall be listed as reference documents for the qualified parts. a) JERG-0-035 NASDA Parts Application Handbook Other reference documents shall be listed as required. 				
A.3.2.3	Order of Precedence The order of precede shall be specified in	ence of applicable specifications ar accordance with paragraph 2.2 of	nd applicable doc this specification.	uments	
A.3.2.4	Detail Specifications Unless otherwise sp	ecified, the text of this paragraph s	hall be in the follo	owing format.	

JA	AXA 7 ر	QTS-2000D July 2016	J A X A Parts Specification	Page	– A-10 –		
	Example: Detailed requirements for style and performance of the resistors are specified in each detail specification.						
 A.3.2.4.1 Detail Specification Number a) It shall be stated that the detail specification number shall be assigned in accordance with paragraph A.2.2.2 of this appendix. b) Rules to assign detail specification number shall be illustrated using an example. 					igned in ing an		
A.3.2.4.2 Revision Letter of Detail Specification It shall be stated that a revision letter in the detail specification number shall be assigned in accordance with paragraph A.2.2.2.4 of this appendix.					r shall be		
A.3.2.4.3 Independency of D The text of this par			etail Specification agraph shall be in the following for	rmat.			
		Example: The detail specific document number	ation shall be a stand-alone docur	nent with a uniqu	е		
A.3.2.4.4 Format of Detail Sp It shall be stated th paragraph A.6., ite in the detail specifi (Detail Specificatio			pecification nat the format of detail specification m b) of this appendix. It shall be a cation shall be specified in accord n).	n shall be in acco also stated that re ance with paragra	rdance with quirements aph A.4		
A.3.3	Rec	quirements					
	The	e following items sha	all be defined.				
	b)	Certification					
	c)	Quality assurance	program				
	a) e)	Design and constru	uction				
	f)	External view, phys	sical dimensions, mass and marki	ng			
	g)	Workmanship					
	п) i)	Screening					
j) Electrical performa		Electrical performa	ance				
	k)	Mechanical perform	nance				
	l) m)	Environmental per Durability	formance				
	ing Durability						

L

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– A-11 –		
A.3.3.1	General Requirements General requirements shall be specified only when deemed necessary. For example, it shall be stated that detail requirements of the qualified parts shall comply with the detail specification.					
A.3.3.2	Certification Requirements for certification and retention of certification shall be specified with regard to the items listed in the following paragraphs in accordance with this specification.					
A.3.3.2.1	Qualification Coverage The coverage of qualification for each item (element) shall be specified in the main body or each appendix. It shall be stated that details of qualification coverage which cannot be specified in the main body or appendix shall be covered in the detail specification.					
A.3.3.2.2	Initial Qualification It shall be stated th paragraph 3.4.1 of	at qualification tests shall be cond this specification.	lucted in accorda	nce with		
	Example: To acquire certifica a quality assuranc paragraph 3.3, cor acquire an approva 2000. The manufa the Japan Aerospa	ation under this specification, a ma e program that meets the requirer nduct the qualification tests specifi al from JAXA as specified in parag acturer shall be listed on the Quali ace Exploration Agency (JAXA QM	anufacturer shall nents specified ir ed in paragraph 4 graph 3.4.1 of JA fied Manufacture /IL).	establish 1 4.3.1, and XA-QTS- rs List of		
A.3.3.2.3	Retention of Qualification It shall be stated that a manufacturer shall apply for retention of the certification in accordance with paragraph 3.4.2 of this specification, with results of the quality conformance inspection and maintenance status of quality assurance program within the effective period of certification. A procedure to apply for retention of certification shall be specified, where no product was manufactured during the effective period of certification.					
A.3.3.2.4	Effective Period of Effective period of three years.	Certification certification shall be specified. Th	e period shall no	t exceed		
A.3.3.2.5	Change of Qualifica When the manufac that a manufacture specification. It shall be stated th items which might l	ation Coverage turer has changed the qualification r shall be requalified in accordanc at, in principle, requalification sha be affected by the change.	n coverage, it sha e with paragraph Il be conducted o	all be stated 3.4.3 of this nly for the		

JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-12 –	
A.3.3.3	Quality Assurance P	rogram			
A.3.3.3.1	Quality Assurance It shall be stated th in accordance with assurance progran the complete quali	Program nat a manufacturer shall establish a paragraph 3.3 and Appendix C, a n plan (hereinafter referred to as "(ty assurance program.	a quality assuran Ind generate a qu QAP plan") which	ce program iality i documents	
A.3.3.3.2	 TRB Formation It shall be stated that a manufacturer shall form a Technical Review Board (TRB) in accordance with paragraph 3.3.5 of this specification. 				
A.3.3.4	 Materials a) Requirements for materials shall be specified. b) Prohibited materials for space use shall be specified. c) It shall be stated that general requirements on materials shall be specified in the manufacturing conditions of the quality assurance program. d) If necessary, it shall be stated that detail requirements shall be specified in the detail specification. 				
A.3.3.5	 Design and Construction a) Requirements for critical design and construction of the qualified parts shall be specified. b) If necessary, it shall be stated that detail requirements shall be specified in the detail specification 				
A.3.3.6	 External View, Physical Dimensions, Mass and Marking a) Requirements for external view, physical dimensions, mass and marking shall be specified. b) For example, requirements of interface with other devices including leads, mounting structure, plating and mass shall be specified. c) If necessary, it shall be stated that detail requirements shall be as specified in the detail specification 				
A.3.3.7	 .7 Workmanship a) Requirements for workmanship shall be specified. b) For example, verification requirements such as precap, PIND, radiography and DPA shall be specified. c) If necessary, it shall be stated that detail requirements shall be specified in the detail specification. 				
A.3.3.8	 Specifications a) Specifications shall be specified. b) If necessary, it shall be stated that detail requirements shall be as specified in the detail specification. 				

J/	AXA-Q 7 Jul	TS-2000D y 2016	J A X A Parts Specification	Page	– A-13 –	
A.3.3.9	 A.3.3.9 Screening a) Requirements for screening shall be specified. b) For example, verification requirements such as thermal tests, mechanical tests, radiography or other appropriate methods shall be specified. c) If necessary, it shall be stated that detail requirements shall be as specified in the detail specification. 					
A.3.3.10	Ele	ctrical Performanc	e			
	a) b)	Requirements fo If necessary, it sl the detail specific	r electrical performance shall be s hall be stated that detail requirement cation.	pecified. ents shall be as s	pecified in	
A.3.3.11	Me	chanical Performa	nce			
	a) b) c)	Requirements fo For example, ver solderability, resi If necessary, it so the detail specific	for mechanical performance shall be specified. rerification requirements with regard to terminal strength, esistance to soldering heat and sealing shall be specified. shall be stated that detail requirements shall be as specified in ification.			
A.3.3.12	En	vironmental Perfor	mance			
	a) b) c)	Requirements for For example, ver vibration test, so (reduced) test, the test, thermal vac outgassing test a If necessary, it so the detail specific	r environmental performance shal rification requirements such as sho lvent resistance test, salt spray test nermal shock test, thermal and imr uum test, radiation hardness test, and odor test shall be specified. hall be stated that detail requirement cation.	I be specified. bock test, accelera st, barometric pre mersion cycling te flammability test ents shall be as s	ition test, essure est, humidity , offgas test, epecified in	
A.3.3.13	Dur	rability				
	a) b) c)	Requirements fo For example, ver life shall be spec If necessary, it sl the detail specific	r durability shall be specified. ification requirements with regard ified. hall be stated that detail requirement cation.	to storage life ar ents shall be as s	nd operating	
A.3.4	Qualit	y Assurance Provi	sions			
	The formal a) G b) C c) In d) G e) G f) T g) L h) C	ollowing items sha General requireme Classification of tes n-process inspecti Qualification test Quality conformance Test method Long-term storage Change of tests an	Il be specified in the quality assurants sts and inspections on ce inspection d inspections	ance provisions.		

JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-14 –	
A.3.4.1	General Requirement It shall be stated that quality assurance pro- manufacturer shall ha (TRB) properly. Othe provisions shall be sp	ts a manufacturer shall be responsib ogram in accordance with paragrap ave the obligation to operate the To er requirements specially required becified.	ble for implement ohs 4.1 and 4.2, a echnical Review for quality assura	ation of the and that the Board ance	
A.3.4.2	Classification of Test Paragraph 4.3 of this necessary for the clas	s and Inspections specification shall be referenced. ssification of the qualified parts sha	Other requireme all be also specifi	ents ied.	
A.3.4.3	 In-Process Inspection a) The in-process inspection shall be specified, in order to detect any failure which could seriously affect the reliability and quality of the products, assure the workmanship, and identify the characteristic properties which cannot be measured after parts are finished products. Examples are shown below. 1) Internal visual inspection of semi-finished products (100% or sampled inspection for non-destructive inspection) 2) Physical and chemical inspection of semi-finished products (destructive inspection or 100% or sampled inspection for non-destructive inspection) 3) Characterization of semi-finished products (100% or sampled inspection for non-destructive inspection) b) It shall be stated that the in-process inspection shall be defined in the manufacturing process flowchart of a QAP plan specified in Appendix C, and 				
A.3.4.4	 Qualification Test The following items shall be specified in the provision of qualification test. a) Samples b) Production records c) Test items and number of samples d) Criteria for pass/fail e) Miscellaneous 				
A.3.4.4.1	Samples a) It shall be stat manufacturing b) Selection of sa coverage.	ed that samples shall be manufact conditions specified in the quality amples shall be specified in relatio	tured in accordan assurance progr n to the qualificat	ice with the am. ion	
A.3.4.4.2	Production Records It shall be stated th shall archive and n data or test data of and in-process insp	s nat a manufacturer, which intends t nanage certificates of materials, ar materials, process records during pection data, and submit them upo	to acquire certific nd acceptance ins the production o on request.	ation status, spection f samples	

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– A-15 –
A.3.4.4.3	Test Items and Nu a) Test items for b) Sampling plar shall be speci c) If necessary, i be as specifie	mber of Samples qualification test shall be provided n, distribution of samples to each te fied. t shall be stated that detail require d in the detail specification.	in the form of tal est group and ord ments of test met	oles. er of tests hods shall
A.3.4.4.4	Criteria for Pass/Fa a) Criteria for pa b) Disposition of defectives doe the failure mo	ail ss/fail shall be specified. the accepted products shall be spe es not exceed the permitted numbe de of the defectives is catastrophic	ecified, when the er of defectives sp c.	number of becified, but
A.3.4.4.5	Miscellaneous Miscellaneous thin disposition of sam	gs such as disposition of non-conf oles, sample storage shall be spec	ormance, post-te ified.	st
A.3.4.5	 Quality Conformance The following items is inspection. a) Classification of b) Samples c) Test items and r d) Criteria for pass e) Post-test dispos f) Miscellaneous 	Inspection hall be specified in the provision of tests number of samples /fail ition of sample	f quality conforma	ance
A.3.4.5.1	 Classification of Tele Classification of tele conformance inspective a) Group A: Quading the mainufacture b) Group B: Quading the mainufacture c) Group C: Quading the conducting the 	ests ests shall be specified. Unless othe ection shall be grouped as follows. ality conformance inspection to be nufacturing processes. ality conformance inspection to be during the effective certification pe ality conformance inspection to be duction, when no products were ma ication period and the recertification e quality conformance inspection.	erwise specified, of performed for all performed with the performed at the anufactured durin on was obtained v	quality products ne first lot time of g the vithout
A.3.4.5.2	Samples Criteria for sample	selection and constitution of an ins	spection lot shall	be specified.
A.3.4.5.3	Test Items and Nur a) Test items and qualification te b) Order of each	mber of Samples d the number of samples shall be s ests. test of the quality conformance ins	specified based o spection shall be	n those of specified.

JAX	(A-QTS 7 July 2	S-2000D 2016	J A X A Parts Specification	Page	– A-16 –
	c)	If necessary, i in the detail sp	t shall be stated that detail require becification.	ments shall be as	s specified
A.3.4.5.4	Crit	eria for Pass/Fa	ail		
	a)	Criteria for pas	ss/fail shall be specified.		
	b)	Disposition of defectives doe the failure mod	the accepted products shall be sp es not exceed the permitted number de of the defectives is catastrophic	ecified, when the er of defectives s c.	number of pecified, but
	c)	If necessary, i in the detail sp	t shall be stated that detail require pecification.	ments shall be as	s specified
A.3.4.5.5	Pos	st-Test Dispositi	on of Sample		
	a) b)	In the case of Disposition of	non-conformance, disposition of the products subjected to destruct	he products shall ive test shall be s	be specified. specified.
A.3.4.5.6	Mis	cellaneous			
	lf n det	ecessary, it sha ail specification	II be stated that detail requirement	ts shall be specifi	ed in the
A.3.4.6	Test I	Vethod			
	 Test Method a) Conditions of the tests and inspections shall be specified. b) Test methods shall be specified to verify the conformance of the common parts/materials to the requirements defined in each applicable specification in accordance with paragraphs A.3.3.4 through A.3.3.13 of this appendix. 1) Materials 2) Design and construction 3) External view, physical dimensions and marking 4) Workmanship 5) Screening 6) Electrical performance 7) Mechanical performance 8) Environmental performance 9) Durability c) It shall be stated that requirements shall be verified by analysis when they cannot be verified by tests. d) It may be stated that detail requirements shall be as specified in the detail 				mmon ification in dix. en they e detail
A.3.4.6.1	Mat	erials			
	a)	Test methods	to verify the conformance of the m	naterials to the re	quirements
	b)	Verification review of qual	quirements for certification such as ity assurance program shall be spe	s certificates of m ecified.	aterials and
A.3.4.6.2	Des	sign and Constru	uction		
	a)	Verification me DPA shall be s	ethods for the requirements of des specified.	ign and construc	tion such as

JAXA 7	-QTS July 2	-2000D 016	J A X A Parts Specification	Page	– A-17 –		
	b)	Verification red	quirements for certification and shi	ipment shall be s	pecified.		
A.3.4.6.3	Exte	ernal View, Phy	sical Dimensions and Marking				
	a)	Verification me and marking s	Verification methods for the requirements of externals, physical dimensions				
	b)	Accuracy and specified.	magnification requirements of me	asuring equipme	nt shall be		
A.3.4.6.4	Wor Veri	kmanship ification methoo	ls for the requirements of workma	nship shall be sp	ecified.		
A 3 4 6 5	Scre	ening	·				
7.3.4.0.3	Veri	fication method	ls for the requirements of screenir	na shall be specifi	ed.		
12166	Eloc	trical Parforma		5			
A.3.4.0.0	a)	Verification me	ethods for the requirements of electronic e electronic e elec	ctrical performanc	ce shall be		
	b)	Unless otherw following stand necessary. 1) MIL-STD-	ise specified, test methods shall b dards. Special conditions for tests 202	e in accordance shall be specifie	with the d, if		
		 Test Meth 2) MIL-STD- Test Meth 3) MIL-STD- 	nod Standard, Electronic and Elect 750 nod Standard, Semiconductor Dev 883	trical Component	Parts		
	c)	Vhen no stan specified.	hod Standard, Microcircuits dards of test methods are availabl	e, the test metho	ds shall be		
A.3.4.6.7	Мес	hanical Perform	nance				
	a)	Verification me be specified.	ethods for the requirements of me	chanical performa	ance shall		
	b)	Unless otherw standards spe tests shall be	ise specified, test methods shall b cified in paragraph A.3.4.6.6, item specified, if necessary.	e in accordance b). Special cond	with the ditions for		
	c)	When no stan specified.	dards of test methods are availabl	e, the test metho	ds shall be		
A.3.4.6.8	Envi	ironmental Perf	ormance				
	a)	Verification me	ethods for the requirements of env	ironmental perfo	mance shall		
	b)	Unless otherw standards spe	ise specified, test methods shall b cified in paragraph A.3.4.6.6, item	e in accordance b). Special cond	with the litions for		
	c)	When no stan specified.	dards of test methods are availabl	e, the test metho	ds shall be		

٦	AXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– A-18 –	
A.3.4.6.9	 1.6.9 Durability a) Verification methods for the requirements of durability shall be specified. b) Unless otherwise specified, test methods shall be in accordance with the standards specified in paragraph A.3.4.6.6, item b). Special conditions for tests shall be specified, if necessary. c) When no standards of test methods are available, the test methods shall be specified. 					
A.3.4.7	Long-Term Sto	orage				
 A.3.4.7.1 Disposition of Lots Stored for a Long Term at Manufacturer's Site Disposition of lots stored for a long term shall be specified in accordance with paragraph 4.3.4 of this specification. a) Period of storage b) Test item c) Test date d) Identification of products 					nce with	
A.3.4.7.2 Storage by Purchasers It shall be stated that conditions and period of storage by purchasers shall be specified in the detail specification.				shall be as		
A.3.4.8 Change of Tests and The change of tests a conformance inspect			Inspections and inspections for the in-process i on shall be specified.	inspection and qu	uality	
Example: If the manufacturer wishes to change or delete the test and/or ins process inspections and quality conformance inspections, paragr of JAXA-QTS-2000 shall apply.			and/or inspectio ons, paragraphs 4	ns of the in- I.4 and 6.1		
A.3.5	 A.3.5 Preparation for Delivery Paragraph 5 of this specification shall be referenced, and the following shall be specified. a) Packaging b) Marking on package 					
A.3.6	 A.3.6 Notes Miscellaneous things that are not covered in the previous paragraphs shall be specified. Examples are shown below. a) Notice for a QML manufacturer b) Notice for acquisition officers (Items to be specified at the time of procurement such as part number, applicable specification number, deliverable data and source inspection shall be specified.) c) Notes for preparation and registration of application data sheets 				be , applicable specified.)	

	JAXA-QTS-2000D	J A X A	Page	_ Δ_1Q _
	7 July 2016	Parts Specification		- A-13 -
A.3.7	Appendix			
	Appendixes shall be us Unless otherwise speci the main body or for ea	ed, if necessary, to supplement fied, appendixes shall be prepar ch type of qualified parts.	or add details to the ed separately for ea	e main body ach item of
A.4.	Detail Specification			
	 a) Revision record b) General c) Applicable document d) Requirements e) Quality assurance profi f) Preparation for deliver g) Notes 	all specify the following items. s ovisions ery		
A.4.1	General			
	Unless otherwise speci	fied, the following items shall be	specified.	
	b) Part number			
	c) Specifications			
A A A A				
A.4.1.1	Scope The scope of the deta generic specification.	ail specification shall be specifie	d, indicating the ap	plicable
	Example:			
	This specification es 70 of film, fixed resis context of the space	tablishes the detailed requireme tors (specified in appendix A of use, high reliability, resistors (sp	nts for RNS50, 55, JAXA-QTS-2050), pecified in JAXA-Q	60, 65 and in the TS-2050).
A.4.1.2	Part Number			
	Part number shall be specification.	specified in accordance with the	e applicable generio	2
A.4.1.3	8 Specifications			
			_	

A.4.1.4 Miscellaneous

Miscellaneous things shall be specified.

A.4.2 Applicable Documents

Applicable documents such as generic specifications shall be listed in accordance with paragraph A.3.2.

J	IAXA- 7 J	QTS-2000D July 2016	J A X A Parts Specification	Page	– A-20 –	
A.4.3	 .4.3 Requirements a) Requirements shall be specified in accordance with the applicable generic specification. b) Unique requirements shall be provided if necessary. c) A detail specification shall specify items that are required in the generic specification to specify in a detail specification. d) Performance requirements may be tabulated, if appropriate, indicating compliance with the requirements defined in the generic specification. 					
A.4.4	Qua	ality Assurance Prov	isions			
A.4.4.1	 4.4.1 General a) Quality assurance provisions shall be specified in accordance with the applicable generic specification. b) Unique requirements shall be specified. c) Test items of screening test, if applicable, in-process inspection, qualification test and quality conformance inspection may be tabulated in association with the requirements of the generic specification. 					
A.4.4.2	A.4.4.2 Change of Tests and Inspections If the manufacturer wishes to change or delete the test and/or inspections of the in- process inspections and quality conformance inspections specified in the applicable generic specifications at the issuance of a detail specification or the revision, the manufacturer shall describe the rationale that the products shall satisfy the quality assurance requirements after the implementation of the change as specified in paragraphs 4.4 and 6.1 of this specification					
A.4.5	Pre	paration for Delivery				
	 a) Requirements of preparation for delivery shall be specified in accordance with the applicable generic specification. b) If there are conditions and/or maximum period of storage that must be observed by purchasers, those conditions and/or maximum period of storage shall be specified. c) Unique requirements shall be specified, if necessary. 					
A.4.6	Not Not	es es shall cover what	is not specified above.			
A.5.	Notice	e of Change				
A.5.1	Sco A n spe	pe otice of change shal cification.	I be prepared in accordance with p	baragraph 6.2 of	this	
A.5.2	Ger a)	neral Requirements A notice of change specification.	shall be issued for each generic s	pecification or de	etail	

	JAXA 7、	-QTS-2000D July 2016	J A X A Parts Specification	Page	– A-21 –	
	b)	The notice of chan original specification	ges shall remain effective until a re on.	evision is issued f	for the	
A.5.3	Inst	tructions for Prepara	tion			
	a) b)	Each change shall be described in the order of pages on which the paragraph appears in the original specification. Description before and after the change and rationale for the change shall be described.				
	c)	unchanged. Example: 3.4.2 (ti	itle) Deleted			
	d)	When numerous cl	hanges are made to a paragraph,	rewrite the whole	paragraph.	
A.6.	Form	ats of Applicable Spe	ecifications			
	a) A b) A	An example of gener An example of detail	ic specifications is shown in A-1. specifications is shown in A-2.			
	c) A	An example of notice	of change is shown in A-3.			

7 July 2016	J A X A Parts Specification	Page	– A-22 –
Example: Format A-1 Generic Sp	pecification		
Cover sheet) ⁽¹⁾			
		Regist	ation No. xx
		-AXAL	QTS- xxxxG (date)
		JAXA	Superseding -QTS-xxxxF Cancelled (date)
GE	RESISTORS, HIGH RELIABILITY, SPACE USE, NERAL SPECIFICATION FO	R	
JAPAN AE	JAXA ROSPACE EXPLORATION /	AGENCY	
<u> </u>			

JAXA-QTS-2000D 7 July 2016)0D	J A X A Parts Specification		Page		– A-23 –	
(Example: Format A-1 (Revision record)							
	JAX Day	A-QTS-xxx y Month Yea	xG ar	J A X A Parts Specification		Page		- i -
	Rev.	Date		Issue/revision record Description				

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– A-24 –
Example: Format A-1 (Table of contents)				
JAXA-QTS-xxxxG Day Month Year		J A X A Parts Specification	Page	- ii -
		Contents		
1. GENERAL				1
1.1 Scope				1
1.2 Terms and Defi	nitions	S		1
1.3 Classification				2
1.4 Part Number		(continues)		1
2. APPLICABLE DOCL	JMEN	TS		2
	ument	(continues)		2

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-25 –					
Example: Format A-1 (Text)								
JAXA-QTS-xxxxG	JAXA	_						
Day Month Year	Parts Specification	Page	- 1 -					
	RESISTORS,							
	HIGH RELIABILITY, SPACE USE,							
	GENERAL SPECIFICATION FOR							
1. GENERAL								
1.1 Scope								
This specification estab for space use, high relia	This specification establishes the general requirements and quality assurance provisions for space use, high reliability, resistors (continues)							
1.2 Terms and Definitions								
The definitions for terma a) Derating curve: Th	s used herein are as shown below. ne curve(continues)							
1.3 Classification								
Products covered by th	s specification shall (continu	es)						
,		,						
1.4 Part Number								
The part number is defi nominal resistance and	ned in the following format and identi resistance tolerance.	fies the style, chara	acteristic,					
Example: JAXA ⁽¹⁾ <u>RNS</u> Style (see 1.	55 - <u>J</u> - <u>1001</u> - Characteristic Nominal Re Resistance 4.1) (see 1.4.2) (see 1.4.3) (s	<u>F</u> esistance tolerance see 1.4.4)						
Note: ⁽¹⁾ "JAXA" indicate	es the common part for space use an (continues)	, id may be abbreviat	ted to "J".					
2. APPLICABLE DOCUMEN	TS							
2.1 Applicable Documents	2.1 Applicable Documents							
The documents listed b documents are	elow form a part of this specification continues)	as specified herein.	. These					
JAXA-QTS-2000 Co MIL-STD-202 Te	JAXA-QTS-2000 Common Parts/Materials, Space Use, General Specification for MIL-STD-202 Test Method Standard, Electronic and Electrical Component Parts (continues)							

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-26 –				
Example: Format A-2 Detail Spe	cification						
(Cover sheet) ⁽¹⁾							
		Regist	ration No. xx				
		JAXA-QTS-	·××××/A×××A (date)				
		JAXA -QTS	Superseding S-×××/A××× Cancelled (date)				
	RESISTORS, FIXED, FILM,						
	HIGH RELIABILITY, SPACE USE,						
D	ETAIL SPECIFICATION FOR	2					
Prepared and	d Established by: ABCD COR	PORATION					
Issued by: JAPA	AN AEROSPACE EXPLORAT		(
Note: ⁽¹⁾ The purpose of Example Format A-2 is to show the format for detail specification. Contents used here vary for each part.(The same applies next few pages)							

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification		Page	– A-27 –		
Ex (R	ample: Form evision recor	at A-2 d)		· · · ·			
	JAXA-QTS Day Mo	-××××/A×××. onth Year	A	J A X A Parts Specification		Page	- i -
				Revision Record			
	Rev.	Date		Descri	iption		

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification		Page		– A-28 –		
Example: Fo (Table of co	ormat A-2 ontents)							
JAXA-QT Day M	S-×××/A×××A lonth Year		J A X A Parts Specification		Page		- ii -	
			Contents					
1. GE	NERAL						1	
1.1	Scope						1	
1.2	Part Number						1	
1.3	Ratings		(continuos)				2	
			(continues)					
2. API	PLICABLE DOCU	JMEN	TS				2	
			(continues)					
3. RE	QUIREMENTS						2	
3.1	Performance		·····				2	
			(continues)					
4. QU	ALITY ASSURAN	ICE P	ROVISIONS				3	
4.1	In-Process Insp	ection					3	
4.2	Qualification Te	st					4	
4.3	Quality Conform	nance	Inspection				5	
4.4	Long-Term Stor	age					7	
4.5	Changes of Tes	sts and	Inspections				7	
5. PRI	EPARATION FOR	R DEL	IVERY				7	
6. NO	TES						7	

JAXA-QTS-2000D 7 July 2016	Parts	J A X A Specification	Page	– A-29 –	
Example: Format A-2 (Text)					
JAXA-QTS-××××/A×××A Day Month Year	J Parts ۹	A X A Specification	Page	- 1 -	
	RESISTOR HIGH R SP/ DETAIL SPE	RS, FIXED, FILM, RELIABILITY, ACE USE, ECIFICATION FOR			
1. GENERAL					
1.1 Scope					
 1.1 Scope This specification establishes the detailed requirements for RNS50, 55, 60, 65 and 70 of film, fixed resistors (specified in appendix A of JAXA-QTS-××××), in the context of the space use, high reliability, resistors (specified in JAXA-QTS-××××). 1.2 Part Number The part number is defined in the following format and identifies the style, characteristic, nominal resistance and resistance tolerance. Example: JAXA⁽¹⁾ <u>RNS55</u> - J - 1001 - E Style Characteristic Nominal resistance Resistance tolerance (see A.1.3.1) (see A.1.3.2) (see A.1.3.3) (see A.1.3.4) Note: ⁽¹⁾ "JAXA" indicates the common part for space use and may be abbreviated to "J."					
Applic	Table 1.	Part Number			
Item Applic of JA	able paragraph	S	Specification		
Style	A.1.3.1	RNS55			
Resistance	A.1.3.2 A.1.3.3	J (±25ppm/°C for -55°C Example: 100R00=100 (Identified by a six-digi	το 175°C) Ω t number.) ⁽¹⁾		
Resistance tolerance	A.1.3.4	V (±0.005%), T (±0.01 B (±0.1%), C (±0.25%)	%), A (±0.05%), , D (±0.5%), F (±1	.0%)	
Note: ⁽¹⁾ For the resistance tolerand number.	ance of C, D or	F, the resistance sha	l be identified by	a four-digit	

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-30 –
kample: Format A-2			
ext)			
JAXA-QTS-××××/A×××A	JAXA	Daga	2
Day Month Year	Parts Specification	Page	- 2 -
1.3 Ratings The ratings are shown	in Table 2.		
	Table 2. Ratings		
Item	Requirement paragraph of JAXA QTS-××××	A- Specific	cation
Operating temperature range	(°C) A.3.5.2	-55 to -	+175
Rated ambient temperature (C) A.3.5.3	12	5
Derating curve	A.3.5.4	As specified i	in Figure 1.
Style	-	30.1 to	100k
Power rating (W)	A.3.5.3	30.110	
Maximum operating voltage (∧) A.3.5.5	300	0
Power rating at 70°C	-	0.6	6
Maximum operating voltage a	t 70°C -	300	0
2. APPLICABLE DOCUMEI Applicable documents ar	(continues) NTS e as specified in paragraph 2.1 c	of JAXA-QTS-××××	
	(continues)		
3. REQUIREMENTS Requirements shall be as	s specified in paragraph A.3 of J	AXA-QTS-××××.	
3.1. Performance The performance shall	comply with Table 3.		

	JAXA-QTS-2000D 7 July 2016		ر J Parts S	A X A pecification	Page	– A-31 –	
E (Example: Format A-2 Text)						
	JAXA-QTS-××××/A×××A J Day Month Year Parts S			X A ecification	Page	- 3 -	
	Table 3.			Performance			
	Item	Test method paragraph of JAXA-QTS-××××			Performance		
	Materials		A.3.2	As specified in Ap	ppendix A of JAXA-QTS-××××.		
	External view, physical dimensions, marking	A.3.3		As specified in Su	pplementary Figure X.		
	Thermal shock (I)	A.3.8.3		As specified in Ap	cified in Appendix A of JAXA -QTS-×××.		
	Thermal shock (II)	A.3.8.3		As specified in Appendix A of JAXA -QTS-×××.			
	Overload	A.3.6.1		As specified in Appendix A of JAXA -QTS-xxxx.			
	Resistance		A.3.6.2	As specified in Appendix A of JAXA -QTS-××××.			
	Radiography		A.3.4.1	As specified in Ap	pendix A of JAXA -QT	S-××××.	

(continues)

4. QUALITY ASSURANCE PROVISIONS

The quality assurance provisions shall comply with paragraph A.4 of JAXA-QTS-××××.

4.1 In-Process Inspection

The in-process inspection shall comply with paragraph 4.3 of JAXA -QTS-××××. [The changes shall be made to xxx test. The details and rationale of the change shall be specified in paragraph 4.4. (These sentences are added when any changes have been made.)]

Table 4.	In-Process	Inspection
----------	------------	------------

Test item	Requirement paragraph	Test method paragraph	Quantity of samples
External view and physical dimensions	A.3.3	A.4.3.2	100%
Plating thickness	-	-	100%

(continues)
JAXA-QTS-2000D 7 July 2016		S-2000D 2016	J A X A Parts Specification		Page	– A-32 –			
Exa (Te	ample: ext)	Forma	at A-2						
	JAXA-QTS-××××/A×××A JAXA							4	
	D	ay Mo	onth Year	Parts Sp	ecification		Page	- 4 -	
	4.2. Qualification Test The qualification test shall comply with paragraph A.4.1 of JAXA-QTS-××××. Table 5. Qualification Test								
			Test		_		Pass/fail		
	Group	Order	ltem	Require- ment paragraph	Test method paragraph	Qu	antity of samples	Quantity of allowable defects ⁽²⁾	
		1	External view, physical dimensions and marking ⁽¹⁾	A.3.3	A.4.3.2				
		2	Thermal shock (I)	A.3.8.3.1	A.4.3.6.3.1	565		0	
		3	Overload	A.3.6.1	A.4.3.4.1	(all sam	ples except for I-6 and	d U	
		4	Resistance	A.3.6.2	A.4.3.4.2				
		5	Radiography	A.3.4.1	A.4.3.3.1				
		6	Destructive physical analysis (DPA)	A.3.4.2	A.4.3.3.2	2 or 3 ⁽²⁾		0	
	IA	1	Solderability ⁽³⁾	A.3.7.3	A.4.3.5.3	12	Any resistance	0	
		2	Resistance to solvents ⁽³⁾	A.3.8.5	A.4.3.6.5	12		0	
		1	Resistance-temperature characteristic	A.3.6.3	A.4.3.4.3	(10	Maximum resistanc	e	
	П	2	Low temperature storage	A.3.8.6	A.4.3.6.6	10	Critical resistance o	^r 1	
		3	Low temperature operatior	A.3.8.7	A.4.3.6.7	10	Minimum resistance	e	
		4	Terminal strength	A.3.7.1	A.4.3.5.1				
				(con	tinues)				

JAXA-QTS-2000D 7 July 2016			J A Parts Sp	A X A pecification	Pa	age	– A-33 –	
xample: F Fext)	Format A	A-2						
JAXA	-QTS-×× ay Montl	×××/A×××A h Year	J <i>F</i> Parts Sp	A X A pecification	F	Page	- 5 -	
4.3.	 4.3. Quality Conformance Inspection The quality conformance inspection shall comply with paragraph A.4.2 of JAXA-QTS- ××××. [The changes shall be made to xxx tests. The details and rationale of the change shall be specified in paragraph 4.4. (These sentences are added when any changes have been made.)] 							
		Test				Par	ss/fail	
Sub- group	Order		Item	Requirement paragraph	Test method paragraph	Quantity of samples	Quantity of allowable defects	
	1	Thermal shock	(()	A.3.8.3.1	A.4.3.6.3.1			
A1	2	Overload						
				A.3.6.1	A.4.3.4.1	100%	0	
	3	Resistance		A.3.6.1 A.3.6.2	A.4.3.4.1 A.4.3.4.2	100%	0	
A2	3 1	Resistance External view, dimensions an	physical d marking ⁽¹⁾	A.3.6.1 A.3.6.2 A.3.3	A.4.3.4.1 A.4.3.4.2 A.4.3.2	100% AQL	00	
A2 A3	3 1 1	Resistance External view, dimensions an Radiography ²⁾	physical d marking ⁽¹⁾	A.3.6.1 A.3.6.2 A.3.3 A.3.4.1	A.4.3.4.1 A.4.3.4.2 A.4.3.2 A.4.3.3.1	100% AQL 100%	04.0%0	
A2 A3 A4	3 1 1 1	Resistance External view, dimensions an Radiography ²⁾ DPA ⁽³⁾	physical d marking ⁽¹⁾	A.3.6.1 A.3.6.2 A.3.3 A.3.4.1 A.3.4.2	A.4.3.4.1 A.4.3.4.2 A.4.3.2 A.4.3.3.1 A.4.3.3.2	100% AQL 100% 2 or 3	0 - 4.0% 0 0	
A2 A3 A4	3 1 1 1 1	Resistance External view, dimensions an Radiography ²⁾ DPA ⁽³⁾ Resistance-ter characteristic	physical d marking ⁽¹⁾ nperature	A.3.6.1 A.3.6.2 A.3.3 A.3.4.1 A.3.4.2 A.3.6.3	A.4.3.4.1 A.4.3.4.2 A.4.3.2 A.4.3.3.1 A.4.3.3.2 A.4.3.4.3	100% AQL 100% 2 or 3	0 - 4.0% 0 0	
A2 A3 A4 A5	3 1 1 1 1 2	Resistance External view, dimensions an Radiography ²⁾ DPA ⁽³⁾ Resistance-ter characteristic Dielectric withs (atmospheric p	physical d marking ⁽¹⁾ nperature standing voltage pressure)	A.3.6.1 A.3.6.2 A.3.3 A.3.4.1 A.3.4.2 A.3.6.3 A.3.6.4	A.4.3.4.1 A.4.3.4.2 A.4.3.2 A.4.3.3.1 A.4.3.3.2 A.4.3.4.3 A.4.3.4.3	100% AQL 100% 2 or 3 AQL	0 - 4.0% 0 - 2.5%	

(continues)

JAXA-QTS-2000D 7 July 2016			J A X A Parts Specification			Page		– A-34	
nple: Fo t)	rmat A-	2				L			
JAXA-Q	TS-×××	:/A×××A	J	ΑΧΑ					
Day	Month Y	′ear	Parts S	pecification		Pa	age		- 6 -
		Tabla 10	Quality Con	formanaa Inan	ootio		n P)		
						ii (Giou	р в)	Pas	s/fail
Sub- group	Order	1631	ltem	Requirement paragraph	n pa	Test nethod ragraph	Quantit sampl	y of es	Quantity o allowable defects
	1	Resistance-to characteristic	emperature	A.3.6.3	A.	4.3.4.3			
B1	2	Dielectric wit voltage	hstanding	A.3.6.4	A.	4.3.4.4	10		0
	3	Insulation rea	sistance	A.3.6.6	A.	4.3.4.5			
	4	Resistance to	o soldering heat	A.3.7.4	A.	4.3.5.4	-		
	5	Moisture resi	stance	A.3.8.4	A.	4.3.6.4			
Do	1	Solderability		A.3.7.3	A.	4.3.5.3	_		<u> </u>
B2	2	Resistance to	o solvents	A.3.8.5	A.	4.3.6.5	5		0
	1	Low tempera	ture storage	A.3.8.6	A.	4.3.6.6			0
B3	2	Low tempera	ture operation	A.3.8.7	A.	4.3.6.7	10		
	3	Terminal stre	ength	A.3.7.1	A.	4.3.5.1			
B4	1	Life (125°C)		A.3.9.1	A.	4.3.7.1	10		0
B5	1	Life (70°C)		A.3.9.2	A.	4.3.7.2	10		0
B6	1	Stability ⁽¹⁾		A.3.8.8	A.	4.3.6.8	10		0
	and insu	ulation resista Table 11	ance test shall b , Quality Con í	be performed. (continues) formance Insp	oectio	n (Grou	р С)		
		Test			-	Taat		Pass	s/fail
Sub- group	Order		ltem	Requirement paragraph	me para	est ethod agraph	Quantity sample	of s	Quantity of allowable defects
0.1	1	Shock		A.3.8.2	A.4	.3.6.2	4.0		0
	2	High frequ	ency vibration	A.3.8.1.1	A.4.	3.6.1.1	10		U
C2	1	Thermal s	hock (II)	A.3.8.3.2	A.4.	3.6.3.2	10		0
C3	1	Random v	ribration	A.3.8.1.2	A.4.	3.6.1.2	10		0
C4	1	Voltage co	pefficient	A.3.6.5	A.4	.3.4.6	10		0
04	2	Mechanic	al shear ⁽¹⁾	A.3.7.2	A.4	.3.5.2	10		0
Note: ⁽¹⁾	Applica	ble to RNS5). (c	continues)					

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– A-35 –					
Example: Format A-2 (Text)								
JAXA-QTS-xxx/AxxxAJAXADay Month YearParts SpecificationPage- 7 -								
4.4. Long-Term Storage Long-term storage shal QTS-xxxx, Appendix A.	4.4. Long-Term Storage Long-term storage shall be as follows and in accordance with paragraph A.4.4 of JAXA- QTS-xxxx, Appendix A.							
	(continues)							
 4.5. Changes of Tests and It Example 1 There is no change to t specified in Appendix A Example 2 The changes has been a) Change description b) Rationale: xxx 	 4.5. Changes of Tests and Inspections Example 1 There is no change to the test or inspection from the quality conformance inspection specified in Appendix A of JAXA-QTS-xxxx. Example 2 The changes has been implemented to xxx test. a) Change description: xxx b) Rationals: xxx 							
	(continues)							
5. PREPARATION FOR DE Preparation for delivery sl requirements.	LIVERY nall comply with paragraph 5 of JAXA-C	עTS-×××× and the f	ollowing					
	(continues)							
 NOTES Notes shall comply with paragraph 6 of JAXA -QTS-××× and the following requirements. (continues) 								

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JAXA-QTS-2000D 7 July 2016			-QTS-2000 July 2016	D	J A X Parts Spec	J A X A Parts Specification Page -		– A-36 –			
E	xam	ple: Fo	ormat A-3 N	otice of	f Change ⁽¹⁾						
	JAXA-QTS-xxxx Notice 1 Date				J A X A Parts Specific	J A X A Parts Specification			ו No. xx		
	NOTICE OF CHANGE										
	XXXXX HIGH RELIABILITY, SPACE USE, GENERAL SPECIFICATION FOR										
		Dogo	Dorograph	Line		Change des	cription				
		raye	Falagiaph	LINE	Before	After		F	leason		
N	lote:	⁽¹⁾ The	purpose of	Examp	ple Format A-3 is to sl	how the forma	t for Notic	e of Cha	inge.		

JAXA-QTS-2000D	JAXA	Dawa		
7 July 2016	Parts Specification	Page	– C-i –	
		+		
	APPENDIX C			
REQUIREME				
C.1. Scope			C-1	
C.2. Applicable Documents.			C-1	
C.3. Definition of Terms			C-1	
C.4. Requirements			C-1	
C.4.1 Organizational Stru	cture and TRB Formation		C-1	
C.4.1.1 Organizational	Structure		C-1	
C.4.1.2 TRB Formation	n		C-2	
C.4.2 Quality Assurance	Manager		C-2	
C.4.3 Design Manageme	nt		C-2	
C.4.3.1 General			C-2	
C.4.3.2 Plans for Desig	gn and Development		C-3	
C.4.3.3 Organizational	and Technical Interfaces		C-3	
C.4.3.4 Design Inputs			C-3	
C.4.3.5 Design Output	S		C-3	
C.4.3.6 Design Review	vs		C-3	
C.4.3.7 Design Verifica	ation		C-3	
C.4.3.8 Design Validat	ion		C-3	
C.4.3.9 Design Chang	e		C-3	
C.4.4 Educational and Tr	aining Program		C-4	
C.4.5 Calibration System			C-4	
C.4.6 Production Condition	ons and Management		C-4	
C.4.6.1 Production Co	nditions		C-4	
C.4.6.2 Control of Env	ironmental Conditions		C-4	
C.4.6.3 Documents for	Procurement, Production and Ma	anagement	C-4	
C.4.6.4 Flowchart		-	C-4	
C.4.6.5 Handling, Pac	kaging and Transportation Proced	lures	C-5	
C.4.6.6 Process Reco	rds		C-5	
C.4.6.7 Control of Criti	cal Processes		C-5	
C.4.6.8 Disposition Sy	stem of Nonconformance		C-5	
C.4.7 Packaging			C-6	
C.4.8 Materials			C-6	
C.4.8.1 Conforming M	aterials		C-6	
C.4.8.2 Nonconforming	g Materials		C-6	
C.4.8.3 Traceability of	Materials		C-6	
C.4.9 Failure Analysis an	d Corrective Actions		C-6	
C.4.9.1 Failure Analys	C.4.9.1 Failure Analysis			
C.4.9.2 Corrective Act	C.4.9.2 Corrective Actions			
C.4.10 Manufacturers' Fac	cilities		C-7	
C.4.10.1 Clean Rooms			C-7	
C.4.10.2 Storage of Fin	ished Products		C-8	
C.4.11 Change Control of	Quality Assurance Program		C-8	
C.4.11.1 Implementatio	n of Evaluation Tests		C-10	

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-ii –		
C.5. Quality Assurance Proc	Jram Plan		C-10		
C.5.1 General Requirem	ents		C-10		
C.5.2 Preparation of QA	P Plan		C-10		
C.5.2.1 Instructions for	C.5.2.1 Instructions for Preparation of QAP Plan				
C.5.2.2 Overall Struct	ure of QAP Plan		C-11		
C.5.2.3 Cover			C-11		
C.5.2.4 Revision Reco	ords		C-12		
C.5.2.5 Table of Cont	ents		C-12		
C.5.2.6 Instructions for		C-12			
C.5.3 Format of QAP Pla	C.5.3 Format of QAP Plan				

Example: Format C-1 Quality Assurance Program Plan	.C-13 <u>3</u> to C-27
Example: Format C-2 DPA Manual	.C-288 to C-34

This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

	JA>	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-1 –					
	APPENDIX C									
C.1.	Sco	pe								
	This man orde	appendix covers the ufacturers shall estab er to acquire certification	general requirements of the quality lish in accordance with paragraph on of JAXA for common parts and	y assurance prog 3.3 of this specif materials.	ram that ication in					
C.2.	Арр	licable Documents								
	a)	ISO 9001 Quality Ma	inagement Systems – Requiremer	nts						
		(JIS Q 9001:2000 Qu	uality Management Systems - Req	uirements)						
	b)	(JIS Q 9000 Quality Ma	Inagement Systems - Fundamenta Management Systems - Fundame	als and Vocabula ntals and Vocabu	ry ulary)					
C.3.	Defi	nition of Terms								
	a)	QML manufacturer								
	L)	"Manufacturer" corres	sponds to "organization" used in IS	SO 9001.						
	D)	"Quality assurance pro	ogram ogram" corresponds to "quality ma	anagement syste	m" used in					
		ISO 9001 and also in	cludes the requirements for space	use.						
	c)	Quality assurance pro	ogram plan							
		"Quality assurance pr	ogram plan" corresponds to "quali	ity manual" used	in ISO 9001					
		instruments involved	in activities from material procurer	ment to product d	lelivery.					
	d)	Quality assurance ma	anager		,					
		"Quality assurance m	anager" corresponds to "manager	ment representati	ve" specified					
	۵)	In ISO9001.								
	0)	"Nonconformance" co	prresponds to "nonconformity" spe	cified in ISO9001						
C.4	Rea	uirements								
0.4.	Тоа	acquire certification of	JAXA for common parts and mate	rials, a manufact	urer shall					
	mee	t the requirements spe	ecified in this section for the estab	lishment of a qua	ality assurance					
	prog	ram. If the manufactu	urer has certification of ISO 9001 s	standard or any e	quivalent					
	public certification, the manufacturer may use the documents prepared to acquire the certification in a quality assurance program.									
C.4.1	O	rganizational Structure	and TRB Formation							
C.4.1	.1	Organizational Struct	ure							
		A manufacturer shall	prepare an organization chart whi	ch includes the fo	ollowing items					
		and maintain it currer	it.							
		 a) A DIOCK diagram b) A diagram of aut 	hority and responsibility hierarchy	o. . The organizatio	on of a					
	 b) A diagram of authority and responsibility hierarchy. The organization of a companywide responsibility for management of quality assurance activities shall 									

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-2 –
	be specified, and of such activities c) A quality assura (paragraph 3.3.4 major organizatio	d responsibilities for establishment shall be identified. nce manager (paragraph 3.3.3) an) shall be specified in a list of man on.	and implementand a registered instantant	tion of policies spector I for each
C.4.1.2	TRB Formation			
	 A manufacturer shall implementation of a complementation of a c	form a Technical Review Board (T juality assurance program. The Th ce with Appendix K. When the material to a TRB, the committee may be the following items on the qualified TRB to review and judge. Ind quality management ews with applicable standards and crite and maintenance, including char r critical processes ation criteria management, renewal and relocation inspection external audits of quality and corr fucation and training ent and optimization of conditions f attrol of a quality assurance program lure analysis of nonconformance a of tests for requalification between the TRB and the in-hous chart. TRB members shall be also hall include a quality assurance material	TRB) to review the RB shall be forme anufacturer has a used as the TRB parts shall be de teria ange and trend m on of equipment f rective actions for production, tes m and corrective act b specified in the anager and a reg	e ed and standing fined as nanagement, for production, sting and tions be specified in chart. istered
C.4.2	Quality Assurance Mana The name of the quality be included in the qualit	ager assurance manager assigned by y assurance program plan	the QML manufa	cturer shall
C.4.3	Design Management	· · · ·		
C.4.3.1	General A manufacturer shall the design of the qua met.	establish and maintain written pro lified parts in order to ensure that t	cedures to contro the specified requ	ol and verify uirements are

٦	4XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-3 –		
C.4.3.2	Plans for Design and A manufacturer shall Each plan shall descr for implementing the	Development develop a plan for each process ir ibe or reference each process and process. Plans shall be revised as	n design and dev d define a person s the design prog	elopment. responsible resses.		
C.4.3.3	Organizational and T When different group and technical interfac shall be exchanged ir	echnical Interfaces s are providing inputs in the design ses among the groups shall be defin n writing and periodically confirmed	n processes, the ined. Necessary d.	organizational information		
C.4.3.4	Design Inputs A manufacturer shall define and document the design requirements on qualified parts including applicable legal and regulatory requirements. The manufacturer shall be responsible for verifying adequacy of the selected requirements. Incomplete, ambiguous or conflicting requirements shall be resolved among sources of the requirements. For providing design input, the results from all activities for confirming the contract details shall be considered.					
C.4.3.5	 Design Outputs Design outputs shall be documented such that the design outputs can be verifiable against the design inputs and other requirements. Design output shall meet the following requirements. a) To comply with the design input requirements. b) To contain or reference product acceptance criteria. c) To specify the design characteristics of the qualified parts to assure safe and proper functionality. 					
C.4.3.6	Design Reviews The manufacturer sha design results at prop representatives of all from other areas as n	Design Reviews The manufacturer shall plan and conduct design reviews using formal documents of design results at proper stages of the design. Reviewers shall include not only representatives of all directly involved entities in the design stage, but also experts from other areas as necessary. Review minutes shall be retained.				
C.4.3.7	Design Verification Compliance of desigr proper design stages maintained.	Design Verification Compliance of design outputs with the design requirements shall be verified in the proper design stages. Verification methods and results shall be recorded and maintained.				
C.4.3.8	Design Validation Design validation sha needs and/or require	Ill be performed to ensure that qua ments. The results shall be record	alified parts comp	ly with user ed.		
C.4.3.9	Design Change Any changes in the d the authorized persor	esign shall be identified, documen nnel before the changes are imple	ited, validated an mented.	d approved by		

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-4 –
C.4.4	Educational and Trainin A manufacturer shall de all entities in the compa motivations to maintain shall cover all fields suc processing, assembly a	g Program evelop and conduct educational an iny involved in production and/or s the reliability and quality. The edu ch as management, engineering, q ind production of the products.	d training progra upply of qualified ucational and trai uality control, pro	ms to provide parts with ning programs ocurement,
C.4.5	Calibration System Any measuring equipme fail judgment of tests, in accordance with the sys equivalent standard.	ent which is used in the productior aspection or analysis shall be calib stems and regulations specified in	n processes or us rated and control ANSI/NCSL Z 54	ed for pass or led in 40-1 or any
C.4.6	Production Conditions a	nd Management		
C.4.6.1	Production Condition A manufacturer shall parts and materials to conditions in the speci inspection, and speci samples have been p conducting qualification	s establish and maintain production o be submitted for qualification tes cifications such as materials, production records al treatments. Production records produced in accordance with the production test.	specifications of t and specify the uction processes shall be retained roduction specific	common production , process flow, d to prove that cations prior to
C.4.6.2	Control of Environme Requirements and to concerning the produ documents. The con	ntal Conditions lerances of critical environmental a ction and inspection of qualified pa trol requirements shall be specifie	and working conc arts shall be defir d in relevant doc	litions ned in uments.
C.4.6.3	Documents for Procu A manufacturer shall of all documents used assurance of qualified specifications, test pr (hereinafter referred t prepare a list of these assurance document a revision record.	rement, Production and Managerr identify the title, number, date of e d for procurement and processing d parts such as procurement spec ocedures, inspection procedures a to as "product assurance documer e documents. When the manufact s after acquisition of certification, t	nent establishment or l of materials, prod ifications, produc and facilities man nts"). The manufa urer wishes to ch the manufacturer	atest revision duction and tion agement rules acturer shall ange product shall prepare
C.4.6.4	Flowchart A manufacturer shall specified below and I	prepare a drawing that depicts the ists the relevant documents.	e flow of production	on processes
C.4.6.4.	1 Production Process Flowcharts shall sp and environmental identification and d	ses becify materials, processes, proces conditions required for producing lates of establishment and revisior	ss controls, contro qualified parts, a ns of each applica	ol methods nd able document

JA	XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-5 –
C.4.6.5	Handling, Packaging A manufacturer shall work-in-process parts transportation.	and Transportation Procedures define the provisions for handling and finished products, and storag	of materials, fabr ge, packaging and	icated parts, d inter-factory
C.4.6.6	Process Records A manufacturer shall processes from acce qualified parts. Thes in order to support tra to the delivery of proc inspection data, whic retained for 8 years fr established by the ma the qualified parts are record shall identify th	establish a process recording systeptance of materials up to processing e records shall be retained for 8 yeaceability for purposes such as fail ducts such as screening test data a h are specifically called out in appli- rom the date of delivery. Recordina anufacturer may be used, provided be being supplied in accordance with the date of processing, name of wo	tem to record and ng, assembly and ears from the date ure analysis. Re- and quality confo licable specification of forms and slips d that it shall be s h this specification orker, and facilitie	d evaluate all d test of e of recording cords related rmance ons, shall be s already pecified that on. Any s used.
C.4.6.7	 Control of Critical Production production production production production provisions shall include a) Definition of the processes (Include) b) Educational productional prod	bcesses cess might have significant impact nafter referred to as "critical proces provisions to identify and control th de the following items. critical processes and control cate ding trend analysis items) grams for critical processes (Parag w and confirm technical skills of w echnical skills be depicted in the manufacturing p	s on reliability and ss"), the manufac e critical process gories of manufa graph C.4.4) vorkers process flowchar	d quality of turer shall es. The cturing t.
C.4.6.8	Disposition System o A manufacturer shall occur during producti minimum.	f Nonconformance establish a system to disposition r on processes. The system shall ir	nonconformance nclude the followi	that might ng items as a
C.4.6.8.1	Reporting System of A system shall be management, obta actions under the o defined.	of Nonconformance established to report the occurrence in an approval from responsible per lirection of the responsible person	ce of nonconform ersonnel and take nel. Reporting fo	ance to the e appropriate rmats shall be
C.4.6.8.2	Report of Nonconfor A system shall be taken under the dir the responsible pe	ormance Disposition established to report the results of rection of the responsible personne rsonnel. Reporting formats shall b	corrective action el and obtain an a le defined.	s which were approval from

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-6 –
C.4.6.8.	3 Disposition of In-Pr	ocess Nonconforming Products		
	Procedures shall b fabricated products on the production p	e defined to disposition the produc s, which were being produced whe processes.	ts, including part n nonconformand	ially ce occurred
C.4.6.8.4	4 Records of Noncon	formance Disposition		
	Report documents be managed in acc	specified in paragraph C.4.6.8.2 a cordance with the requirements of	nd a list of those paragraph C.4.6.	reports shall 6.
C.4.7	Packaging			
	A manufacturer shall es and delivery of qualified Packaging specification specifications.	stablish packaging specifications a I parts as specified in paragraph 5 is shall meet the requirements of th	pplicable to the tr of this specificati nis specification a	ansportation on. and applicable
C.4.8	Materials			
C.4.8.1	Conforming Materials A manufacturer shall appropriate methods	maintain inspection status by usin and establish a system to identify	g stamps, cards, conforming mate	tags or other rials.
C.4.8.2	Nonconforming Mate The system describe nonconforming mater	rials d above shall be capable of prever rials or being mixed with conformin	nting the misuse	of
C.4.8.3	Traceability of Materi	als		
	Acceptance control n appropriate documen entire production prod qualified parts. Thes inspections.	umbers of a lot or a batch of the m its such as work slips and producti cesses from acceptance of the ma e records shall be verifiable agains	naterial shall be re on instructions th terial to completions t records of rece	ecorded in rough the on of the iving
C.4.9	Failure Analysis and Co	rrective Actions		
	A manufacturer shall es actions. For the qualifie manufacturer during tes purchaser, the nonconfe be analyzed in order to analysis, necessary con the failure.	stablish systems to perform failure ed parts when a nonconforming pro- sts or inspections, or a nonconform orming product (hereinafter referre determine the cause of the failure rrective actions shall be taken in or	analysis and take oduct is discovere ning product is re- d to as "faulty pro . Based upon the der to prevent re	e corrective ed by the turned from a oducts") shall results of the currence of
C.4.9.1	Failure Analysis			
C.4.9.1.	1 Failure Reports			
	Once a quality ass to JAXA immediate	urance manager confirms a failure ely.	, the failure shall	be reported

	IAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-7 –
C.4.9.1.2	2 Failure Analysis Ca A manufacturer sha thorough analysis o that it has enough	apabilities and Facilities all provide engineers and facilities of faulty products. An external sou capabilities to perform the failure a	necessary to cor urce may be usec analysis.	nduct a I, provided
C.4.9.1.3	 Failure Analysis Re A manufacturer shat the analysis, the m JAXA. The report a) Analysis result b) Possible caus c) Corrective act 	eports all establish procedures for failure anufacturer shall immediately sub shall include the following items. ts es of the failure (as much as poss ions	analysis. Upon o mit a failure analy ible)	completion of /sis report to
C.4.9.1.4	Failure Modes and Based upon the re- manufacturer shall technique (FMAT). or control (paragra	Causes sults of the past failure analysis by develop and maintain a failure me The FMAT shall correlate each fa ph 12.3 of Example: Format C-1).	analyses and/or echanism and ass ailure mode to de	tests, a surance sign, process
C.4.9.2	Corrective Actions A manufacturer shall nonconformance. Ar assurance manager s responsible for the pl evaluation tests. Wh the qualified parts shall (hereinafter referred to the engineering depart that require an emergent qualified parts shall no approved by JAXA. Aparagraph 3.4.3 of th	establish a system to take correct halysis results on nonconformance shall include a plan for corrective a an. The plan shall be supported b en corrective actions are to be tak all not be produced, until prototype to as "prototype parts") have been artment and the TRB. When the fa gency report specified in paragraph to be produced until the plan for the As a result of these procedures, re- is specification shall be performed	ive actions on all approved by a q actions, and a dep y actual data or r action processes es of the improve produced and ev ilure is categorize n 3.6.2 of JAXA-C ne corrective action equalification test when deemed n	uality partment esults of and materials d parts valuated by ed to failures QTS-2000, the ons has been specified in ecessary.
C.4.10	Manufacturers' Facilities A manufacturer shall po evaluation of qualified p these facilities effective records of the facilities maintained.	s ossess facilities and equipment for parts in accordance with applicable ly, provisions for management and such as dates of purchase, inspec	production, testin specifications. I handling shall b tion and repair, s	ng, and n order to use e defined, and hall be
C.4.10.1	Clean Rooms When a process conf operations for clean r ISO 14644-2 unless of shall specify proper le	rol contains requirements for clear ooms shall comply with the require otherwise specified. Engineering o evel of cleanliness in process spec	n rooms, the crite ements of ISO 14 department of the cifications.	ria and 644-1 and manufacturer

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-8 –
C.4.10.2 Storage of Finish A QML manufact parts are stored p production lot or a	d Products rer shall establish, maintain and cont ior to delivery. In addition, appropria date code of the products stored sha	trol the site where the records indica all be maintained.	qualified ting a
 parts are stored p production lot or a C.4.11 Change Control of Q A QML manufacturer quality assurance p corrective actions of etc. A QML manufacturer control of quality as this specification. a) A manufacturer independently to controls are special application for in be made by a m characteristics a Any changes de accordance with changes shall b 1) Grade I: Req 2) Grade II: Corr for changes shall b 1) Grade I: Req 2) Grade II: Corr for changes shall b 5) A manufacturer need of change whether the ma manufacturer ne plan for collecting cationale shall be plan shall be rev manufacturer in changes, they s d) When a manufa necessary (Grad change based of on the change p holds TRB and 	ior to delivery. In addition, appropria date code of the products stored sha uality Assurance Program shall establish and maintain a chan ogram. The system shall cover chan a failure, revision of applicable spec (hereinafter referred to as "manufact urance program as shown below. For hall specify the changes which the n the quality assurance program or oth ified, and then reviewed by JAXA for tial certification or retention of certific unfacturer shall be assumed that the od reliability of the products. iated from the qualification coverage paragraph 3.4.3. The classification (i specified as follows. alification is required; procedure for n ultation with JAXA prior to change is be determined through discussion v ualification is not required; the decisi RB. hall prepare and submit the change Then the manufacturer shall hold a T ufacturer can make its own decision eds to consult with JAXA based on th the necessary data. determines that it can make change recorded and the evaluation results ewed by TRB to see if the change ca ependently. Even if the manufacture all still be reviewed by JAXA by the turer determines that the preliminary e II), the manufacturer shall obtain th the change plan after JAXA confirm ocedure. After the manufacturer obtain the the changes are determined to b	ate records indica all be maintained. ge control system iges due to a resu- cifications or test of turer") shall condu- or TRB, refer to Ap- nanufacturer may ner document on r qualification at the cation. The change ey do not affect the cation. The change ey do not affect the cation at the specifie Grades) and action requalification shall a required; the con- vith JAXA. on can be made the plan when the pro- TRB meeting to de for the change of the changed conter es independently of an actually be main r can make own of TRB status report discussion with a station with a s	ting a for the lt of optimization, luct a change opendix K of add which change he timing of les which can he d and made in on for the all be taken. urse of action by the oduct is in etermine the ents and the (Grade III), the on the change de by the decision for t. JAXA is / for the n and agrees y data and anufacturer
shall report the manufacturer sh reconfirmation. changes shall s	esults to JAXA and the changed data II not add changes without JAXA ap ven prior consultation with JAXA is o I be reviewed by JAXA by the TRB s	a shall be re-confi proval during the letermined to be a status report.	rmed. The necessary, the



C.4.11.1 Implementation of Evaluation Tests

When the manufacturer is to change product assurance documents specified in the quality assurance program or facilities for production, testing, or inspection, the manufacturer shall collect data through proper methods such as evaluation tests to evaluate possible impacts on characteristics of qualified parts such as performance, quality, reliability and compatibility. The TRB shall judge if the changes are appropriate based on data such as evaluation test results in accordance with Appendix K.

C.5. Quality Assurance Program Plan

This section provides the manufacturer, who is to obtain certification, with the guidelines to prepare and maintain a quality assurance program plan (hereinafter referred to as "QAP plan") in accordance with paragraph C.4.

C.5.1 General Requirements

- a) As a condition for JAXA to certify a production line of qualified parts in accordance with applicable specifications, the quality assurance program shall be completely documented to ensure that a manufacturer can continuously produce qualified parts with a consistent quality.
- b) When requirements for a quality assurance program are defined in applicable specifications other than this specification, the requirements shall be included in a QAP plan.
- c) A manufacturer, who is to obtain certification, shall develop a QAP plan in consideration of uniqueness for space-use parts, identification of common parts and materials supplied in accordance with this specification and post-certification maintenance.
- d) JAXA shall review a QAP plan after application for qualification test is submitted, and confirm whether a manufacturer is able to produce and assure qualified parts in accordance with applicable specifications, and audit, as required, if the QAP plan is properly implemented after the acquisition of certification.
- e) When a manufacturer has some of its production, tests or inspections performed outside of the company, except for cases where their employees operate testing facilities outside of the company, the manufacturer shall provide JAXA with the evidence that these operations are controlled in accordance with a control program equivalent to the quality assurance program of this specification, or include these operations in the quality assurance program as a part of the manufacturer and provide JAXA with the program for review. In the latter case, the quality assurance program applicable to external operations shall be included in or attached to the QAP plan.

C.5.2 Preparation of QAP Plan

A QAP plan shall include the following items as a minimum.

JA	XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-11 –
C.5.2.1	Instructions for Prepa	aration of QAP Plan		
	 a) Terms shall be t b) A4-size paper shall be used 	hose commonly used. nall be used. Unless otherwise spe	ecified, a word pr	ocessor shall
	c) Unless otherwise line to be certifie	e specified, a QAP plan shall be pr d.	epared for each	production
	d) If there are multi prepared for pro	ple types in the qualified parts, a g visions common to all part types, a	eneral QAP plan and a detail QAP	may be plan may be
	 a) A QAP plan sha b) For each item sporter overview by reference documents, and and/or tables. 	Il focus on items applicable to the opecified in paragraph C.5.2.6, a matering to titles and numbers of applicable descriptions	certification by JA anufacturer may p cable or related p of systems using	XA. provide an provisions or figures
	g) When affiliated eh) Maintenance sha	entities are involved, QAP plans of all be specified for each item.	those entities sh	all be outlined.
C.5.2.2	Overall Structure of C	QAP Plan		
	 Unless otherwise special a) Cover b) Revision record c) Table of content d) Text, figures and e) Blank formats of f) Supplementary of Note: Unless otherw prepared, they 	ecified, the QAP plan shall be orga s d tables documents and examples to fill th documents (when specified in appl ise specified, when both general a shall have the same document st	nized as follows. e formats icable specificati nd detail QAP pla ructure.	ons) ans are to be
C.5.2.3	Cover			
	The cover shall inclue a) Document numb b) Title	de at least the following items. per of the QAP plan and date of iss	ue	
	c) Name of qualityd) Name of manufa	assurance manager acturer		
C.5.2.3.1	Document Number	of QAP Plan and Date of Issue		
	The document nun of establishment a	nber shall be indicated in the manund revision shall be indicated.	ufacturer's style, a	and the date
C.5.2.3.2	Title			
	a) The title shall Example: Re Pla	be in the same format as that of ap sistors, High Reliability, Space Use n for	oplicable specific e, Quality Assura	ations. nce Program
	b) Product identic) When both gein the following	fication such as part number may l neral and detail QAP plans are to g formats, respectively.	be provided if neo be prepared, the	cessary. titles shall be

	IAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-12 –
	Example 1: Re As Example 2: Re Qu	esistors, High Reliability, Space Us ssurance Program for esistors, Fixed, Film, High Reliabili uality Assurance Program for	se, General Plan ty, Space Use, D	of Quality etail Plan of
C.5.2.3.3	3 Signatures A quality assurance on the QAP plan.	e manager and a registered inspec	ctor shall set their	r seals or sign
C.5.2.4	Revision Records Revision records sha own document mana specified by their inte a) Revision letter b) Revision date c) Revision descrip d) Seals or signatu	Il include the following items. Whe gement provisions, they may use t rnal provisions. tion res of quality assurance manager	en a manufacture the forms and gui	r has their idelines spector
C.5.2.5	Table of Contents a) A table of conter b) A separate list o	nts shall be provided. f figures and tables shall be provid	ed after the table	of contents.
C.5.2.6	Instructions for Prepa The text of the QAP p a) Scope b) Organizational s c) Quality assurance d) Applicable docur e) Education and tr f) Design control g) Control of produ h) Management of i) Management of i) Management sys j) Procurement ma k) Nonconformance l) Failure analyses m) Packaging, stora n) Change control of o) Design and cons p) Formats and exa	aration of Text blan shall include at least the follow tructure ce system ments and standards constituting t raining ction processes production facilities stem of measuring instruments anagement of materials e disposition system and corrective actions age and delivery of quality assurance program struction amples of completed formats	ving items. he quality assura	ince program
C.5.3	Format of QAP Plan An example of the QAP	Pplan is shown in Example Format	C-1.	

JAXA-QTS-2000D 7 July 2016		J A Parts Sr	A X A Decification	Page	– C-13 –
Example: For (Cover) ⁽¹⁾	rmat C-1 Quality As	surance Program	ı Plan	ļ	L
				QAP pla	an number ⁽²⁾ (date)
	QUALITY	RESIS HIGH REL SPACE ASSURANCE	TORS, IABILITY, USE, PROGRAM P	LAN FOR	
	Quality assura	nce manager	Tar	o Shinrai	
	Registered	inspector	Та	ro Uchu	
	Date of late	st revision	Octob	ber 5, 1998	
	Date of esta	ablishment	July	/ 1, 1989	
	Approved by	⁽³⁾ Inspect	ed by ⁽³⁾ P	repared by ⁽³⁾	
		EF DIV ABCD COR	ISION, PORATION		
Notes: ⁽¹⁾ The purpo Contents ⁽²⁾ The manu ⁽³⁾ The regis	ose of Example Forr used here vary for e ufacturer shall fill the tered inspector and	mat C-1 is to sho each plan. e document numb the quality assur	w the format for one of the QAP plance manager structure	quality assurance an and the date o hall set their seals	program plan. f issue. s or sign in the

boxes under "Approved by", "Inspected by" and "Prepared by".

JAXA-C 7 Ju	TS-2000D ly 2016	J A X A Parts Specific	ation		Page	– C-14 –
Example: For (Revision rec	rmat C-1 ord)					
		Revision Reco	rd			
Revision letter	Date	Description	Appro by	oved	Inspected by ⁽¹⁾	Prepared by ⁽¹⁾
		. 14				
Note: (1) The re in the l	egistered ins boxes under	ector and the quality assura "Approved by", "Inspected b	ance mana oy" or "Prep	ger sl bared	nall set their by".	seals or sign

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-15 –
Example: Format C-1 (Table of contents)			-
	Table of Contents		
Paragraph ⁽¹⁾		Page	number ⁽²⁾
1 Conorol		(Page	not chown)
 (This paragraph shall desciproduces and supplies JAX purpose of the QAP plan, ir 1.1 Objective 1.2 Scope 1.2.1 Document Organ 1.3 Maintenance 	ribe manufacturer's intent that the mar A certified parts with a consistent qua nplementation guidelines and change	nufacturer continua lity, and explain the notification to JAX	illy e A.)
 Policy Organizational Structure (This paragraph shall state the quality assurance responsible shall be included.) Organization Chart, W Organization Chart, Supervise Financial Relation and 2.3 Roles and Responsible Their Assistants 	that the company assures that the orgonsibility for common parts and materi /ork Allocation, Authority and Respons ision, Audit and Work Allocation of Affi d Subcontractors ilities of a Quality Assurance Manager	, a Registered Insp	not shown) o fulfill items without pector, and
2.4 Roles and Responsibi (These items may be clearly indicate the da	lities of the TRB or Equivalent Standir provided in the form of table or figure. te prepared and organizations involve	ng Committee The organization d in the QAP plan.	chart shall)
 Quality Assurance System (Quality assurance system between the relevant intern development phase to usag organizations of reliability a defined.) 	shall be described using a chart which al organizations and each process fro ge of common parts and materials. Ma and quality control shall be identified.	(Page h shows relationshi om a planning and anaging and super Work allocation sha	not shown) ip vising all be
 Applicable Documents and (Relationship of documents and the purpose of the QAI 	Standardss and standards, which form the progra of plan shall be described. The following	(Page am, to JAXA docun ng items shall be ir	not shown) nents ncluded.)
otes: Only major sections are includ Page numbers are not shown	ed in this example. Actual QAP pl in the example of Format C-1.	ans shall include	all sections.

JA	XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-16
		·	ł	<u> </u>
Example	: Format C-1			
(Table of	f contents - continued)			
4.1	System of Internal Doo	cuments and Standards		
4.1	.1 Internal Documer	ntation System (at various corporate l	evels such as head	dquarters,
	departments and	plants)		
4.1	.2 Identification and	Contents of Documents (including ex	(amples)	
	(Related compani	es shall be identified, if any.)		
4.2	Documents Constitutir	ng a Quality Assurance Program		
4.2	.1 Document List			
	(A list of documer	nts shall specify categories, titles, ider	tification numbers	dates of
	establishment and	d revisions, and management departn	nents. The docum	ents shall
	be shown in the p	roduction process flowchart, and sort	ed by category in a	i table.)
4.2	.2 Procedures for E	stablishment, Revision and Cancellati	ion of Documents a	and
	Standards			laters al
	(The document an	nd standard management provisions	shall be referenced	
	management of d	ocument and standard shall be descr	ibed on planning, r	eviews,
	approvais, decisio	in and distribution.)		
5. Edu	ucation and Training		(Page	not shown)
(Ap	plicable provisions shall	be referenced. The following items s	shall be at least spe	ecified.)
5.1	Yearly Plan for Each L	evel		
5.2	Skill Training for Produ	uction		
5.3	Designation of Worker	s or Certification of Skill for Critical Pr	ocesses (certificat	ion test
	programs to evaluate	workers' skills)		
6. De:	sign Control		(Page	not shown)
(A)	plan shall be provided to	implement each requirement specifie	ed in paragraph C.4	1.3 of
this	s appendix.)			
7. Ma	nagement of Production	Processes	(Page	not shown)
(Th	e following items shall b	e at least specified.)	. 2	,
7.1	Work Conditions and E	Environmental Control		
7.2	Process Records, Stor	rage Responsibility and Period		
	(The process records	shall provide failure traceability to the	materials.)	
7.3	A Flowchart of Produc	tion Process from Acceptance of Mate	erials to Delivery o	f Finished
	Products (Figure C-5 of	of Example Format C-1)		
	(Technical values are	not required in the flowchart. Subcon	tractors shall be sp	pecified, if
	any.)			
7.4	Management and Ider	tification of Critical Processes (Table	C-6 of Example Fo	ormat C-1)
7.5	Provisions for Subcon	tractor Management (provisions for se	election of subcont	ractor, contr
	and disposition in case	e of process failure)		
7.6	Management of Fabric	cated Parts and Work-in-Process Part	S	
7.7	Identification of In-Pro	cess Inspections		
0 00	ntrol System of Production	on Facilities	(Page	not shown)

Example	: Format C-1			
(Table of	contents - continued)	·		
8.1	Control of Production I	Facilities		
	(A control system of pr	roduction facilities shall include the co	ontrol of repair and	
	modification history, pr	ovisions for procurement and dispose	al, and daily inspec	tions and
	periodic inspections.	The control of measuring equipment in	nstalled in producti	on facilities
	shall be described in re	elation to paragraph 9.)		
8.2	Control of Clean Room	1S		
(Control of clean room shall be defined if paragraph C.5.2.6 includes requirer				
	clean room.)			
8.3	Control of Test, Inspec	tion and Analytical Facilities	ation and analytic	
	(Control items, precision	on and calibration cycles of test, inspe	ection and analytica	al lacilities
	Format C-1.)			
	Sontrol System of Measu	ring Equipment	(Page	not shown
3. ΛC	onlicable provisions shall	be referenced Internal substandard	calibration equipm	not shall
be	categorized by type Tra	aceability of the equipment to national	standards shall be	
indi	icated using tables and/	or figures)		
9.1	A Control System of S	ubstandard Equipment Possessed by	a Manufacturer	
9.2	A System of Calibratio	n and Precision Control of Measuring	Equipment for Pro	oduction.
•	Test, Inspection and A	nalysis	,	,
9.3	Identification and Cont	trol of Measuring Equipment Calibrate	ed by Outside Com	panies
9.4	A List of Precision Cor	ntrol of Major Measuring Equipment fo	or Test and Inspect	ion Specifie
	in Applicable Specifica	itions		
10. Pro	ocurement Control		(Page	not shown
(Ap	plicable provisions shall	be referenced. The following items s	shall be at least spe	ecified.)
10.1	Criteria for Supplier Se	ection		
10.2	Quality of Purchased (Boods and Disposition to be Taken W	hen Suppliers Cha	inged
	Production Process			
10.3	Receiving Inspection c	of Procured Goods		
	(Valid period of receivi	ng inspection, disposition of failed pro	oducts, storage and	d control of
	inspection records sha	Ill be specified.)		
10.4	Storage Conditions of	Purchased Goods and Inventory Con	trol	
	(Names of purchased	goods, applicable standards, procure	ment specification	number,
	Table C 10 of Example	Ition of procurement lot, and suppliers	s shall be tabulated	I. See
		e Format C-1.)		
11. Dis	position System for Non	conformance	(Page	not shown
(Ap	plicable provisions shall	be referenced with regard to disposit	ion against	
nor	iconformance during pro	duction processes, complaints, or fau	ilty products. The	following
iten	ns shall be specified.)			

JAX	JAXA-QTS-2000D JAXA Page -		- C-18	
	7 July 2016	Parts Specification	i age	0-10
Example	: Format C-1			
(Table of	contents - continued)			
11.1	A System for the Resp	oonsible Department to Disposition No	onconformance Oc	curred withi
	the Company			
	(All processes shall be	e addressed including receiving inspe	ction, production, ir	nspection
	and delivery.)			
11.2	A System for the Resp	oonsible Department to Disposition No	onconformance or (Complaints
	Reported by External	Customers.		
	(These systems shall a	address reporting to the quality assur	ance manager and	JAXA.)
12 Eail	ure Analysis and Correc	tive Actions	(Page	not chown)
12. Tan (An		be referenced. The following items s	whall be specified)	not shown)
(AP) 12.1		rd Procedures for Conducting Eailure		
12.1	A System and Standa	Actions and Change Control	Analyses	
12.2	(Those systems shall	address reporting to the quality assur	ance manager and	
123	FMAT (Failure Mecha	nism and Assurance Technique)	ance manager and	JAAA.)
12.0		bly with Table C-11 of Example Form	$r (C_{-1})$	
12 /	Facilities of Failure An	alveis (paragraph $C = 1$ of Example 1 of R	at 0-1.)	
12.4	Actions to be Taken W	/hen Failure Analysis Cannot be Perf	ormed by the Com	hanv
12.0				July
13. Pac	kaging, Storage and De	livery	(Page	not shown)
(Ap	plicable provisions shall	be referenced. The following items s	shall be specified.)	
13.1	Packaging			
	(Marking requirements	s for each packaging level shall be de	fined. Marking loca	ations and
	methods shall be defir	ned.)		
13.2	Storage of Finished Pi	roducts		
	(Storage methods of fi	nished products, re-inspection items	on long-stored proc	ducts, valid
	period and record arch	niving shall be addressed.)		
13.3	Delivery			
	(Handling requirement	s for lots and products for delivery sh	all be defined. Pre	paration
	and management of in	spection reports, and confirmation of	registered inspecto	or shall be
	addressed.)			
14. Cor	ntrol of Program Change)	(Page	not shown)
(Ap	plicable provisions shall	be referenced. The following items s	shall be specified.)	,
14.1	A system of Internal E	valuation		
14.2	Evaluation and Validat	tion of Changes by TRB		
14.3	Internal Communication	ons		
15 Des	sign and Construction		(Page	not shown)
10. Doc (\//k	nen annlicable specificat	tions include the requirements for des	ian and constructio	not showing
ann	licable provisions shall l	be referenced. The following items st	nall be specified)	
15 1	Design Overview	in the relievent of the relieventy forms of		
15.2	Construction or Assen	here and Criteria for Internal	Inspections (Figure	e C-11 of
	Example Format C-1)			
15.3	Procedures for DPA (F	Example Format C-2)		
10.0				

J	AXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– C-19 –
Examp (Table	ole: Format C-1 of contents - continued)			
	Formats and Example of Er Formats for all processes i example of filling the format sted indicating the title, de torage. Examples shall be	ntry ncluding production, test and inspecti t shall be marked as space use. Exar partments responsible for preparation e provided for ambiguous parts of the	(Page on shall be provide nples of formats sh and storage, and p formats.)	not shown) d. An hall be period of

2.01 01 100.00	and figures)			
		List of Tables and Figures		
			Page	number
Figure C-1.	Organization Char	t	(Page number	not shown
Table C-1.	Responsible Perso	onnel, Authority and Responsibility	(Page number	not shown
Table C-2.	Types and Conten	ts of Provisions	(Page number	not shown
Figure C-2.	Control System of	Provisions	(Page number	not shown
Table C-3.	List of Production	Documents	(Page number	not shown
Table C-4.	List of Quality Ass	urance Documents	(Page number	not shown
Figure C-3.	Quality Assurance	System	(Page number	not shown
Figure C-4.	Quality Audit Syste	em	(Page number	not shown
Figure C-5.	Production Proces	s Flowchart	(Page number	not shown
Table C-5.	List of Process Da	ta	(Page number	not shown
Table C-6.	List of Critical Proc	cesses	(Page number	not shown
Table C-7.	List of Facilities an	d Equipment for Production, Test,		
	Inspection and Ana	alysis	(Page number	not shown
Figure C-6.	Calibration System	۱	(Page number	not shown
Table C-8.	List of Substandar	d Equipment	(Page number	not shown
Table C-9.	List of Accuracy C	ontrols	(Page number	not shown
Table C-10.	List of Incoming Ite	em Controls	(Page number	not shown
Figure C-7.	Procedures for No	nconformance Disposition	(Page number	not shown
Figure C-8.	Failure Analysis P	rocedures	(Page number	not shown
Figure C-9.	System for Correct	tive Actions	(Page number	not shown
Table C-11.	FMAT		(Page number	not shown
Figure C-10.	Procedures for Ch	ange Control	(Page number	not shown
Figure C-11.	Construction	-	(Page number	not shown
	List of Example Ec	ormats	(Page number	not shown

JAXA-QTS-200	0D
7 July 2016	

J A X A Parts Specification

Page

– C-21 –

Example: Format C-1

Production)A(anti-			Productio	on control rec	cords	
flowchart (material name) ⁽¹⁾	Work or process name ⁽²⁾	instruction documents (3)	Facilities used	Department in charge	Control items ⁽⁴⁾	Sampling	Records	Remarks ⁽⁵⁾
5	5 Spot welding	Process specification ABC-1234 Work guideline DEF-0123 XYZ-0005	(Facilities used shall be identified in accordance with Table B-10.) A-5678 Spot welding machine	Welding Group, Second Equipment Section, First Production Department	 Conditions Pressure Pressure Time Weld shape Welder Welding strength 	All AM, PM work schedule: 3 at start	Work slips	* Critical process
	6 Intermediate inspection	Process specification ABC-5678 Inspection guideline 111-3444	Identification name	Second Group, Third Control Section, Quality Control Department	 Resistance Weld shape Winding pitch Effective length of winding Winding Winding state Weld position 	All n=5 Ac0 Re1	 Inspection slips Photos 	* Critical process
Base- coat	7 Cleaning	Process specification ABC-3456 Work guideline XYZ-0006	Identification name	Second Group, Forth Section, First Production Department	Number of cleaning Cleaning duration	All	Work slips	
8	8 Basecoat preparation	Process specification BBA-8885 DDY-3456	Identification name	First Group, Second Inspection Section, Quality Control Department	Name Quality Lot number Manufacturer name	For each shipped lot	Receiving inspection slips	
		Process specification BCD-1222 Work instruction PQR-1111	Identification name	Second Group, Third Section, First Production Department	 Density (mixing ratio) Pot life 	For each work	Work slips	
Notoo	1	Figure	e C-5. Prod	uction Pro	cess Flowcha	rt	I	I

⁽¹⁾ The production process flowchart shall comply with JIS Z 8206 "Graphical Symbols for Process Chart".

⁽²⁾Work names shall be specified.

⁽³⁾ Document number shall be specified for work instruction documents.

⁽⁴⁾ Actual values are not necessary in the column of control items.

⁽⁵⁾ Identification of critical process shall be specified in the column of remarks.

Table C-6. List of Critical Processes Critical control Applicable standards or of worker of certification of worker of certification of worker of certification of period of parts of remark (classification) of period of parts of remark (classification) of period of parts of remark (classification) of period of parts of the table of the table is not shown.) Electron EBW-XXX PO AB-1201 (special-021) (classification) of the table is not shown.) The rest of the table is not shown.)	7	4-QTS-2000D ′ July 2016	1	J A X A Parts Specification			ige	– C-22 –		
Table C-6. List of Critical Processes Critical process Facilities or standards or do worker (certification documents documents documents documents) Certification documents documents documents documents Validity period Device or parts remark documents Electron beam corporation AB-1201 (special-012) (classification) YY-1201 (classification) 3 years Body/ cap Electron beam corporation EF-1234 AB-1201 (special-012) (classification) YY-1201 (classification) 3 years Body/ cap Welding EF-1234 Image: Corporation documents Corporation documents The rest of the table is not shown.)						<u> </u>				
Table C-6. List of Critical Processes Critical facilities or control standards or documents (certification documents) (classification) validity parts remark (classification) validity parts remark (classification) validity parts remark (classification) validity (classification) v					D					
Critical process Facilities or control number Applicable stadards or documents Identification of worker (certification) Certification documents Device or parts Remark Electron beam welding EBW-XXX PO Corporation AB-1201 ZZ-1122 (special-021) YY-1201 (class I) 3 years Body/ cap Imple: Imple: Fr-1234 Imple: Imple: Imple: The rest of the table is not shown.) Imple: Format C-1			l able C-6	5. List of Criti	ICAI Processes					
Critical process ontrol number Application standards or documents overker (certification) (certification) Validity period Device or parts Remark Electron beam PO AB-1201 ZZ-1122 (special-012) YY-1201 (class 1) 3 years Body/ cap EF-1234 Imple: Format C-1 Imple: Format C-1	Eacilities or Applicable Identification Certification									
Electron EBW-XXX PO Corporation AB-1201 ZZ-1122 (special-02) YY-1201 (class I) 3 years Body/ cap Image: Format C-1	Critical process	control number	standards or documents	of worker (certificate number)	Certification documents (classification)	Validity period	Device or parts	Remarks		
(The rest of the table is not shown.) (The rest of the table is not shown.)	Electron beam welding	EBW-XXX PO Corporation EF-1234	AB-1201	ZZ-1122 (special-012) (special-021)	YY-1201 (class I)	3 years	Body/ cap			
rmple: Format C-1										
mple: Format C-1			(The r	est of the table is	s not shown)					
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JAXA-QTS-2000D	JAXA	Dama	0.00
7 July 2016	Parts Specification	Page	- C-23 -

Example: Format C-1

Table C-7. List of Facilities and Equipment for Production, Test, Inspection or Analysis

(Production facilities)⁽¹⁾

Control section	Facilities	Manufacturers	Type or control number	Performance	Precision	Frequency of maintenance and calibration
А	Spot welding machine	XXZ Corporation	FG-111	1-10 WS	±1µm	- Twice per year - Every work start time

(The rest of the table is not shown.)

Note: ⁽¹⁾ Separate tables shall be used for production facilities, test and inspection facilities and analysis facilities.

	JAXA-QT 7 July	S-2000D	F	J A X A Parts Specific	cation	Page	– C-24 –			
F	Example: Format C-1									
	Table C-10. List of Control of Purchased Products ⁽¹⁾									
	Procured goods	Applicable standards (date)	Procurement specification (date)	Inspection specification (date)	Inspection items	Definitions of purchased lot	Supplier			
	Basecoat paint (X-25)	ABC-2000 (date)	YZ-2563 (date)	XI-4233 (date)	Confirmation inspection certificates Quantity Viscosity (sampling)	of	AB Paint Corporation			
			(The rest	of the table is no)					
			(110 100							
	Note: ⁽¹⁾ All ma	terials used	for products	shall be listed	I.					

Example: Format C-1											
Table C-11. FMAT										JAX	
Ту	be or part number	NAS	SDA RNR XX				Dispos	sition ⁽⁵⁾			
No.	Element ⁽¹⁾	Failure mode ⁽²⁾	Failure mechanism	Impacts on product ⁽⁴⁾	Raw materials ⁽⁶⁾	Production processes ⁽⁷⁾	Design items ⁽⁸⁾	In-process inspections ⁽⁹⁾	Tests/ inspections of final products ⁽¹⁰⁾	Test methods ⁽¹¹⁾	17S-20
1	Lead wires	Breakages	Breakages	Open circuit	1. Core materials (frequency/anneal) (material spec. no.)	1. Handling methods (prevention of breakage) (process spec. no.)	1. Materials 2. Dimensions (lead wire diameter) (doc. no.)	1. Visual 2. Dimensions (inspection spec. no.)	 Terminal strength Vibration resistance Visual Dimensions Shock 	Paragraph number of JAXA-QTS-2*** 1. 4.7.15 2. 4.7.21 3. 4.7.3 4. 4.7.3 5. 4.7.20	
		Insulation failures (with substrate)	Surface oxidation	Loose joints	1. Plating materials (composition/plating thickness) (material spec. no.)	1. Handling and storage methods 2. Material cleaning (process spec. no.)	1. Plating composition 2. Plating thickness (doc. no.)	1. Plating thickness 2. Externals (inspection spec. no.)	1. Solderability	1. 4.7.10	J A X Parts Spec
2	Head part of lead wires	Incomplete electrical continuity (with resistor body)	Contaminat ion (e.g., oil,) Non-	Excessive current noises, Loose joints		1. Handling and storage methods (process spec. no.) 1. Head	1. Head	1. Current noises (all samples) 2. Head dimensions	 1. Voltage coefficient 2. Life 3. Thermal shock 	1. 4.7.25 2. 4.7.22 3. 4.7.4	A
			conforming			processing	construction	3. Load			
			shapes and/or dimensions			(process spec. no.)	(doc. no.)	selection (all samples) (inspection			σ
			Surface oxidation			1. Handling and storage methods (process spec.		spec. no.)			age
			I			110.)					- C-25 -

Example: Format C-1											
	•				Table C-11. FI	MAT (continued)] ,
3	Connection between head and body	Resistance value drift (rise)	Incomplete connection	Resistance value drift (rise)	1. Material Carbon:	1. Mixture 2. Mixing conditions (temperature, time)	1. Material (doc. no.)	 Current noise (all samples) Voltage coefficient Desistance stability 	 Voltage coefficient Terminal 	1. 4.7.25 2. 4.7.15 3. 4.7.22	JAXA-QT 7 July
		Excessive current noise		Excessive current noise	volumetric density Silica: grain size, purity Resin: resin content, viscosity	3. Molding conditions (temperature, time) (process spec. no.)		 Resistance stability Fluidity Material use test Load selection (all samples) External selection (all samples) (Inspection spec. no.) 	strength 3. Life 4. Thermal shock	4. 4.7.4	S-2000D 2016
<u> </u>					(material spec. no.)	able is not shown)					
Notes: ⁽¹⁾ A part shall be de-integrated into individual elements. The elements shall be listed sequentially in column ⁽¹⁾ . Connections between elements shall be considered as an element. ⁽²⁾ Failure mode and failure mechanism of each element shall be listed in columns ⁽²⁾ and ⁽³⁾ respectively. ⁽³⁾ Effects of the failure shall be listed in column ⁽⁴⁾ . ⁽⁴⁾ Disposition for the failure shall be listed in column ⁽⁵⁾ . ⁽⁵⁾ Disposition for raw materials shall be listed in column ⁽⁶⁾ . For example, receiving inspection items and the inspection documents shall be listed. ⁽⁶⁾ Disposition for production processes shall be listed in column ⁽⁷⁾ . For example, the control items specified in the production specifications and applicable document numbers shall be listed.								J A X A Parts Specification			
 (*) Design philosophy shall be listed in column (*). For example, the requirements and document numbers specified in assembly specifications shall be listed. (8) Disposition for in-process inspection shall be listed in column (*). For example, the control items and document numbers specified in inspection specifications shall be listed. The inspections defined here shall be limited to those conducted during a production process. (9) Disposition for tests and inspections of final products shall be listed in column (*). For example, the test and inspection items specified in applicable specifications shall be listed in column (*). 								Page			
											- C-26 -



JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– C-28 –
Example: Format C-2 DPA Ma	anual			
(Cover)				
			Docu Estal Revis	ument No. olished on: sed on:
		DPA Manual		
Part number				
Applicable specific Document numbe	cation numb r of quality a	er assurance program plan		
Appro	oved by	Checked by	Prepared by	
		EF Division, ABCD Corporation		
Example: Format C-2

(Body)

1. Objective

This manual is to establish requirements on Destructive Physical Analysis (DPA) including implementation procedures and acceptance criteria. DPA is performed to verify compliance of product design with requirements specified in applicable specifications of Japan Aerospace Exploration Agency.

2. Scope

This manual is applicable in the initial review and reviews for qualification retention defined in a quality assurance program to verify compliance of product design and construction. This manual is also applicable to tests specified in applicable specifications such as qualification test and quality conformance inspection.

3. General Requirements

- a) DPA destroys the product to inspect and analyze its internal physical characteristics. DPA is used to verify the product to comply with the design requirements which are unable to be analyzed by external visual inspections.
- b) An inspector registered to JAXA shall obtain knowledge and information on DPA and make an appropriate evaluation and judgment objectively.

4. Outline of Products

- 4.1 Product Overview
 - (Text example is not provided.)
- 4.2 Shape, Dimensions and Major Constituent Materials (Text example is not provided.)

 Requirements for Design, Construction and Production Requirements for design, construction and production shall be as follows. Physical values shall be specified in a pre-defined format.

- 5.1 Requirements for Design and Construction, and Priorities of Requirements (Text example is not provided.)
- 5.2 Critical Production Processes to Meet Design Requirements (Text example is not provided.)
- 5.3 Construction Drawing (Text example is not provided.)
- 5.4 Verification Methods for Design Requirements (Text example is not provided.)

6. Methods of DPA

The procedures of DPA for each sample and the verification items shall be as follows.

6.1 The Number of Samples and Verification Items (Text example is not provided.)

	JAX	A-QTS-2000D	JAXA	Page	– C-30 –
		7 July 2016	Parts Specification		
-	- I F				
Examp (Body		ormat C-2			
(DOU)	- <u>cor</u> 3 2	Preparation for DPA			
		(Text example is not p	rovided.)		
e	6.3	Procedures of DPA			
		(Text example is not p	rovided.)		
	-				
	EX5	Example of Formats	DBA shall be as follows. See attach	monto	
	a)	1) Design requireme	Ports of products (Table 1)	intents.	
		 2) Requirements of 	critical processes (omitted)		
		3) List of DPA result	ts (Table 2)		
		4) Photographs of ir	nspection results (Table 3)		
		5) List of analysis re	esults (Table 4)		
	b)	The data obtained in q	ualification tests or quality conformar	ice inspection shal	be prepared
		in these formats and a	ttached to an application for QML cer	tification.	
11					

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification		Page		– C-31 –		
Example: Format C-2	Example: Format C-2						
	Table 1. Design R	equire	ements				
1. Construction drawing	1. Construction drawing 2. Part number						
3. Identification number 4 (corresponds to the	. Design requirements	5. Sp	ecification	s	6. Desigi docum	n nents	
construction drawing)	(priority)						
7. Order of analyses 8	 Verification items (corresponds to the 		9. Insp	ection r	nethods		
	design requirements	s)					

JAXA-Q 7 Jul	TS-2000D y 2016	J A X A Parts Specification			Page	– C-32 –
Example: Forma	it C-2					
		Table 2. List	of DPA Result	S		
				ſ		
1. Classification inspection	of test or	2. Part number		3. Lot nu	umber (date m	anufactured)
			1			
4. Identification number	5. Design requirements	6. Specification	7. Inspection	n results	8. Judgm	ent
			Measurement	Photo No.	Inspector	Registered inspector to JAXA

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification		Page	– C-3
ample: Format (C-2	· · · ·		_	
	Table 3	. Photographs o	of Inspection Re	esults	
1. Classificatio inspection	n of test or	2. Part number	-	3. Lot number (da	ate manufactur
4. Photo No.	5. Identification number	6. Specification	7. Measurement	8. Judgment by inspector	9. Judgment by registered inspector to JAXA
10. Photos to b	be attached here.			11. Description	S
4. Dhoto No	E Identification	6 Specification	7 Magguroment	9 Judgment by	0 ludamont h
4. Photo No.	number			inspector	inspector to
10. Photos to b	be attached here.	11. Description	S		

JAXA-QTS-2000D 7 July 2016)	J A X A Parts Specification		Page	– C-34 –
Exam	ple: Format C-2					-
		т	able 4. List of A	nalysis Results		
	1. Classification of te inspection	est or	2. Part number		3. Lot number (date	manufactured)
	4. Identification number	5. Desig prode requi	gn and uction irements	6. Analysis results 7. Ch rec ins		ked by ered ctor

APPENDIX D

QUALITY ASSURANCE MANGAER AND REGISTERED INSPECTOR

D.1	Scope	D-1
D.2	General Requirments	D-1
D.3	Role and Responsibility of the Quality Assurance Manager	D-1
D.4	Role and Responsibility of the Registered Inspector	D-1
D.5	Qualification and Selection Criteria for Registered Inspector	D-1
D.6	Registration Procedures for the Quality Assurance Manager and the	Resitetered
	Inspector	D-2

This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

JAXA-QTS-2000D		JAXA	Dogo				
	7 July 2016	Parts Specification	Page	– D-1 –			
	APPENDIX D						
	QUALITY ASSURA	NCE MANAGER AND REGISTER		1			
D.1	Scope This appendix establishes	the roles and responsibilities and	registration proc	edures of			
	the quality assurance mar	nager and registered inspector.					
D.2	General Requirments						
	This appendix defines the manager and a registered specific roles and respons	basic roles and responsibilities of inspector. It is QML manufacture sibilities in the Quality Assurance P	a quality assurar r's responsibility Program Plan.	nce to define			
D.3	Role and Responsibility of	the Quality Assurance Manager					
	As a criteria for selecting a quality assurance manager, he/she shall be a director who is ultimately responsible having roles and responsibilities for quality assurance of the qualified parts representing the QML manufacturer and shall be assigned with the following roles and responsibilities:						
	b) To be a director who is	s ultimately responsible for the qua	ality assurance of	the			
	products c) To support and assure manufacturer	the performance of the registered	d inspector in the	QML			
D.4	Role and Responsibility of	the Registered Inspector					
	A registered inspector sha	all be responsible for the following	tasks:				
	a) To provide comments and directions from J	s, requests, and suggestions to JA AXA to staff in the manufacturer	XA and convey r	equirements			
	b) To verify the producti	on of test vehicles and samples, te	est procedures ar	nd the			
	 c) To verify if the manuf to quality assurance of shipping criteria. 	acturing history and inspection res program and applicable specification	sults of the production ons, and determine	cts conform ne pass/fail			
	d) To attend and monito	r TRB and report to JAXA					
	e) To verify the mainten datasheets	ance of QAP plan, detail specificat	tions, and applica	ation			
	f) To verify implementa	tion of the tasks involving the mair	ntenance of qualif	ication			
	g) To attend all of the pr	ocesses throughout designing of t	he qualified parts	to services			
	h) I o attend the training (held once a year) an	program for the registered inspected of the manufacter of the staff in the staff in the manufacter of the staff in t	ctor of JAXA quai	fied parts			
	i) To verify trend contro	I and the current status of the ana	lytical process				
	j) To confirm the operation improvement	tion of quality assurance program	and promote the				
D.5	Qualification and Selectior	Criteria for Registered Inspector					
	A QML manufacturer shal	I select a registered inspector base	ed on the followir	og criteria.			

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	JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– D-2 –	
	a) Unless otherwise specified, a registered inspector shall be a manager or equivalent who has been assigned to an inspection and/or quality control department/technical department involved with qualified parts for at least 2 years. However, the registered inspector shall not belong to any production department.					
	b) When the registered inspector is replaced, the successor to be selected or the assistant is desired to have had participated in the training program for the registered inspector.					
	c)	One registered insper	ctor shall be selected for one qual	ity assurance pro	gram. When	
	 multiple types of parts are qualified, one registered inspector can serve concurrently. d) When a registered inspector performs his/her duties in fabrication facilities or other sites and a broad range of manufacturing processes should be covered, the manufacturer may designate an assistant(s) for the registered inspector. In this case, the scope of authority of the assistant shall be specified in the quality assurance program plan. However, the ultimate authority and responsibility shall rest with the 					
	e)	When the multiple su employees of the sub shall be clearly identit	bcontractors are involved in produ ocontractors. In this case, respons fied.	iction, assistants sibilities of each a	may be ssistant	
D.6	Re	gistration Procedures fo	or the Quality Assurance Manager a	and the Resitetere	ed Inspector	
	a)	 A notice shall be submitted on any of the following occasions: 1) Initial registration of application for the qualification test 2) Change in the quality assurance manager, registered inspector or the registered information 				
	b)	The format and preparation guidelines for the initial registration and change notice shall be in accordance with Appendix F. Changes shall be reported using cross- reference between the existing contents and the changed contents.				

JAXA-OTS-2000D	.LAXA		
7 July 2016	Parts Specification	Page	— E-
	APPENDIX E		
c	ERTIFICATION PROCEDURES		
	Contents		
E.1 Scope			E-
E.2 Preparation			E-
E.3 Establishment of a Q	uality Assurance Program		E-
E.4 Designation of a Qua	lity Assurance Manager and a Rec	gistered Inspector	rE-
E.5 Certification Procedu	res		E-
E.5.1 General Require	ments		E-
E.5.2 Initial Qualification	יח		E-
E.5.2.1 General Requi	rements		E-
E.5.2.2 Application for	Qualification Test		E-'
E.5.2.3 Review of Qua	lification Test Application		E-'
E.5.2.4 Production of	Test Vehicle and Sample		E-'
E.5.2.5 Designation of	Witness		E-
E.5.2.6 Implementation	n of Qualification Test		E-
E.5.2.7 Changes to Qu	alification Test		E-:
E.5.2.8 Termination of	Qualification Test		E-:
E.5.2.9 Application for	QML Certification		E-:
E.5.2.10 Notice of Appr	oval for QML Certification		E-:
E.5.3 Retention of Qua	llification		E-:
E.5.3.1 General Requi	rements		E-:
E.5.3.2 Implementation	n of the Quality Conformance Insp	ection	E-2
E.5.3.3 Application for	Certification Retention	· · · · ·	E-3
E.5.3.4 Review of the	Application for Certification Retent	ion	E-,
E.5.3.5 Notice of Appr	oval for Certification Retention		E-,
E.5.4 Requalification			E-،
E.5.4.1 General Requi	Percents		E-, F
E.5.4.2 Application for	Requalification Tests		E-' E
E.5.4.3 Application for			E-4
E.5.5 Cancellation of G			E-4
Figure E-1. Qualification Fl	owchart		E-4
Figure E-2. Initial Qualificat	ion Procedures		E-(
Figure E-3. Qualification Re	etention Procedures		E-

This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– E-1 –			
E.1	E.1 Scope This appendix defines procedures for QML certification for common parts/materials in compliance with the requirements specified in paragraph 3.4 of this specification.						
E.2	 E.2 Preparation To obtain QML certification under this specification, a manufacturer shall perform the following steps prior to the submission of the Qualification Test Application: a) Develop the detail specification in compliance with Appendix A. b) Develop a plan to obtain certification in accordance with this specification and applicable specifications. c) General specifications and generic specifications are available on the JAXA Qualified EEE Parts and Materials Database website. 						
E.3	E.3 Establishment of a Quality Assurance Program To obtain QML certification in accordance with this specification, a manufacturer shall establish a quality assurance program in compliance with paragraph 3.3 and Appendix C. The quality assurance program shall be documented as a Quality Assurance Program Plan. The Quality Assurance Program Plan shall be prepared in accordance with the muidelines aparitied in paragraph Q.5.						
E.4	 E.4 Designation of a Quality Assurance Manager and a Registered Inspector To obtain QML certification in compliance with this specification, a manufacturer shall designate a quality assurance manager and registered inspector and register them with JAXA. The duties of the quality assurance manager and the registered inspector shall be defined in Appendix D. 						
E.5 E.5.1	 defined in Appendix D. E.5 Certification Procedures E.5.1 General Requirements Certification procedures shall be in compliance with the requirements specified in this specification and applicable specifications. QML certification is classified into the following three types and separate procedures are defined for each. Figure E-1 depicts the qualification flow. a) Initial qualification b) Retention of qualification c) Requalification 						

J/	AXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– E-1 –		
E.5.2	Initial Qualification	·		<u> </u>		
E.5.2.1	E.5.2.1 General Requirementsa) Initial qualification shall be in accordance with the procedures specified in					
	paragraph 3.4.1.b) Procedures of initial qualification are shown in Figure E-2.					
E.5.2.2	Application for Qualif	cation Test				
	 To acquire QML certification in accordance with this specification, a manufacturer shall submit a Qualification Test Application accompanied with the following documents as specified in paragraph 3.4.1.1 of this specification. Formats of these documents shall be as specified in Appendix F. a) Implementation Plan for Qualification Test Implementation b) Detail Specification c) Quality Assurance Program Plan and Quality Manual (if required) d) Registration Notice of Quality Assurance Manager/Registered Inspector e) Application Data Sheet (preliminary) and Field Data (if available) 					
E.5.2.3	Review of Qualification	on Test Application				
	JAXA shall review the audit of the quality as application is determine the manufacturer of the In the review, JAXA so quality assurance pro- documents, manufact of any part of the enti- certification.	application and supporting docur surance program in accordance w ned acceptable, JAXA shall appro he approval. shall evaluate the content and implogram based on a comprehensive turing facilities and test equipment ire quality assurance program that	ments and perform vith paragraph 3.3 ove the application lementation statu examination of va t. JAXA may wait is covered by IS	m an on-site 3.6. If the n and notify s of the arious related ve a review O 9001		
E.5.2.4	Production of Test Ve	hicle and Sample				
	Manufacturers are all compliance with the (Approval for Qualifica	owed to produce qualification test Quality Assurance Program Plan u ation Test Application from JAXA.	vehicles or samp pon receipt of the	bles in e Notice of		
E.5.2.5	Designation of Witne	SS				
	Upon approval of the for the qualification te	Qualification Test Application, JAX ests and notify the manufacturer of	XA shall designat the witness.	te a witness		
E.5.2.6	Implementation of Qu To acquire QML certi qualification tests in o qualification test. a) The JAXA witnes compliance with b) If the JAXA witne during the qualifi	alification Test fication under this specification, a compliance with an approved imple ss shall verify that the qualification the implementation plan for qualifi ess is able to confirm what the ma- ication tests after the completion o	manufacture sha ementation plan f tests are perforn ication tests. nufacturer is to d f the qualification	Il perform the or the ned in emonstrate tests, the		
	tests may be per	formed without the JAXA witness.	2			

JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– E-2 –		
E.5.2.7	Changes to Qualifica To make a change to for approval a Chang accompanied with a	tion Test the qualification tests, the manufa e Request for Qualification Test A description of and rationale for the	acturer shall subn pplication (parag change(s).	nit to JAXA raph F.3.3)		
E.5.2.8	Termination of Qualif To terminate the qua Qualification Test Te erroneous test, or an shall report the event	Termination of Qualification Test To terminate the qualification tests, the manufacturer shall submit a Notice of Qualification Test Termination (paragraph F.3.4). In the event of nonconformance, erroneous test, or an excess of the allowable failure occurrences, the manufacturer shall report the event to the JAXA witness.				
E.5.2.9	 Application for QML Certification To obtain QML certification under this specification and upon completion of the qualification tests, a manufacturer shall submit to JAXA an Application for QML Certification accompanied with the following documents in compliance with paragraph 3.4.1.7. Formats of these documents shall be as specified in Appendix F. a) Report of Qualification Test (Development Test) b) Quality Assurance Program Plan c) Application Data Sheet d) Test data and records 					
E.5.2.10	 Notice of Approval fo a) JAXA shall approval for supporting docurrent supporting docurrent specifications. b) When an Application manufacturer of c) A copy of the Approval for the Approval fo	r QML Certification ove an Application for QML Certific ments meet the requirements spec ation for QML Certification is appro- the approval with a QML Certificat plication for QML Certification sha th the certificate. the information of the certified man formation available on the Databas als website. er must not produce the common p ificate.	cation if the applic cified in the applic oved, JAXA shall re. Il be returned to t nufacturing line to se of JAXA Qualit parts/materials pr	cation and cable notify the the JAXA QML fied EEE ior to receipt		
E.5.3 F	Retention of Qualification	on				
E.5.3.1	 General Requirement a) The retention of a b) The QML manufront c) The procedure for Implementation of the 	ts qualification shall be processed in a acturer shall confirm the delivery s of the quality assurance program c or retention of qualification is depic e Quality Conformance Inspection	ccordance with pa status of qualified luring the certifica sted in Figure E-3	aragraph 3.4.2. parts and ation period. 3.		
	The QML manufactur conducted during the of qualification applic	rer shall report the results of the qu certification period to JAXA in the ation. If no qualified part was man	uality conformanc TRB status repo nufactured during	e inspection rt or retention the		

J	AXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– E-3 –
	certification pe without condu	eriod, the o	QML manufacturer may apply th quality conformance inspection.	ne retention of qu	alification
E.5.3.3	Application for	r Certificat	ion Retention		
	The QML man accompanied days prior to th paragraph 3.4 Submission of when included a) Report of b) Quality As c) TRB State 1) Report 2) Report 3) Nond	nufacturer with the for he expirat I.2. Forma f the Report d in the TR f Quality C ssurance sus Report ort of Qua ort of Qua conformar	shall submit an Application for (ollowing documents to JAXA con ion date of the certification period ats of these documents shall be ort of Quality Conformance Inspect B Status Report. Conformance Inspection Status Program Plan lification and Delivery Status lity Assurance Program Update nee information	Certification Rete mmencing betwe od in accordance as shown in App ection Status is n	ntion en 30 and 60 with endix F. ot required
E.5.3.4	Review of the	Applicatio	on for Certificaiton Retention		
	a) JAXA sha JAXA sha audit) cor paragrapl b) The revie to ISO 90	all review t all verify w nducted at h 3.3.6. w may be 001.	the application and supporting of thether the results of quality ass manufacturer's sites is properly waived for part of the quality as	documents. In thi surance program y reflected in acco ssurance progran	s review, audit (onsite ordance with n that refers
E.5.3.5	Notice of Appr	roval for C	Certification Retention		
	a) When the determine applicable period sp qualificati	e Applicati ed to mee e specifica ecified in ion" proce	on for Certification Retention an t the requirements specified in t ations, JAXA shall approve the o the applicable specifications (the ss.).	nd supporting doc his specification a certification retention is is the "retention	uments are and the tion for the n of
	 b) JAXA shat c) A copy of manufact d) JAXA shat 	all notify th f the Appli turer with t all update	ne QML manufacturer of the app cation for Certification Retentior the certificate. the JAXA QML.	proval with a QML n shall be returne	- Certificate. d to the
E.5.4	Requalification				
E.5.4.1	General Requ Requalificatior a) Requalific purpose o and "certi	lirements n is perfor cation sha of requalifi ification" s	med to change the qualification Il be conducted in accordance v ication, "qualification" shall be in hall be interpreted as "recertifica	coverage. vith paragraph 3. hterpreted as "req ation."	4.1. For the Jualification"

J/	۹ХА 7 、	-QTS-2000D July 2016	J A X A Parts Specification	Page	– E-4 –
E.5.4.2	ŀ	Application for Requa	lification Tests		
	e	 The application f for requalification requalification ar 	orm for qualification tests (paragra n tests. Documents and/or descrip e not required.	aph E.5.2.2) shall ptions unrelated to	also be used o the
	t	 Submission proc as the initial qual 	edures for the application for requisition for requisition (paragraph E5.2).	alification shall b	e the same
E.5.4.3	ŀ	Application for QML F	Recertification		
	a	 The application f for QML recertified requalification ar 	orm for QML certification (paragra cation. Documents and/or descrip e not required.	ph E.5.2.9) shall tions unrelated to	also be used o the
	t	 If JAXA has alread process, the QM accompanied with 	ady confirmed or approved data re L manufacturer may submit an ap	equired for the rea plication for rece he requalification	qualification tification tests.
	C	 Submission proc the initial qualific 	ation (paragraph E.5.2).	rtification shall be	e the same as
E.5.5	Ca	ncellation of QML Ce	ertification		
	a)	To cancel the QML request for cancella items specified in F	certification, the QML manufactur ation in the form of a technical corr .3.8.	er shall submit to espondence whic	JAXA a ch includes
	b)	JAXA shall notify th delete the pertainin	e QML manufacturer of the cance g information from JAXA QML.	Ilation approval i	n writing and







JAXA-QTS-2000D	A X A L		
7. July 2016	Parts Specification	Page	— F-i
7 Odly 2010			
	APPENDIX F		
APPL	ICATION FORM AND PROCEDU	IRES	
	Contents		
F.1 Scope			F-1
F.2 Purposes and Applica	ition Forms		F-1
F.3 Instructions for Prepa	rations and Submission		F-3
F.3.1 General Requirer	ments		F-3
F.3.2 Application for Q	ualification Tests		F-3
F.3.2.1 Qualification Te	est Application (Format F-1)		F-3
F.3.2.2 Notice of Appro	oval for Qualification Test Applicat	ion (Format F-2)	F-4
F.3.2.3 Implementation	n Plan for Qualification Test (Form	at F-3)	F-4
F.3.2.4 Rationale for Sa	mple Selection and Supplementary In	formation (Format	F-4)F-4
F.3.2.5 Order of Tests	and Sample Size (Format F-5)		F-5
F.3.2.6 Test Items and	Methods (Format F-6)		F-5
F.3.2.7 Names and Ma	ajor Specifications of Test Equipm	ent (Format F-7).	F-5
F.3.2.8 Test Site and S	Schedule (Format F-8)		F-5
F.3.2.9 Test Site and C	Guide Map (Format F-9)		F-5
F.3.2.10 Quality Assura	nce Program Plan		F-6
F.3.2.11 Application Dat	ta Sheet		F-6
F.3.2.12 Field Data			F-6
F.3.2.13 Detail Specifica	ations		F-€
F.3.2.14 Notice of Quality	y Assurance Manager/Registered In	spector (Format F	-10)F-6
F.3.3 Change Request	for Qualification Test Application	(Format F-12)	F-7
F.3.4 Notice of Qualific	ation Test Termination (Format F-	·13)	F-7
F.3.5 Application for QI	ML Certification		F-8
F.3.5.1 Application for	QML Certification (Format F-14)		F-8
F.3.5.2 Review Comm	ents and Judgment (Formats F-15	5, F-20)	F-8
F.3.5.3 Correlation Tal	ole between Qualification Test Iter	ns and	
Development T	est Items (Format F-16)		F-§
F.3.5.4 Supplementary	Information (Formats F-18, F-22))	F-§
F.3.5.5 Report of Qual	ification Test (Development Test)	(Formats F-17, F	-21)F-9
F.3.5.6 Results of Qual	ification Test (Development Test) (I	-ormats F-19, F-2	3) F-10
F.3.5.7 Test Data and	Records		F-1(
F.3.5.8 Application Dat	ta Sheet		F-10
F.3.6 Application for Ce	ertification Retention		F-1(
F.3.6.1 Application for	Certification Retention (Format F-	24)	⊦-1(
F.3.6.2 Report of Qual	ity Conformance Inspection Status	s (Format F-26)	⊦-11 ⊏ • •
F.3.6.3 Quality Assura	nce Program Plan		⊦-1′ ⊏
F.3.6.4 Report of Qual	Incation and Delivery Status (Forn	nat F-25)	⊦-1′
F.3.6.5 Report of Qual	Ity Assurance Program Update (F	ormat F-27)	⊦-12 ⊂
F.3.7 IKB Status Repo			⊦-13 ⊏ ∡
F.3.8 Application for Ca	ancellation of QIVIL Certification		F-13
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This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-1 –
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APPENDIX F

APPLICATION FORM AND PROCEDURES

F.1 Scope

This appendix provides instructions for preparation, submission and application forms which must be submitted to JAXA by manufacturers who wish to obtain QML certification for common parts/materials as specified in paragraph 3.4 of this specification.

F.2 Purposes and Application Forms

Table F-1 lists documents that the manufacturer must submit to obtain QML certification.

No.	Purpose	Form and document required for application	Form No.	No. of copies required
		a) Qualification Test Application	F-1	2
	1) Notice of Approval for Qualification Test Application	F-2	2	
		b) Implementation Plan for Qualification Tests	F-3	2
		1) Rationale for sample selection and supplementary information	F-4	2
		2) Order of tests and sample size	F-5	2
		3) Test items and methods	F-6	2
1	Application for 1 qualification test/	4) Names and major specifications of test equipment	F-7	2
		5) Test site and schedule	F-8	2
		6) Test site and guide map	F-9	2
		c) Quality Assurance Program Plan	_	2
		d) Application Data Sheet (draft) and Field Data	-	2
		e) Detail Specification	-	2
		 f) Notice of Quality Assurance Manager/ Registered Inspector 	F-10	1
2	Change to Qualification Test Application	Change Request for Qualification Test Application	F-12	2
3	Termination of qualification tests	Notice of Qualification Test Termination	F-13	2

Table F-1. Required Documents for Qualification Test

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-2 –

No.	Purpose	Form and document required for application	Form No.	No. of copies required	
			a) Application for QML Certification	F-14	2
		1) Review comments and judgment	F-15 ⁽¹⁾ F-20 ⁽²⁾	2	
		 Correlation table between qualification test items and development test items 	F-16 ⁽¹⁾	2	
	Application for	3) Supplementary information	F-18 ⁽¹⁾ F-22 ⁽²⁾	2	
4	certification (recertification)	b) Report of Qualification Test (Development Test)	F-17 ⁽¹⁾ F-21	2	
		1) Results of Qualification Test (Development Test)	elopment Test) F-19 ⁽¹⁾ F-23 ⁽²⁾ 2		
		2) Test Data and Records	_	1	
		c) Quality Assurance Program Plan	-	2	
		d) Application Data Sheet	-	2	
		a) Application for Certification Retention	F-24	2	
	Application for certification	b) Report of Quality Conformance Inspection Status	F-26	2	
		c) Quality Assurance Program Plan	_	2	
5		d) TRB Status Report	F-28	1	
		1) Report of Qualification and Delivery Status	F-25	1	
		2) Report of Quality Assurance Program Update	F-27	1	
		3) Nonconformance information	F-29	1	
		TRB Status Report	F-28	1	
		1) Report of Qualification and Delivery Status	F-25	1	
0	I RE Status Report	2) Report of Quality Assurance Program Update	F-27	1	
		3) Nonconformance information	F-29	1	
7	Cancellation of certification	Request for cancellation in technical correspondence	_	1	

Table F-2. Documents for Qualification Test (continued)

Notes:

⁽¹⁾ Forms required for an application to obtain QML certification of JAXA-developed parts.

⁽²⁾ Forms required for an application to obtain QML certification of non-JAXA-developed parts.

	JAXA-QTS-2000D		JAXA	Page	– F-3 –
	7 July 2016		Parts Specification		
F.3	Instru	ctions for Preparation	ns and Submission		
F.3.1	Gei	neral Requirements			
	a)	Unless otherwise s	pecified, application forms shall be	e prepared using	word-
	b)	Application forms s	e. shall be printed on A4 size paper. f	iled and indexed	properly.
	c)	If multiple copies a	re submitted, original and duplicat	e shall be identifi	ed accordingly
	d) The original shall bear a corporate seal and the duplicate is a photocopy of the original.				
F.3.2	2 Application for Qualification Tests				
	 A Qualification Test Application shall be submitted prior to performance of the qualification or requalification tests. When the qualification tests are exempted, the Qualification Test Application may be submitted with an Application for OMI 				
	Certification.				
	b)	Unless otherwise s	pecified, the Qualification Test Ap	plication shall be	submitted no
	C)	Two copies (1 origi	prior to the scheduled start date of inal. 1 duplicate) shall be submitte	d for each form.	.s. The
	0)	documents specifie	ed in Table F-3 shall be submitted	with the applicati	on.
	d)	When the application	on is approved, JAXA will return to	the manufacturer	a duplicate of
		the application form	h bearing the Qualification Test App	proval Number (J	AXA-QTR xxx).
		Table F-3. D	ocuments for Qualification Test	Application	
	1) G	aualification Test Appli	cation		F-1
	1.1)) Notice of Approval	for Qualification Test Application		F-2
	2) Ir	nplementation Plan fo	r Qualification Tests		F-3
	2.1)) Rationale for samp	le selection and supplementary inform	nation	F-4
	2.2) Order of tests and	sample size		F-5
	2.3) Test items and met	hods		F-6
	2.4)) Names and major	specifications of test equipment		F-7
	2.5) Test site and sched	dule		F-8
	2.6) Test site and guide	map		F-9
	3) G	auality Assurance Prog	ram Plan and Quality Manual (if appli	cable) App	endix C
	4) A	pplication Data Sheet	(draft) and Field Data (as appropriate) App	endix G
	5) D	etail Specification		Арр	endix A
	6) N	lotice of Quality Assura	ance Manager/Registered Inspector	F	-10

F.3.2.1 Qualification Test Application (Format F-1)This document shall be a cover page for the Qualification Test Application and shall contain the following information.

JA〉	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-4 –	
	 a) Document numb b) Date: Date (dd/n c) Applicant: Unles company name, d) Product(s): Desc specifications e) Title and document numbers of all and f) Part number: All individual identified g) Manufacturer: N 	er: Document number assigned by nm/yyyy) the application is submitt s otherwise specified, the represent address and telephone number cription of the common parts/mater ent number of applicable specifications part numbers specified in the application and description that follows ame of the company applying for c	y the manufacture ed ntative's name wi rials specified in t tion: Titles and de licable specificati the part type ma certification	er th the he applicable ocument ons. The y be omitted.	
	Note: For requalification tests, "qualification tests" shall be replaced with "requalification tests". Hereinafter, other relating formats shall be identified in the same way.				
F.3.2.2	Notice of Approval fo A blank form of the N submitted with the ap	r Qualification Test Application (Fo otice of Approval for Qualification plication.	rmat F-2) Test Application	shall be	
F.3.2.3	 Implementation Plan This document shall a a) Product(s): Desc specifications b) Part number: All individual identified c) Qualification cove specifications (If qualification cove d) Production site(se e) Specification numerication titles specification identified g) Deviations from the "None" if there is 	for Qualification Test (Format F-3) contain the following information: cription of the common parts/mater part numbers specified in the app cation and description that follows rerage: Qualification coverage spe the space is insufficient, use a sep erage in a tabular format.) s): Name and address of all factorie mber: Identification of all applicable e: Title of all applicable specification tification the requirements (of specifications a no deviation.	rials specified in t licable specificati the part type ma cified in the appli parate sheet(s) a es involved in the specifications ins associated wi and standards, an	he applicable ons. The y be omitted. cable nd provide the e production th mong others):	
F.3.2.4	 Rationale for Sample This document shall (a) Rationale for sample a) Rationale for sample b) Rationale for wattest is waived. c) Manufacturing conditions Example: QMLP d) Others: Other sumple e) Attachment(s): T 	Selection and Supplementary Info contain the following information: mple selection: Refer to applicable iver of test(s): Provide rationale if a onditions: Title of document(s) whi -001 Quality Assurance Program upplementary information pertainin Title of attached documents, if any	paragraphs in th paragraphs in th a test(s) is waived ch defines the ma n Plan (12 June, 7 g to the qualificat	F-4) e applicable d. "None" if no anufacturing 1998) ion test	

JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-5 –
	f) Contact informat technical operate	ion: Contact information including ors of the applicable common parts	the registered ins s/materials	spector or the
F.3.2.5	Order of Tests and Sa	ample Size (Format F-5)		
 This document shall contain the following information regarding qualification test items specified in the applicable specifications: a) Order of tests: Order of tests specified in numbers b) Test group: As defined in the applicable specifications c) Paragraph number: As defined in the applicable specifications d) Test item: As defined in the applicable specifications e) Samples size: As defined in the applicable specifications f) Allowable number of defectives: As defined in the applicable specifications 				
F.3.2.6	Test Items and Metho	ods (Format F-6)		
	 a) Order of tests: C b) Test item: As de c) Conditions and r d) Specified test meters e) Actual test meters 	order of tests specified in numbers fined in the applicable specification equirements: As defined in the applicable ethod: As defined in the applicable od: Describe "Same as the left" if t fined in the applicable specification	ns plicable specifica specifications he actual test me ns.	tions ethod is the
F.3.2.7	Names and Major Sp	ecifications of Test Equipment (Fo	rmat F-7)	
	This document shall (a) Name of test equ	contain the following information:		
	 b) Relevant test ite c) Major specificati accuracy at a mi 	m: Test items to be conducted usi on: Manufacturer's name, specifica nimum	ng the test equipr ations, performar	ment aces and
	d) Calibration statu period of calibrat	s: Organization that conducted the tion	e calibration and t	he effective
F.3.2.8	Test Site and Schedu	le (Format F-8)		
	 This document shall of F.3.2.6: a) Order of tests: C b) Test item: Name c) Year and months accompanied with d) Test site: Organie e) Test start date: I f) Scheduled test of complete 	contain the following information in order of tests specified in numbers of each test item as specified in the Schedule table indicating start and th date information of year and mo zational name of internal and/or ex Date (dd/mm/yyyy) the qualification completion date: Date (dd/mm/yyyy	he applicable spend ad completion dat onth xternal test sites in test will start y) the test is sche	n paragraph ecification es by arrow eduled to be
F.3.2.9	Test Site and Guide M This document shall a) Name of test site	Map (Format F-9) contain the following information fo	or each test site.	

JAX	(A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-6 –	
	 b) Address of the t c) Telephone numl d) Information on c e) Map to the test s 	est site ber of the test site contact person site			
F.3.2.10	Quality Assurance Program Plan Quality Assurance Program Plan shall be prepared in accordance with Appendix C.				
F.3.2.11	Application Data She Application Data She	eet eet shall be prepared in accordance	e with Appendix (Э.	
F.3.2.12	Field Data Field data shall be pr and in an identical or as the products to be a minimum and shall a) Various test rest b) Actual field failu c) Nonconformanc d) Data such as im	repared for a product manufactured similar design, production process e certified. The field data shall inclu be documented in any appropriate ults re rate e information of shipped products provement history	d on the same pros and quality assu ude the following oformat.	oduction lines urance system information at	
F.3.2.13	Detail Specifications	shall be prepared in accordance w	ith Appendix A		
F.3.2.14	 Detail optimization Detail specifications shall be prepared in accordance with Appendix A. 8.2.14 Notice of Quality Assurance Manager/Registered Inspector (Format F-10) Notice of Quality Assurance Manager/Registered Inspector shall be submitted to register or change the quality assurance manager and/or registered inspector. The notice shall contain the following information: a) Document number: Document number assigned by the manufacturer b) Date: Date (dd/mm/yyyy) the notice is submit c) Applicant: Name of quality assurance manager or registered inspector e) Department: Affiliation of the quality assurance manager or registered inspector, including the organization or factory name f) Job title: Job title of the quality assurance manager or registered inspector g) Telephone number: The telephone number of the quality assurance manager or registered inspector h) Fax number: The fax number of the quality assurance manager or registered inspector i) E-mail address: The e-mail address of the quality assurance manager or registered inspector j) Product(s) assigned: Certified parts, product group or generic nomenclature of products assigned to the quality assurance manager or registered inspector k) Career in the company: Career of the quality assurance manager or registered inspector 				

				1
J	AXA-QTS-2000D	JAXA	Page	_ F-7 _
	7 July 2016	Parts Specification	i age	-1-7-
	 m) Date of change inspector n) Predecessor: inspector One of the irrelevations or contact information documenting the contact or contact information or contact informatin or contact informat	e: Date to change the quality assura Name of the previous quality assura nt job titles in parentheses (quality a struck out. Whenever changes are ion, the manufacturer shall submit a nanges to JAXA.	ance manager or ince manager or r ssurance manage made in the affilia technical corresp	registered registered er or registered ation, job title pondence
F.3.3	Change Request for	Qualification Test Application (Forma	at F-12)	
	If significant change(s of the Qualification Te document (1 original a) Document numb b) Date: Date (dd/r c) Applicant: Unles name, address) of test schedule or test methods are st Application, the manufacturer shal and 1 duplicate). er: Document number assigned by t nm/yyyy) this document is submitted s otherwise specified, the represent and telephone number	e necessary follov I submit two copie the manufacturer ative's name with	ving approval es of this the company
	d) Product(s): Des	ription of the common parts/materia	Is specified in the	e detail
	e) Part number: Pari identification an	rt numbers specified in the applicab I description that follows the part typ	le specifications. e may be omitted	The individual I.
	 f) Manufacturer: N g) Rationale for ch details, if necess 	ame of the company ange: Rationale to change the test. ary.	Use a separate s	heet(s) for the
	If this request is appro- manufacturer.	ved, JAXA shall return the duplicate	of this document	to the
F.3.4	Notice of Qualificatio	n Test Termination (Format F-13)		
	Upon termination of the copies of the Notice of document shall contain a) Document numbers	e qualification tests, the manufacture f Qualification Test Termination (1 or n the following information: er: Document number assigned by t	er shall submit to iginal, 1 duplicate he manufacturer	JAXA two). This
	 b) Date: Date (dd/r c) Applicant: Unles name, address 	nm/yyyy) this document is submitted s otherwise specified, the represent and telephone number	ative's name with	the company
	d) Product(s): Des	ription of the common parts/materia	Is specified in the	e detail
	e) Part number: Pa individual identif	rt numbers as specified in the applic cation and description that follows the	able specificatior	ns. The be omitted.
	f) Manufacturer: N	ame of the company		
	g) Approval numbe approval notice	r of Qualification Test Application: D or the Qualification Test Application	ocument number	of the
	h) Date of approva Application was	: Date (dd/mm/yyyy) the application approved	for Qualification	Test
	i) Reason for term the details, if rec	nation: Reason to terminate the test uired.	t. Use a separate	sheet(s) for

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-8 –

If this request is approved, JAXA shall return the duplicate of this document to the manufacturer.

F.3.5 Application for QML Certification

The manufacturer shall submit two copies of the documents given in Table F-4 (1 original and 1 duplicate) to JAXA. After the application is approved, JAXA shall send a QML Certificate to the applicant accompanied with the duplicate of the application.

	JAXA- developed parts	Non-JAXA- developed parts
a) Application for QML Certification	F-14	F-14
1) Review comments and judgment	F-15	F-20
 Correlation table between qualification test items and development test items 	F-16	N/A
3) Supplementary information	F-18	F-22
b) Report of Qualification Test (Development Test)	F-17	F-21
1) Results of Qualification Test (Development test)	F-19	F-23
c) Test data and records (1 original only)	-	_
d) Quality Assurance Program Plan	Appendix C	Appendix C
e) Application Data Sheet	Appendix G	Appendix G

Table F-4. Documents for QML Certification Application

F.3.5.1 Application for QML Certification (Format F-14)

This document shall contain the following information:

- a) Document number: Document number assigned by the manufacturer
- b) Date: Date (dd/mm/yyyy) the application is submitted
- c) Applicant: Unless otherwise specified, the representative's name with the company name, address and telephone number
- d) Product(s): Description of the common parts/materials specified in the detail specification
- e) Title and document number of applicable specification: Titles and document numbers of the applicable specifications
- f) Production site: Names and addresses of all facilities involving the production
- g) Title and document number of quality assurance program plan: All quality assurance program plan for parts concerned

Note: When applying for recertification, "certification" shall be replaced with "recertification". Hereinafter, "recertification" shall be used for other related forms.

F.3.5.2 Review Comments and Judgment (Formats F-15, F-20)

A blank form of "Review comments and judgment" shall be submitted with the application.

JAX	≺A-Q 7 Jul	TS-2000D y 2016	J A X A Parts Specification	Page	– F-9 –
F.3.5.3	Coi (Fo	rrelation Table bet rmat F-16)	ween Qualification Test Items and	Development Te	st Items
	Thi a) b)	s document shall Qualification test for requirement a Development test	contain the following information: t items: Group, order and items of and test method st items: Group, order of tests and p	the tests, paragra	aph number of test method
	c)	Review commen	its and judgment on qualification te	est results: Left b	lank.
F.3.5.4	Sup	oplementary Inform	nation (Formats F-18, F-22)		
	Thi a)	s document shall Supplementary e F-18): This docu JAXA-developed	contain the following information: explanations to development test (ment shall supplement the informa I part.	applicable only to ation that the proc) Format duct(s) is a
	b)	Rationale for del all test items we	etion of test(s): Rationale to delete re conducted	e test item(s), if a	ny. "None" if
	c)	Manufacturing conditions	onditions: Title of document(s) whi	ch defines the m	anufacturing
	d) e) f) g)	Example: QMLP Failure rate leve Others: Other su Attachment: Title Contact informat information on th applicable comm	-001 Quality Assurance Program I (applicable only to Format F-22): upplementary information pertainin es of attached documents tion (pertaining to this application): ne quality assurance manager or re- non parts/materials	n Plan (12 June, If applicable. g to the application Contact informate egistered inspector	1998) on tion including or of the
F.3.5.5	Rei	port of Qualificatio	n Test (Development Test) (Forma	its F-17, F-21)	
	Thi	s document shall l	be a cover page for the Results of	Qualification Tes	;t
	(De a)	evelopment Test) a Product(s): Desc	and shall contain the following info cription of the common parts/mater	rmation. rials specified in t	he applicable
		specifications			
	b)	Part number: Pa individual identifi	rt numbers specified in the application and description that follows	the part type ma	 The iy be omitted
	c) d)	Contact informat including addres departments	s): Information on production site(s) tion (pertaining to the applicable pr s and department name of engine) roduct): Contact i ering, assurance	nformation and sales
	e)	Title and docume document numb	ent number of applicable specifications and the applicable specifications and the applicable specifications and the specifications are applied by the specification of the specif	tion and standard and standards of	I: Titles and the common
	f)	Qualification cov	rerage: Qualification coverage spe	cified in the appli	cable
	g)	Approval numbe	r of the Qualification Test Applicat t Test)	ion (Implementat	ion Plan for
	h)	Test site	,		
	i) i)	Period of test Witness of qualif	fication test (Development officer):	Left blank.	
	••	·	,		

J	АХА 7 、	-QTS-2000D July 2016	J A X A Parts Specification	Page	– F-1	0 –
F.3.5.6	F	Results of Qualification	on Test (Development Test) (Forma	ats F-19, F-23))	
	٦	This document shall	contain the following information:			
	a	a) Order of tests: T	he order of tests in numbers			
	b	 Test item: Test it 	tems specified in the applicable sp	ecifications		
	C	 Conditions and r applicable specified 	equirements: Conditions and requ fications	irements spec	ified in the	
	c	d) Test results: Sur	nmary of test results. Use a separ	rate sheet(s), i	f necessary	/
	e	e) Judgment of the	development test supervisor (witnes	s of qualification	on test): Lef	t blank
F.3.5.7	٦	Test Data and Record	ds			
	۲ ۲	This document consist prepared to verify the	sts of organized data and records t test results specified in paragraph	from the qualif n F.3.5.6.	ication test	S
F.3.5.8	ŀ	Application Data She	et			
	٦	The Application Data	Sheet shall be prepared in accord	lance with App	oendix G.	
F.3.6	Ap	plication for Certifica	tion Retention			
	a)	This application sh this specification.	all be submitted by the due date s	pecified in par	agraph 3.4.	.2 of
	b)	Two copies of docu 1 duplicate).	uments mentioned in Table F-5 sha	all be submitte	ed (1 origina	al,
	c)	If the application is accompanied with	approved, JAXA shall send a QM the duplicate of the application.	L Certificate to	the applic	ant
		Table F-5. Doc	uments for Certification Retention	on Applicatio	'n	
	I) A	pplication for Certifica	tion Retention		F-24	

1) Application for Certification Retention	F-24
2) Report of Quality Conformance Inspection Status	F-26
3) Quality Assurance Program Plan	Appendix C
4) TRB Status Report	F-28
4.1) Report of Qualification and Delivery Status	F-25
4.2) Report of Quality Assurance Program Update	F-27
4.3) Nonconformance information	F-29

F.3.6.1 Application for Certification Retention (Format F-24)

This document shall be a cover page for the Application for Certification Retention and shall contain the following information.

- a) Document number: Document number assigned by the QML manufacturer
- b) Date: Date (dd/mm/yyyy) the application is submitted
- c) Applicant: Unless otherwise specified, the representative's name with the company name, address and telephone number
- d) Product(s): Name of the qualified parts specified in the applicable specifications

 e) Title and document number of the applicable specifications: Title and document number of the applicable specifications f) Effective period of current certification: Expiration date specified in the current QML Certificate g) Current certification number (date) h) Production site: Names and addresses of all facilities involving production i) Title and document number of quality assurance program plan: All quality assurance program plan of parts concerned j) Approval number of Cualification Test Application for initial certification (date) k) Initial certification retention: Left blank. m) Date of certification retention: Left blank. m) Date of certification retention: Left blank. r) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan) Example: QMLP-001 Quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection preside. m) Quality Assurance Program Plan The Quality Assurance Program Plan The Quality Assurance Program Plan The Quality Assurance Program Plan Asal be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document s	JAX	XA-Q ⁻ 7 Jul <u>y</u>	TS-2000D y 2016	J A X A Parts Specification	Page	– F-11 –
 f) Effective period of current certification: Expiration date specified in the current QML Certificate g) Current certification number (date) h) Production site: Names and addresses of all facilities involving production i) Title and document number of quality assurance program plan: All quality assurance program plan of parts concerned j) Approval number of Qualification Test Application for initial certification (date) k) Initial certification number (date) l) Number of certification retention: Left blank. m) Date of certification retention: Left blank. m) Date of certification retention: Left blank. m) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection results: Number of defectives) l) Inspection results: Number of defectives) l) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Qua		e)	Title and docume	ent number of the applicable speci	fications: Title an	d document
 g) Current certification number (date) h) Production site: Names and addresses of all facilities involving production i) Title and document number of quality assurance program plan: All quality assurance program plan of parts concerned j) Approval number of Qualification Test Application for initial certification (date) k) Initial certification number (date) i) Number of certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. r) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Qualify Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of registered inspector i) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) m) Inspection period j) Judgment on inspection j) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Q		f)	Effective period	of current certification: Expiration of	date specified in t	he current
 h) Production site: Names and addresses of all facilities involving production Title and document number of quality assurance program plan: All quality assurance program plan of parts concerned j) Approval number of Qualification Test Application for initial certification (date) k) Initial certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. r) Approval seal of JAXA president: Left blank. r) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: (DMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of quality assurance manager h) Name and seal of quality assurance maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection results: Number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period<td></td><td>g)</td><td>Current certificat</td><td>ion number (date)</td><td></td><td></td>		g)	Current certificat	ion number (date)		
 i) Title and document number of quality assurance program plan: All quality assurance program plan of parts concerned j) Approval number of Caulification Test Application for initial certification (date) k) Initial certification number (date) l) Number of certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: OMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall be rooted situs of the common parts/materials and shall contain the following information. 		h)	Production site:	Names and addresses of all faciliti	es involving proc	luction
 i) Approval number of Qualification Test Application for initial certification (date) k) Initial certification number (date) i) Number of certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of quality assurance manager h) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection results: Number of defectives) l) Inspection results: Number of defectives) l) Inspection results: Number of defectives) l) Deleted) m) (Deleted) m) (Deleted) m) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Flan F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		i)	Title and docume	ent number of quality assurance pl am plan of parts concerned	rogram plan: All o	quality
 k) Initial certification number (date) i) Number of certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period j) Judgment on inspection p) Lot number (production date) F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		j)	Approval numbe	r of Qualification Test Application	for initial certification	tion (date)
 Number of certification retention: Left blank. m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection rems j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan The Quality Assurance Program Plan F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		k)	Initial certification	n number (date)		
 m) Date of certification retention: Left blank. n) Approval seal of JAXA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan shall be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		I)	Number of certifi	ication retention: Left blank.		
 h) Approval seal of JAAA president: Left blank. F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan shall be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		m)	Date of certificat	ion retention: Left blank.		
 F.3.6.2 Report of Quality Conformance Inspection Status (Format F-26) This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications b) Part number: Part numbers specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives) l) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan shall be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		n)	Approval seal of	JAXA president: Left blank.		
 This document shall be a cover page containing results of the quality conformance inspections conducted within the effective period of certification and contain the following information. a) Product(s): Description of the qualified parts specified in the applicable specifications. The individual identification and description that follows the part type may be omitted. c) (Deleted) d) Number of detail specification e) Manufacturing conditions: Title and document number of document(s) which define the manufacturing conditions (Quality Assurance Program Plan) Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) m) Inspection period Judgment on inspection Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information.	F.3.6.2	Rep	port of Quality Cor	nformance Inspection Status (Form	nat F-26)	
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 f) (Deleted) g) Name and seal of quality assurance manager h) Name and seal of registered inspector i) Inspection items j) Criteria of pass/fail k) Sample size (allowable number of defectives) l) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan shall be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 			Example: QMLP	-001 Quality Assurance Program	n Plan (12 June, 7	1998)
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 k) Sample size (allowable number of defectives) k) Sample size (allowable number of defectives) k) Inspection results: Number of defectives, the maximum, minimum and average values of measurements shall be reported. Non-numerical test results shall be briefly described. m) (Deleted) n) Inspection period o) Judgment on inspection p) Lot number (production date) F.3.6.3 Quality Assurance Program Plan The Quality Assurance Program Plan shall be attached if the plan has been changed. F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information.		i)	Criteria of pass/f	ail		
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 F.3.6.4 Report of Qualification and Delivery Status (Format F-25) This document shall provide production status of the common parts/materials and shall contain the following information. 		The	e Quality Assurance	ce Program Plan shall be attached	if the plan has b	een changed.
This document shall provide production status of the common parts/materials and shall contain the following information.	F.3.6.4	Rep	port of Qualificatio	n and Delivery Status (Format F-2	5)	
		Thi: con	s document shall tain the following	provide production status of the co information.	ommon parts/mat	erials and shall

JAXA-Q	TS-2000D	J A X A Parts Specification	Page	– F-12 –
7 Ju	ly 2010	Faits Specification		
a)	Product(s): Desc specifications	cription of the common parts/mater	ials specified in t	he applicable
b)	Part number: Pa individual identifi	rt numbers specified in the applica cation and description that follows	ble specifications the part type ma	s. The ly be omitted.
c)	QML manufactu	rer: Name of the QML manufacture	er	
d)	Detail specificati specificati	on number: Document number and	d established dat	e of the detail
e)	Qualification cov specifications	erage: Qualification coverage defined	ned in the applica	able
f)	Production site(s): Name and address of productio	n site(s)	
g)	Manufacturing co define the manufacturing co reported. All cor Traceability betw is not required. Example: QMLP	onditions: Title and document num facturing conditions (Quality Assurn ditions applied during the product veen delivered products and the ap -001 Quality Assurance Program	ber of document ance Program Pl ion period shall b oplied manufactu n Plan (12 June, 7	(s) which an) shall be e described. ring conditions 1998)
h)	Current certificat	ion number		,
i)	Effective period	of current certification: Expiration of	date specified in t	he current
	Notice of Approv	al for Certification Retention		
j)	Name and seal of	of quality assurance manager		
k)	Name and seal of	of registered inspector		
I)	Product: Name of	of the delivered common parts/mat	erials, if any	
m)	Part number: Pa individual identifi	rt numbers specified in the applica cation and description that follows	ble specifications the part type ma	s. The ly be omitted.
n) o)	Quantity of delive Customer: Name delivery only), if	red products: Quantity of the delivere of the company to which products any	ed common parts/ s are delivered (p	materials, if any primary
F.3.6.5 Re	port of Quality Ass	urance Program Update (Format F	-27)	
r n pro coi Pla coi As: a) b) b) c) d) e) f) g) h) i)	Is document shall p ogram for the TRB ntain the following in may be used in mmunicated via a r surance Program I Product(s): Desc Part number: Par individual identifi QML manufactur Title and docume Production site(s Document numb Period covered (Name, departme Description of ch	status report or application for cert information. A revision record of the place of this report. When change revision record alone, a copy of up Plan shall be attached to the revision cription of the common parts/mater rt numbers specified in the application cation and description that follows rer: Name of the QML manufacture ent number of detail specification s): Name and address of the produ- er and established date of Quality by the report) ent and seal of quality assurance mange(s): The following information	tatus of the quali tification retention he Quality Assura es are not sufficie dated pages in th on record. tials able specifications the part type ma er station site(s) Assurance Progra nanager o shall be provide	ty assurance n and shall ance Program ntly ne Quality s. The ny be omitted ram Plan d.
, ,	1) Document r	number		

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-13 –
 2) Last update 3) Updated cc 4) Impact(s) o 	e date ontents n the Quality Assurance Program I	Plan	
 F.3.7 TRB Status Report (Fo This document shall be documents to JAXA and information. a) Subject of report: N target common part b) Period covered (by Example: 5 March. c) Report item: Check 	rmat F-28) a cover sheet for a TRB activity rep nually from the certification date and Name, detail specification number, rts/materials. y the report) , 2003 to 4 March, 2004 the box of applicable item(s). Add a	oort submitted with I shall contain the and certification ttached document	n related following number of number, if any.
 F.3.8 Application for Cancella The QML manufacturer correspondence and su in JAXA. a) Product(s) for cancel 1) Name of the C 2) Detail specific 3) Current certifie 4) Company nan b) Reason for cancell c) Deadline for the fir d) Alternative product e) Contact informatio 	ation of QML Certification shall provide the following information obmit it to the division manager in of cellation QML product ation number cation number and date the of QML manufacturer ation hal order ts n	ation in the form of the form	of technical parts control
 F.3.9 Nonconformance information This document shall compare the s	nation (Format F-29) ntain the following information. conformance occurrence of certified number of nonconforming parts nonconformance if related document(s): Title and do ndence or non-conformance report	d parts or similar ocument identifica submitted to JA	parts ation of a XA.

7 July 2016	JAXA Parts Specification	Page	– F-14	
G	UALIFICATION TEST APPLICATIO	DN		
		Document No. Date:		
(President's name) President Japan Aerospace Explora	ation Agency			
	Address:	pplicant		
	Company: Representative: Telephone number:		seal seal	
Per paragraph 3.4.1.1 of	JAXA QTS-2000. I request approva	al to conduct qua	lification	
Per paragraph 3.4.1.1 of tests as specified in the Ir Product(s)	JAXA QTS-2000, I request approve nplementation Plan for Qualification Title and document num applicable specificati	al to conduct qua Test. ber of on	lification	
Per paragraph 3.4.1.1 of tests as specified in the Ir Product(s)	JAXA QTS-2000, I request approve nplementation Plan for Qualification Title and document num applicable specification	al to conduct qua Test.	lification	
Per paragraph 3.4.1.1 of tests as specified in the Ir Product(s) Part number	JAXA QTS-2000, I request approve nplementation Plan for Qualification Title and document num applicable specification Manufacturer	al to conduct qua Test.	lification	
Per paragraph 3.4.1.1 of tests as specified in the Ir Product(s) Part number	JAXA QTS-2000, I request approve nplementation Plan for Qualification	al to conduct qua Test.		
JAXA-QTS-2000D 7 July 2016	J Parts S	A X A pecification	Page	– F-15 –
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		(Tally impres	sion of original a	nd duplicate)
Review comments and	judgment			
The application is hereby a	pproved.			
Approval number	te of approval dd/mm/yyyy)	JAXA presid	ent's seal for appro	oval
Format F-2				

IMPLEMENTATION PLAN FOR QUALIFICATION TESTS

Product(s)	Part number	Qualification coverage	Production site(s)

1. Applicable specifications and standards

1.1 Titles and document numbers

Specification number	Specification title

1.2 Deviations from the requirements

Format F-3

JAXA-QTS-2000D 7 July 2016	J / Parts Sp	A X A Decification	Page	– F-17 –				
2. Rationale for sample	selection and supp	lementary information	ı					
2.1 Rationale for sar	nple selection							
2.2 Rationale for wa	2.2 Rationale for waiver of test(s)							
2.3 Manufacturing co	onditions							
2.4 Others								
2.5 Attachment(s)	2.5 Attachment(s)							
Contact information	Contact information							
Company	Department	Name	Telephone	number				
Format F-4								

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-18 –

Test	Test	Qualificatio	n tests		Allowabl
order	group	Paragraph number	Test item	Sample size	defective

JAXA-QTS-2000D	JAXA	Dama	F 40
7 July 2016	Parts Specification	Page	– F-19 –

Test item	requirements	Specified test method	Actual test method
		Test item requirements	Test item requirements Specified test method

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-20 –
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Test equipment	Relevant test item	Maior specification	Calibration status

	JAXA-QTS-2000D 7 July 2016		J A Parts Spe	X A cification	Page	– F-21 –
6	. Test site an	d schedule				
	Test order	Tost itom	Year			Test site
			Month			
	Test start	date (dd/mm/yyyy)	Scheduled tes completion dat	st (dd/mr	m/yyyy)
For	mat F-8]

	JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-22 –
7. 1 ((((Test site and guide map Provide a detailed descript 1) Name of test site 2) Address 3) Telephone number 4) Contact information	tion of the test site and guide map).)	
((Guide map)			
orma	t F-9			

7		JAXA	Page	_ F-
'	July 2016	Parts Specification	T age	I
		NOTICE OF		
	QUALITY ASSU	RANCE MANAGER/REGISTER	ED INSPECTOR	
			Document No.	
			Date:	
(Dir	ector's name)			
Dire	ector			
Par	ts Program Group,	- 4		
Saf	ety and Mission Assu	irance Department(1)		
Jap	an Aerospace Explor	ation Agency		
		ŀ	Applicant	
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		Company:		seal
		Representative:		sear
In c this mai ass	compliance with parages form to notify JAX nager/ registered insported insported insported insported insported insported insported insported insported insp	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person i pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the	bmitting surance qualit
In c this ass 1. 2. 3. 4. 5.	compliance with parages form to notify JAX nager/ registered insportance of products su Name Department Job title Telephone number Fax number	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person is pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the	bmitting surance a quality
In c this ass 1. 2. 3. 4. 5. 6. 7	compliance with parages form to notify JAX nager/ registered insportance of products su Name Department Job title Telephone number Fax number E-mail address	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person is pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the	bmitting surance e quality
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In c this mai ass 1. 2. 3. 4. 5. 6. 7. 8. 9. 10.	compliance with parages form to notify JAX nager/ registered insportance of products su Name Department Job title Telephone number Fax number E-mail address Product(s) assigned Career in the compa Rationale for change	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person is pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the	bmitting surance a quality
In c this ass 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	compliance with parages form to notify JAX nager/ registered insport ourance of products su Name Department Job title Telephone number Fax number E-mail address Product(s) assigned Career in the compa Rationale for change Date of change (if appl	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person is pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the	bmitting surance a quality
In c this mai ass 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11. Not	compliance with parage form to notify JAX nager/ registered insport ourance of products survey Name Department Job title Telephone number Fax number E-mail address Product(s) assigned Career in the compa Rationale for change Date of change (if apple Predecessor (if apple) the irrelevant tit	Telephone number: graphs 3.3.3 and 3.3.4 of JAXA-((A that the following person is pector) for our company and is ubject to certification.	QTS-2000, I am su s the (quality as responsible for the gistered Inspector	bmitting surance quality by strik

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– F-24
CHANGE REQUE	EST FOR QUALIFICATION TEST	APPLICATION	
		Document No. Date:	
(President's name) President			
Japan Aerospace Explor	ation Agency		
	Addross:	cant	
	Company:		seal
	Representative:		seal
	Telephone number:		
In compliance with parag request a change to t submitted on (dd/mm/yyy	graph 3.4 of JAXA-QTS-2000, I an the Qualification Test Applicatio yy) for the following reason.	n submitting this f n (document nu	orm to umber)
1. Product(s)			
2. Part number			
3. Manufacturer			
4. Rationale for change	e		

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	F QUALIFICATION TEST TER	MINATION	
		Document No.	
		Date:	
(President's name)			
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Japan Aerospace Exploi	ration Agency		
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1 Product(s)			
2. Part number			
3. Manufacturer			
4. Approval Number o	f Qualification Test Application	JAXA-QTR	
(Date of Approval) 5 Reason for terminat	tion	(dd/mm/yyyy)	

	APPLICATI	ON FOR OML CERTIFICA	TION	
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			Document No. Date:	
(President's nan	ne)			
President	- Eurolanation	A		
Japan Aerospac	e Exploration	Agency		
		Арр	olicant	
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In compliance w request QML ce	ith paragraph rtification of th	Address: Company: Representative: Telephone number: 3.4 of JAXA-QTS-2000, I a the following product (s).	m submitting this f	seal seal
In compliance w request QML ce By submitting th paragraph 1.4 or Product(s)	ith paragraph rtification of th nis applicatior f JAXA-QTS-2	Address: Company: Representative: Telephone number: 3.4 of JAXA-QTS-2000, I a the following product (s). a, I agree to be bound by 2000. Title and document number of applicable specification Title and	m submitting this f the obligation sta	seal seal

Format F-14

JAXA-QTS-200 7 July 2016	00D	J A X A Parts Specification	Page	– F-27 -
Review comments	and judgme	ent:		
Review comments	Example As a res assuranc at a minir	evelopment tests, th ogram plan and orga o satisfy all requireme	e quality nization, ents.	
	Reviewe	d by:	seal	
Judgment	Example Applicatio	: on No (issued on dd/mr	n/yyyy) is judged ap	propriate.
	Judged t	by:	seal	
The application is a	approved as	follows. Approval date (dd/mm/yyyy)	President's seal for a	approval
ormat F-15				

7 July 2016		16	Parts Specification			Page		– F-28	
		COF QUA D	RRELATION T ALIFICATION ⁻ VEVELOPMEN	ABLE BETW FEST ITEMS T TEST ITEN	'EEN AND IS				
		Qualification	test item		C	Developm	ent tes	t item	
Group c	Test order	Test item	Requirement paragraph	Test method paragraph	Group	Test order	Tes pai	t method ragraph	
А	1								
	2								
	3								
Review commer judgmer qualifica	nts and nt on ation tests	Example: All the qua it has been	lification tests han confirmed that	ave been perfo all the requirer	ormed as nents w	s develop ere fulfille al	ment te	ests and	

JAXA-QTS-2000D 7 July 2016	J Parts S	A X A pecification	Page	– F-29 –
1. Supplementary info	ormation			
1.1 Supplementar	y explanations to dev	elopment tests		
This section p JAXA-develop	rovides supplementar ed part.	y information indica	ting that the part	is a
Example:				
The qualification tests performe xxxx (year). The Qualification for Developme	on test for this applic ed under a contract " on Test Application is ent Test, Approval No	ation is substituted Development of XX s substituted by the xxxxxx.	by the developn (XX" implemente Implementation I	nent ed in Plan
1.2 Rationale for c	leletion of test(s)			
This section p Development	rovides the rationale Test" indicate deletior	for deletion of test of test item(s).	(s) if the "Result	ts of
1.3 Manufacturing	conditions			
1.4 Others				
1.5 Attachment(s)				
Contact information				
Company	Department	Name	Telephone	e number
Format F-18				

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification			Page	– F-30	
	RE	PORT OF DEV	ELOPME	ENT TES	ST		
. Summary of develo	opment t	ests					
Product(s)	P	art number	Produ	iction site	e(s)	Contact inf	formation
Title and document num	nber of	Qualificatio	n		Apj	proval numbe	r of the
applicable specification and	l standard	Quanicatio	n coverag	je	1111	Development	Test
			T				
-			-		Deve	lopment office	er
I est site							
Test period							seal
	<u> </u>						

JAXA 7 .	-QTS-2000D July 2016	J A X Parts Spec	A ification	Page	– F-31 –
2. Result	s of development te	est			
Test order	Test item	Conditions and requirements	Test res	ults dev test	dgment of /elopment supervisor
Format F-19)				

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– F-32 –
Review comments and judgme	ent:			
Review comments by witness qualification test results	on			
		This application is c	considered appropriat	e.
Overall review comments by the with	ness	Chief witness:		seal
		Assistant witness:		seal
		Example:		
Judgment		Application No (de	d/mm/yyyy) is judged a	appropriate.
		Judged by:	sea	I
The application is approved.				
Certification number		Approval date (dd/mm/yyyy)	President's seal for	approval
Certification number of the last certification	D	ate of the last certification (dd/mm/yyyy)		
Format F-20				

JAXA-QTS-2000D 7 July 2016	J / Parts S	A X A pecification	Page	– F-3
1. Supplementary inforr	nation			
1.1 Rationale for del	etion of test(s)			
1.2 Manufacturing co	onditions			
1.3 Failure rate level	I			
1.4 Others				
1.5 Attachment(S)				
Contact information				
Company	Department	Name	Telephone	e number

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification			Page	– F-3
. Summary of qualified	cation te	st	ALIFICATION	E91		
Product(s)	Pa	art number	Production s	site(s)	Contact ir	nformation
Title and document num applicable specification and	ber of standard	Qualificati	on coverage	App Qualif	proval numbe	er on the Application
Test site				Wi	itness	
Test period						

JAXA-QTS-2000D	JAXA		F 05
7 July 2016	Parts Specification	Page	– F-35 –

2. Results of qualification tests Conditions and requirements Judgment by witness Test Test item Test results order Format F-23

			T
JAXA-QTS-2000D	JAXA	Page	– F-3
7 July 2016	Parts Specification		
APPLICAT	TION FOR CERTIFICATION R	ETENTION	
		Document No.	
		Date:	
(President's name)			
Japan Aerospace Explor	ation Agency		
	Ar	oplicant	
	Address:		
	Company:		seal
	Representative:		seal
	l'elephone number:		
paragraph 1.4 of JAXA-Q	Title and docum	nent no.	
	specificati	on	
Part no.	Title and docum of quality assu program p	nent no. Jrance Ian	
Effective period of current certification	Approval no. fo certification (da Qualification Test A	r initial JAXA- ate) of (.	-QTR- .)
Current certification no. (date)	Initial certificat (date)	ion no. JAXA· (.	-QTA- .)
This application is hereby app	proved.	I	
Number of certification retention	Date of certification retention	Approval seal of JAX	A presiden
	(33,111,13,3,3,3,9,7)		

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	— F

Product(s)			Part number			QM	L manufacturer
Detail specification number (date of issue)		er Qua	Qualification coverage			Pro	oduction site(s)
Manufacturing conc	lition	s					
Current certification r (dd/mm/yyyy)	no.			Nam	e of quality nce manage	r	sea
Effective period o current certificatio	f n			Name in	of registered spector	k	Sea
Product	Р	art number	Quant delivered	tity of products	Custo	mer	Remarks

JAXA-QTS-2000D
7 July 2016

Produc	ct(s)			Detail s	specification	number		
Part nu	Part number			Manuf	acturing cor	nditions		
Lot nur (productio	nber n date)			Ins	pection pe	riod		
Name of assurance	quality manager		seal	Name o	of registered i	nspector		sea
		Sample siz	e		Test re	sults		
Inspection item	Criteria fo pass/fail	(allowable no defectives) of No	o. of ctives	Max.	Min	. Avg.	Judgmen

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification			Page	– F-39
REPOR	T OF (QUALITY ASSU	RANCE PROG	RAMU	JPDATE	
Product(s)		Part n	umber		QML manufac	turer
Title and document number	er of de	tail specification	F	Product	ion site(s)	
Document number and established date of Quality Assurance Program	n Plan					
Period covered						
Name and department o quality assurance manag	f ger					seal
		Description	of change(s)			
Document number	Las	t update date	Updated cont	ents	Impact(s) c Assurance Pr	on Quality rogram Plar

Γ

	7 July 2016	Parts Specification		Page	9	– F-4	
		TRB STATUS REPORT					
			Docu Date	ument :	No.		
(Dire Dire	ector's name) ctor						
Parts	s Program Group,						
Safe	ety and Mission Assuran	ce Department(1)					
Japa	an Aerospace Exploratio	on Agency					
		Re	porter				
		Company:					
		Department Registered increator:				seal	
		Telephone number				SEAI	
		E-mail address					
In co	mpliance with paragraph	K.3.6.1 of JAXA-QTS-2000, I am s	submitt	ting sta	atus of [·]	TRB	
activi	ity.						
1. Subject of report							
1.	Subject of report						
1.	Subject of report Product: Detail specification pr	umber:					
1.	Subject of report Product: Detail specification nu Certification number:	umber:					
1.	Subject of report Product: Detail specification nu Certification number:	umber:					
1. 2.	Subject of report Product: Detail specification nu Certification number: Period covered	umber:					
1. 2. 3.	Subject of report Product: Detail specification nu Certification number: Period covered Report item	umber:					
1. 2. 3.	Subject of report Product: Detail specification number: Certification number: Period covered Report item	umber: port item	Yes	No	Docu	ment no.	
1. 2. <u>3.</u> <u>1)</u>	Subject of report Product: Detail specification number: Certification number: Period covered Report item Report item TRB meeting minutes	umber:	Yes	No	Docu	ment no.	
1. 2. <u>3.</u> <u>1)</u> 2)	Subject of report Product: Detail specification number: Certification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an	oort item oort item nd Delivery Status (Format F-25)	Yes	No	Docu	ment no.	
1. 2. 3. <u>1)</u> 2) 3)	Subject of report Product: Detail specification number: Certification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Quality Conforma	oort item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26)	Yes	No	Docu	ment no.	
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1. 2. 3. 1) 2) 3) 4) 5) 6)	Subject of report Product: Detail specification number: Certification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Quality Conforma Report of Quality Assuran Failure analysis results and nonconforming products ar Critical changes, addition trend control in design an production process, test a	umber: bort item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26) ce Program Update (Format F-27) d corrective actions on and customer returns (Format F-29) s, improvements or d structure (incl. materials), and inspection	Yes	No	Docu	iment no.	
1. 2. 3. 1) 2) 3) 4) 5) 6) 7)	Subject of report Product: Detail specification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Quality Conforma Report of Quality Assuran Failure analysis results and nonconforming products ar Critical changes, addition trend control in design an production process, test a Addition of new product(s qualification coverage	umber: port item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26) ice Program Update (Format F-27) d corrective actions on and customer returns (Format F-29) s, improvements or ad structure (incl. materials), and inspection s) and/or package(s) within	Yes	No	Docu	iment no.	
1. 2. 3. 1) 2) 3) 4) 5) 6) 7) 8)	Subject of report Product: Detail specification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Qualification an Report of Quality Conforma Report of Quality Assuran Failure analysis results and nonconforming products ar Critical changes, addition trend control in design an production process, test a Addition of new product(s qualification coverage	umber: port item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26) ace Program Update (Format F-27) d corrective actions on and customer returns (Format F-29) s, improvements or ad structure (incl. materials), and inspection a) and/or package(s) within overage and recertification planning	Yes	No	Docu	iment no.	
1. 2. 3. 1) 2) 3) 4) 5) 6) 7) 8) 9)	Subject of report Product: Detail specification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Qualification an Report of Quality Conforma Report of Quality Assuran Failure analysis results and nonconforming products ar Critical changes, addition trend control in design an production process, test a Addition of new product(s qualification coverage Changes to qualification co	umber: port item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26) ance Inspection Status (Format F-27) d corrective actions on and customer returns (Format F-29) s, improvements or d structure (incl. materials), and inspection s) and/or package(s) within overage and recertification planning	Yes	No	Docu	Iment no.	
1. 2. 3. 1) 2) 3) 4) 5) 6) 7) 8) 9) 10)	Subject of report Product: Detail specification number: Period covered Report item Report item TRB meeting minutes Report of Qualification an Report of Quality Conforma Report of Quality Conforma Report of Quality Assuran Failure analysis results and nonconforming products ar Critical changes, addition trend control in design an production process, test a Addition of new product(s qualification coverage Changes to qualification co New certification plan Others:	umber: port item ad Delivery Status (Format F-25) ance Inspection Status (Format F-26) ance Inspection Status (Format F-27) d corrective actions on and customer returns (Format F-29) s, improvements or d structure (incl. materials), and inspection s) and/or package(s) within overage and recertification planning	Yes	No	Docu	Iment no.	

	JAX	A-QTS-2000D 7 July 2016	Pa	J A X A arts Specification	Page	– F-41 –
			Noncon	formance Information		
	Date	Part number		Description	Title and related do	number of ocument(s)
F	ormat F-2	29				

J A X A Parts Specification

APPENDIX G

PREPARATION OF APPLICATION DATA SHEET

G.1 Scope	G-1
G.2 General Requirements	G-1
G.3 General Standards for Preparation	G-1
G.4 Guidelines for Preparation	G-1
G.4.1 Cover Page	G-1
G.4.2 Revision Record	G-2
G.4.3 General	G-2
G.4.3.1 Purpose	G-2
G.4.3.2 Applicable Documents	G-2
G.4.3.3 Referecne Documents	G-2
G.4.4 Summery of Product	G-2
G.4.4.1 External View and Dimensions	G-2
G.4.4.2 Mass	G-2
G.4.4.3 Element Construction	G-2
G.4.5 Usage	G-3
G.4.5.1 Absolute Maximum Ratings	G-3
G.4.5.2 Remcommended Operating Conditions	G-3
G.4.5.3 Special Instructions on Cirucuit Design	G-3
G.4.5.4 Recommended Mounting Method	G-3
G.4.6 Performance Characteristics in Normal Operation	G-3
G.4.6.1 Electrical Characteristics	G-3
G.4.6.2 Mechanical and Thermal Characteristics	G-3
G.4.7 Performance Characteristics in Various Operating Environments	G-3
G.4.8 Enviornmental Limits	G-4
G.4.9 Reliability Data	G-4
G.4.9.1 Faiure Rate	G-4
G.4.9.2 Failure Mode	G-4
G.4.10 Storage Conditions	G-4
G.4.11 Handling Instructions	G-4
G.4.12 Others	G-4
Example: Format G-1	G-5
Example: Format G-2	
	• · ·

This document is the English version of JAXA QTS/ADS which was originally written and authorized in Japanese and carefully translated into English for international users. If any question arises as to the context or detailed description, it is strongly recommended to verify against the latest official Japanese version.

G.1 Scope

This appendix provides instructions to prepare the Application Data Sheet as required in paragraph 3.4 in this specification.

G.2 General Requirements

The Application Data Sheet is established to provide users with helpful information such as usage notes. For this purpose, this appendix provides the minimum requirements to prepare the Application Data Sheet.

G.3 General Standards for Preparation

- a) Terms defined in JIS shall be used.
- b) Unless otherwise specified, an Application Data Sheet shall be prepared for each qualified part to be, or for each detail specification.
- c) In addition to data for the qualified parts, data for similar products may be included in the data sheet. In this case, the data shall be clearly identified as such.
- d) If changes in content or applicable specifications are necessary, the Application Data Sheet shall be revised. The revised issues shall be provided in a revision record.
- e) Error corrections or minor changes may be notified via Change Notice. The Change Notice format is shown in Format example G-2.
- G.4 Guidelines for Preparation

The Application Data Sheet shall include the following items as a minimum:

- a) Cover page
- b) Revision record
- c) General
- d) Summary of product
- e) Usage
- f) Performance characteristics in normal operation
- g) Performance characteristics in various operating environments
- h) Environmental limits
- i) Reliability data
- j) Storage conditions
- k) Handling instructions
- I) Others
- G.4.1 Cover Page

Cover page shall include the following items:

- a) Part description: Part description shall be described identifying the products from their part group.
- b) Part number or part type: Part numbers or types shall be described as specified in the applicable specifications.

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– G-2 –
	 c) Applicable specification detail specification d) QML Manufacturer e) Year and month: Y shall be described. 	ation: Document numbers of the go s shall be described. : Name of the QML manufacturer s ear and month when the Application	eneric specificationshall be described on Data Sheet wa	ons and d. as prepared
G.4.2	Revision Record The revision record sha	II be as specified in item d) of para	agraph G.3.	
G.4.3	General This section shall be pr	epared as follows:		
G.4.3.1	Purpose The purpose of the d	ocument shall be stated as shown	in the example b	elow.
	Example. This App necessar JAXA QM also be c aspects p this docu	y for designing or selecting produce AL. Relevant information not cove onsidered as necessary. Users ar pertaining to selection and use of the ment.	red in this docum red in this docum re responsible for he product(s) spe	ained in ent shall all ecified in
G.4.3.2	Applicable Document This section shall pro specifications that de documents such as M	ts wide a list of the document numbe fine requirements for the qualified /IL specifications.	r and the title of a part(s) and other	applicable applicable
G.4.3.3	Referecne Document This section shall pro documents such as to the Application Data	ts wide a list of the document numbe echnical documents and catalogue Sheet.	r and the title of r es that are used t	eference o develop
G.4.4	Summery of Product This section shall provid functions, applications a	de a summary of the qualified part	(s) such as featur	es,
G.4.4.1	External View and Di The case outlines, di serial number, trader and/or figures.	mensions mensions and markings (inspectio nark and other identifications) shal	n lot identificatior I be shown by ph	n code, lotographs
G.4.4.2	Mass Product mass (norma	al value) shall be provided.		
G.4.4.3	Element Constructior The outline of elemen with information such	n nt construction shall be provided in as names of major parts, materia	figures and/or pl ls used and finish	hotographs 1.

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– G-3 –					
G.4.5	 G.4.5 Usage This section shall provide recommended usage and special instructions for circuit and mounting designs. Handling instructions for other processes such as storage and assembly shall be provided in a separate paragraph. 								
G.4.5.1	Absolute Maximum Ratings The ratings or absolute maximum ratings specified in the applicable specifications shall be provided in a tabular format in this section.								
G.4.5.2	Remcommended Operating Conditions The recommended operating conditions specified in the applicable specification shall be provided in a tabular format in this section.								
G.4.5.3	.3 Special Instructions on Cirucuit Design The recommended circuits, interfaces, timing, preventive circuits against root cause of nonconformance specific to the qualified parts, and prohibited usages shall be specified.								
G.4.5.4	Recommended Mounting Method This section shall provide recommended mounting methods for heat dissipation and shielding which should particularly be taken into consideration, and prohibited mounting methods for the qualified parts.								
G.4.6	Performance Character This section shall provid specifications.	istics in Normal Operation de performance characteristics ass	sured in the appli	cable					
G.4.6.1	Electrical Characteris The electrical charact the applicable specifi	tics teristics shall be provided by figure cations.	es or tables as sp	ecified in					
G.4.6.2	 Mechanical and Thermal Characteristics Mechanical and thermal characteristics mentioned below and specified in the applicable specifications shall be provided in a tabular format. a) Temperature cycling b) Thermal shock c) Resistance to soldering heat d) Moisture resistance e) Vibration f) Shock g) Constant acceleration h) Terminal strength 								
G.4.7	Performance Character The electrical character be provided in the form	istics in Various Operating Enviror istics in various operating environr of figures or tables.	iments ments specified b	elow shall					

J	AXA-QTS-2000D	JAXA	-	.
	7 July 2016	Parts Specification	Page	– G-4 –
	a) Temperature chara	cteristics		
	 h) Input-output charac 	teristics		
	c) Drifts at various en	vironmental tests		
	d) Drifts at life tests			
	e) Other necessary ch	paracteristics		
G.4.8	Enviornmental Limits			
	Evaluation data of varia	us anvironmental tests conducted	as part of the de	volonmont
	tests or other tests shal the applicable specifica The main environmenta shock, constant accelera necessary). Test condit The existing data of pro	I be provided in addition to the environmental tests conducted tions. I parameters shall include tempera ation, ESD resistance (if necessary ions, sample size and test results ducts with similar structure may be	vironmental limits ture, vibration, me and radiation has shall be provided e used.	defined in echanical ardness (if for each test.
G.4.9	Reliability Data			
	The following information	on shall be provided in this section		
	If the qualified part data data of equivalent COT case, the data shall be	relating to the following issues ha S products or products of similar s identified as such.	is not been prepa tructure may be t	ared, the used. In this
G.4.9.1	Faiure Rate			
	This section shall pro data, acceleration tes and criteria for pass/f	vide failure rate or failure rate curv at data, etc., clarifying operating co ail, at a minimum.	ve which is predic anditions, confide	cted by field nce level
G.4.9.2	Failure Mode			
	This section shall pro circuit and performan	vide predictable failure modes suc ce deterioration and their occurrer	ch as open circuit nce rate.	, short
G.4.10	Storage Conditions			
	This section shall provid humidity and antistatic p	de recommended storage condition backage.	ns including temp	perature,
G.4.11	Handling Instructions			
	This section shall provid due to soldering heat a	de special instructions on lead wire nd electrostatic discharge protection	es bending, therm on, etc.	nal stress
G.4.12	Others			
	Address and inquiry info	ormation shall be provided in this s	section.	
1				

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– G-5 –			
Example: Format G-1 (Cover pag	je) ⁽¹⁾					
JAXA-ADS-2050/Axxx COMMON PARTS/MATERIALS, SPACE USE, APPLICATION DATA SHEET FOR						
Part Description	Part Description Resistors, Fixed, High Reliability, Space Use					
Part Number and Type	Part Number and Type NASDA RNS90C NASDA RNS90P					
Applicable Specification	JAXA-QTS-2050 JAXA-QTS-2050/Axxx					
(Month and Year) Prepared and Established by ABCD Corporation Issued by Japan Aerospace Exploration Agency						
Note: ⁽¹⁾ This cover page is an exa	ample.					

	JAXA	A-QTS-2000D	JAXA	Page	_ G-6 _
	7	July 2016	Parts Specification	raye	- 0-0 -
Ex	ample: F	ormat G-1 (revisio	record) ⁽¹⁾		
	JAXA-A	DS-2050/Axxx	J A X A Application Data Sheet	Page	- x -
			Revision Record		
	Rev.	Date	Revised Conter	its	
No	ote: ⁽¹⁾ Thi	is record is an exa	iple.		

JAX ample: I	(A-QTS-200 7 July 2016 Format G-2	0D (Change	JAX Parts Specit	A fication	Pa	ge	– G-7
JAXA-ADS-2050/Axxx Notice 1		J A X A Application Data Sheet		Day Month Year			
			NOTICE OF C	HANGE			
		HIG APP	H RELIABILITY, LICATION DATA	SPACE L SHEET	JSE, FOR		
Page	Paragraph	Line	Change description		Rationale for change		
			Before	Afte	er		
APPENDIX H

SUPPLEMENTARY REQUIREMENTES FOR TESTS AND INSPECTIONS

H.1	Scope	H-1
H.2	General Requirments	H-1
H.3	Requiremnts	H-1
H.3	5.1 Failure Counts, Failure Rate and Pass/Fail Criteria	H-1
H.3	3.2 Sampling Plan	H-1
Н	I.3.2.1 Lot Tolerance Percent Defective	H-1
Н	I.3.2.2 Inspection Lot	H-3
Н	I.3.2.3 In-Process Inspection	H-3
H.3	Disposition of Inspection Lots	H-3
Н	I.3.3.1 Identification	H-3
Н	I.3.3.2 100% Inspection	H-3
Н	I.3.3.3 Resubmitted Lots	H-3

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JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– H-1 –					
		APPENDIX H							
	SUPPLEMENTARY REQUIREMENTS FOR TESTS AND INSPECTIONS								
H.1	Scope This appendix defines the specified in paragraph 4.3	supplementary requirements for t of this specification.	ests and inspecti	ons					
H.2	General Requirments Part to be qualified and su meet the supplementary r following paragraph:	pplied in compliance with the app equirements for the test and inspe	licable specificati	ons shall the					
H.3	Requiremnts								
H.3.1	 H.3.1 Failure Counts, Failure Rate and Pass/Fail Criteria When a sample is rejected in one or more tests or inspections, it shall be considered as a single failure. For failure rate tests, the failure period begins at the last time when the sample was verified as normal. Unless otherwise specified in the applicable specifications, the sample shall fail if it does not pass all tests and criteria. 								
H.3.2	Sampling Plan The sampling plan for c accordance with the me inspections shall be in c level (AQL) defined in J specified in paragraph H be the AQL method of c plan regardless of the lo	haracteristics and weather resista ethod specified in the applicable sp compliance with the sampling meth IS Z 9015-1 or the lot tolerance per H.3.2.1. For weather resistance te IIS Z 9015-1, the LTPD method, o ot size.	nce tests shall be becifications. San nod of acceptanc ercent defective (ests, sampling me r a fixed number	e in mpling for lot e quality LTPD) ethods shall sampling					
H.3.2.	1 Lot Tolerance Percent The lot tolerance percent of defective lots. This quantity c and rejection 100 or more. If the re- be conducted. Table sample size and no g smaller than Table He- acceptance quantity of	t Defective cent defective (LTPD) method is a s plan is characterized with sample on quantity $r = c+1$. Table H-1 is a equired sample size exceeds the lo H-2 is applicable when the lot size preater than 100. Table H-2 is app -1. The sampling plan in Table H- c = 0 using the minimum sample s	sampling plan to e quantity n, acce applicable for the ot size, 100% ins e is smaller than licable for sampl 2 is to judge with ize.	reject 90% ptance lot size of pection shall 10 times the e sizes the					

Table H-1. Minimum Sample Size for LTPD Values																
Maximum percent defective (LTPD)	20	15	10	7	5	3	2	1.5	1	0.7	0.5	0.3	0.2	0.15	0.1	JAX/
Acceptance no. (c)	Acceptance no. (c) Minimum sample size								L L L L							
0	11	15	22	32	45	76	116	153	231	328	461	767	1,152	1,534	2,303	SL(
1	18	25	38	55	77	129	195	258	390	555	778	1,296	1,946	2,592	3,891	-20
2	25	34	52	75	105	176	266	354	533	759	1,065	1,773	2,662	3,547	5,323	6 00
3	32	43	65	94	132	221	333	444	668	953	1,337	2,226	3,341	4,452	6,681	
4	38	52	78	113	158	265	398	531	798	1,140	1,599	2,663	3,997	5,327	7,994	
5	45	60	91	131	184	308	462	617	927	1,323	1,855	3,090	4,638	6,181	9,275	
6	51	68	104	149	209	349	528	700	1,054	1,503	2,107	3,509	5,267	7,019	10,533	
7	57	77	116	166	234	390	589	783	1,178	1,680	2,355	3,922	5,886	7,845	11,771	
8	63	85	128	184	258	431	648	864	1,300	1,854	2,599	4,329	6,498	8,660	12,995	art
9	69	93	140	201	282	471	709	945	1,421	2,207	2,842	4,733	7,103	9,468	14,206	
10	75	100	152	218	306	511	770	1,025	1,541	2,199	3,082	5,133	7,704	10,268	15,407	pe P
	1		Γ	Table H	I-2. Mi	nimum	Sample	Size for	LTPD V	alues						(A cificatio
Maximum percent defective (LTPD)	20	15	10	7	5	3	2	1.5	1	0.7	0.5	0.3	0.2	0.15	0.1	ň
	Minimum	sample s	ize				•									
Lot size	(Accepta	nce numb	er, c = 0)													
10 or less	7	9	9	All												
11 to 20	9	11	14	14 18 18 All						ag						
21 to 40	10	12	17	23	23 27 36 All						Ð					
41 to 60	10	13	19	26	32	48	54	All								
61 to 80	10	13	20	28	35	54	69	72	All							
81 to 100	10	14	20	28	37	54	69	90	90	All						±
Note: If the minimum	n sample si	ze is more	e than the	lot size, 10	0 percent	inspectio	n shall be	conducted								-2-

JAXA-QTS-2000D 7 July 2016		J A X A Parts Specification	Page	– H-3 –		
		I				
H.3.2.2	Inspection Lot If lots for delivery con	sist of multiple production lots, ea	ch production lot	shall be		
	treated as a separate	lot unless otherwise specified.	•			
H.3.2.3	In-Process Inspection					
	If in-process inspection manufacturer's production the data may be used	on data obtained during the final pluction process is equivalent to that d as final inspection data.	hase of the QML of the final inspe	ction,		
H.3.3	Disposition of Inspection	Lots				
	Lots for delivery shall be limited to those that have passed the final inspection. Good products of the failed lots may be delivered after defective products have been removed by the inspections specified in paragraph H.3.3.2 or H.3.3.3 when specified in the applicable specifications. Shipping conditions shall be in accordance with the applicable specifications.					
H.3.3.1	Identification					
	The pass/fail result of lot inspection shall be clearly indicated on the inspection slips, storage bags or boxes, or tags attached to the qualified parts for delivery. The marking shall be in accordance with the methods specified in the quality assurance program. In particular, rejected lots shall be clearly identified and segregated from good products for storage or disposal purposes.					
H.3.3.2	100% Inspection					
	The manufacturer may choose to inspect 100% of products of the lot for all tests and inspections specified in the applicable specifications with the exception of destructive inspections. The samples that have passed the inspections may be delivered as products. If the failure rate does not meet the specified LTPD or other criteria specified in the applicable specifications as a result of 100% inspection, the lot shall be considered as a failed lot.					
H.3.3.3	Resubmitted Lots					
	When 100% inspection manufacturer may so them for inspection. products from the sar characteristic inspect the screening. Lots r as rejected lots unles specifications.	on stipulated in paragraph H.3.3.2 reen out rejected products from th In this case, the new lot shall be come ne lot. The re-submitted lot may be ions if the original lot has passed of ejected in weather resistance insp s there are re-inspection provision	is not chosen, th e failed lot and re omposed of good be exempted from or was not affecte ections shall be t is in the applicabl	e }-submit 1 1 ed by rreated le		

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– K-i –				
APPENDIX K							
	TRB GUIDELINES						
K.1 Objective			K-1				
K.2 General Guidelines			K-1				
K.3 Detailed Guidelines			K-1				
K.3.1 Authority			K-1				
K.3.2 Responsibility			K-1				
K.3.3 Organization and	d Structure		K-2				
K.3.4 Tasks			K-2				
K.3.5 Review and Judg	gment		K-3				
K.3.5.1 General			K-3				
K.3.5.2 Preparation fo	r Review		K-4				
K.3.5.3 Implementatio	n of Review		K-4				
K.3.5.4 Judgment			K-5				
K.3.5.5 Action after Re	eview		K-5				
K.3.6 Status Reports			K-6				
K.3.6.1 Periodic Repo	rts		K-6				
K.3.6.2 Exemption of	TRB Status Report		K-6				
K.3.6.3 Emergency No	otification		K-6				

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			Т	Τ						
JAXA-QTS-2000D		JAXA Dorto Specification	Page	– K-1 –						
7 July 2016		Parts Specification								
	APPENDIX K									
TRB GUIDELINES										
K.1	Objective									
	This appendix provides the guidelines for the Technology Review Board (TRB) that is established and operated by the QML manufacturer in accordance with paragraph 3.3.5 of this specification.									
K.2	General Guidelines									
	 The TRB is established to operate the QML system effectively. The TRB shall be a multi-functional team of various experts and is responsible for the supervision of establishment, implementation, maintenance and revisions (changes) of the quality assurance program. The TRB shall also determine a direction of corrective actins, and review and judge the validity of the corrective actions upon completion. The QML manufacturer shall define and document the following items: a) Authority (paragraph K.3.1) b) Responsibility (paragraph K.3.2) c) Organization and structure (paragraph K.3.3) d) Tasks (paragraph K.3.4) e) Review and judgment (paragraph K.3.5) 									
K.3	Detailed Guidelines									
K.3.1	 K.3.1 Authority After the quality assurance program has been approved by JAXA, the TRB shall have the authority to review and judge as specified in paragraph K.3.5 without prior approval of JAXA. When the TRB exercises the authority, the following conditions shall be met: a) The authority exercised by the TRB shall not exceed the qualification coverage. b) The functions, performance, reliability and quality of products shall be ensured as qualified. c) The TRB shall not exercise its authority exceeding the scope specified by the 									
K.3.2	Responsibility									
	 The TRB established by a) Planning product q b) Maintenance of the changes c) Assessment of the d) Planning, assessment e) Planning, assessment f) Planning, assessment g) Approval of establic specifications 	a QML manufacturer is responsib quality of qualified parts e quality assurance program and a reliability data analyses nent and approval of the failure and nent and approval of the corrective nent and approval of changes to the eric specifications and detail specifi shment, revisions and cancellation	le for the followin approval control o actions te tests and inspe fications n of and changes	g items: f program ections to the detail						

JAXA-QTS-2000D		-QTS-2000D	JAXA	_	
	7、	July 2016	Parts Specification	Page	– K-2 –
	h) i)	Approval of establi Application Data S Documentation of t	shment, revisions and cancellatior heet he TRB organization, structure an	n of and changes	to the edures
	ע א	Poviow and judgm	asks (paragraph K 3 5)		
	r) 1)	Status report (para	araph K 3.6)		
	1)	Status report (para	graph (C.S.O)		
K.3.3	Org	ganization and Struct	ure		
	a)	The manufacturer s formation. The me officers such as a o quality of the qualif fabrication, test (or The quality assuran TRB. The TRB can topics. In addition, request.	shall clearly define the TRB memb mbers of the TRB shall be represe chief of a department or section whi ied parts including design, techno inspection), quality assurance, pr nce manager and registered inspe n include internal and external exp JAXA officials may join the TRB a	pers and condition entatives, i.e. res ho has influence logy, production e oduction control a ector shall be inclu- perts depending c as observers at th	ns for TRB ponsible over the engineering, and others. uded in the on review ne TRB's
	b)	The manufacturer s When several decises scope of authority a When the TRB incl responsibility shall	shall define the decision authority sion authorities are designated for and responsibility for each person udes the subcontractors, their sco be defined.	(chairperson) of t different review shall be clearly c ope of authority an	the TRB. items, the lefined. nd
	c)	The relationship be	etween the TRB and the internal of	rganization shall	be defined
	d)	When the manufac committee may be of the committee sl Review items for th	turer has a standing committee ed designated as the TRB. In this ca hall be included in the Quality Ass he committee shall be clearly defin	quivalent to the T ase, the name an urance Program ed.	RB, the d structure Plan.
K.3.4	Tas	sks			
	a)	Maintenance of the quality and reliability program	e technology based on the quality and the quality and the second se	assurance progra in accordance wi	am and the th the
	b)	Assessment and m	onitoring of the quality and reliabi	lity of the qualifie	d parts
	c)	Maintenance of the	qualification coverage defined in t	he quality assura	nce program
	d)	Maintenance and c flowchart of qualifie	control of the design, materials, an	d manufacturing	process
	e)	Approval of manufa	acturing process flow charts, failur /idual process of qualified parts	e modes, FMAT	and control
	f)	Review of education	n and training plans defined in the	e quality assurance	ce program
	g)	Maintenance of rev	view records and report of the reco	ords to JAXA	
	h)	Assessment and a failed parts	pproval of the failure analysis resu	Ilts and emergen	cy reports of
	i)	Assessment and m	ionitoring of the effectiveness of c	orrective actions	

JA	XA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– K-3 –		
K.3.5	Review and Judgment					
K.3.5.1	 General The manufacturer has a minimum to main reviews and decision record can be readily a) Establishment, in assurance progrime b) Establishment, in Plan (paragraphic) c) Establishment, respecifications (paragraphic) d) Establishment, respecifications (paragraphic) d) Establishment, respecifications (paragraphic) 	s the authority and responsibility to ntain the quality of the qualified pa s shall be organized and maintain available to JAXA upon request. mplementation assessment and ch am (paragraph K.3.5.1.1) naintenance and revisions of the C K.3.5.1.2) evisions and cancellation of, and c aragraph K.3.5.1.3) evisions, and cancellation of, and agraph K.3.5.1.4)	o review the follow arts. Records of t ed in a manner th nange control of t Quality Assurance changes to the de changes to the A	wing items, he TRB hat any he quality e Program etail pplication		
K.3.5.1.1	 Data Sheet (paragraph K.3.5.1.4) e) Conformance with the qualification coverage (paragraph K.3.5.1.5) K.3.5.1.1 Estblishement, Implementation Assessment, and Change Control of Quality Assruance Program The TRB shall review a minimum of the following items, determine changes and corrective actions and assess their validity. a) Reliability and quality control b) Design reviews c) Compliance with specification and standards d) Establishment and maintenance of criteria for critical processes including changes e) Standards for technical skills certification f) Selection, control and renewal of the manufacturing, testing and inspection equipment including the changes on the production or test sites g) In-house and external quality audits and the corrective actions h) Education and training plans i) Establishment and optimization of manufacturing, test and inspection conditions j) Change control of the quality assurance program k) Failure analysis and corrective action plans for nonconformance 					
K.3.5.1.2	Establishment, Mai When the Quality A shall assess and m as a minimum.	intenance and Revisions of Quality Assurance Program Plan is establi naintain the validity of the items a)	y Assurance Prog shed or revised, to I) in paragraph	gram Plan the TRB n K.3.5.1.1		
K.3.5.1.3	Establishment, Rev The TRB shall asso of and changes to	risions and Cancellation of and Cha ess the validity of the establishme the detail specifications.	anges to Detail Sp nt, revisions and	becifications cancellation		

JAX	A-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– K-4 –			
K.3.5.1.4	Establishment, Rev The TRB shall ass of and changes to	isions and Cancellation of and Char ess the validity of the establishmer the Application Data Sheet.	nges to Application nt, revisions and	n Data Sheet cancellation			
K.3.5.1.5	Comformance with Qualification Coverage The TRB shall determine compliance of new products or proposed changes to the design, structure or materials with the qualification coverage specified in the applicable specifications.						
K.3.5.2	 Preparation for Revie The manufacturer shareviews. The materia a) Specification number b) Part number c) Document number d) Scope of review program, tests a e) Materials support results, manifest f) Area to be affect g) Effective date h) Conformance with 	 Preparation for Review The manufacturer shall define requirements on preparing materials required for TRB eviews. The materials shall include the followings as a minimum: Specification numbers of the generic specification and the detail specifications Part number Document number of the Quality Assurance Program Plan Scope of review (title of documents which constitute the quality assurance program, tests and inspections) Materials supporting review items to be accepted (e.g., assessment items and the results, manifest theories, determination of similar items conducted in the past) Area to be affected (functions, quality and reliability of qualified parts) Effective date 					
K.3.5.3	 Implementation of Refailed a) The TRB shall of 1) At the time of (including the 2) At the time of based on not 3) At the time of based on not 3) At the time of the quality a complaints, 4) Before the roof TRB state In addition to the (once a year as made to the quality at that specify mething that specify mething, "impact on date, etc. c) The manufacture the materials present of the the review, the the the the the the the the the the	eview onduct reviews at the following occ of establishing and changing the q ne Quality Assurance Program Pla of planning the measures and eva onconformance investigation result of management review (based on assurance program, results of inter at a minimum) restart of production in the case of us report (to check whether any ch e above occasions, TRB review sh a minimum) in order to check whether lity assurance program. be conducted in accordance with nods, procedures and checklists. customers" specifically performan er shall stipulate that the reviews a epared in accordance with paragra e followings shall be taken into the and results of process improvement	casions as a mini juality assurance n) luating the correct ts the implementation rnal audit and cus exemption of the hanges were mad all be conducted ther there are any the operating pro The checklist sha ice, quality, price are conducted on ph K.3.5.2. e consideration: ent	mum: program etive actions on status of stomer submission e) periodically y changes ocedures Il include an and delivery the basis of			

JAX	(A-Q ⁻ 7 Jul	TS-2000D y 2016	J A X A Parts Specification	Page	– K-5 –	
	 7 July 2016 Parts Specification 1 age 1 kg 1 kg 2 2) Implementation and analysis results of the qualification test and quality conformance inspection 3) Trend and analysis on yields during the manufacturing process and failure modes 4) Nonconformance information and failure analysis results of the qualified parts and similar products in the past 5) Past record on the production of the qualified parts or similar products 6) Information on complaints from JAXA and other customers e) Special caution shall be exercised on the following items during a review: 1) Validity of rationale to accept review items 1.1) Have the changes been reviewed thoroughly? (Has it been objectively confirmed that the equivalent level of performance, quality and reliability are maintained after the change(s)?) 1.2) Has the root cause of the nonconformance been identified? 1.3) Has the action against nonconforming products been properly taken? Has the preventive measure been properly implemented? 1.4) Have the review results been deployed throughout the company? 2) Conformance with the generic specification and detail specification 3) Conformance with the gualifiering coverage. 					
K.3.5.4	Jud	lgment				
	a)	The judge shall a	approve or disapprove requested of the termination of terminatio of termination of termination of te	changes based o K 3 5 3	n results of	
	b)	Judgment shall to shall be made qu including evaluat established theo	be made objectively and reasonab uantitatively and qualitatively base tion test data, control methods of r ries.	ly. Specifically ju d on the various nanufacturing co	idgment evidences nditions and	
K.3.5.5	Act	ion after Review				
	a)	 Meeting minutes 1) Date of TRE 2) Details of re 3) Results of re 4) Action items 5) Relevant de 6) Relevant page 	of TRB shall include the following meeting view eview s tail specification number rt number	at a minimum:		
	b)	The QML manuf records. The rec qualified part(s) the available to JAX	acturer shall archive review materi cords shall be archived for 8 years for which the review results were a A upon request.	ials and results a from the shippin applied, and shall	s quality g date of the be	
	c)	If the TRB decid	es to change the qualification cove	erage, the QML m	nanufacturer	
	d)	If the TRB decide Sheet, the QML with Section 6.	es to modify the detail specification manufacturer shall take the neces	sary action in acc	ition Data cordance	

JAXA-QTS-2000D		J A X A	Paga	Ke			
	7 July 2016	Parts Specification	Fage	- K-0 -			
K.3.6	Status Reports						
K.3.6.1	 Periodic Reports The QML manufacture which is one year from include all changes areliability, performance changes). The report and the report of Quality b) Report of Quality c) Report of Quality d) Report of Quality e) Failure analysis customer returns f) Major changes, structure (included) g) Addition of a new h) Changes to quality i) Newly proposed Reports may be in an an	rer shall submit a TRB Status Report m the certified date and every year and the Grade of the changes (leve ce and interchangeability of the qua- t shall contain the following informa- inutes ication and Delivery Status (paragr y Conformance Inspection Status (y Assurance Program Update (para results and corrective actions of no s additions, improvements and trend ing materials), fabrication process, w product(s) and/or package(s) wit lification coverage and recertification certification plan my form such as a copy of TRB men- tion items.	ort to JAXA arour r after that. This el of impacts on q alified parts due t ation at a minimul raph F.3.6.4) (paragraph F.3.6.5) onconforming pro- test and inspect hin the qualification plan	nd the date report shall uality, to the m. 2) oducts and n and ion on coverage d the			
	summary of major ac not required if submit	tted within the valid certification pe	ormance Inspect riod.	ion Status is			
K.3.6.2	Exemption of TRB St Preparation and sub- from the due date if t changes to the qualit notify JAXA in the for When the products w with paragraph K.3.5 When the production date which is one year	Exemption of TRB Status Report Preparation and submission of TRB status report can be exempted up to one year from the due date if there was no production, shipment of the products, and no changes to the quality assurance program. In this case, the QML manufacturer shall notify JAXA in the form of a technical correspondence. When the products will be manufactured again, TRB shall be held in accordance with paragraph K.3.5.3 a) 4). When the production has restarted, the TRB status report shall be submitted by the date which is one year from the previous due date.					
K.3.6.3	Emergency Notificati If one of the following a) Emergency notif b) Failure analysis c) Major change(s) and others (para	on g issues occurs, it shall be immedia fication (paragraph 3.6.2) (paragraph 3.6.1) and corrective a to the facilities, production proces agraph C.4.11)	ately reported to ction (paragraph s, material and s	JAXA: C.4.9) ubcontractor			

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– Z-i –						
APPENDIX Z									
PROC	PROCEDURE AFTER REVISION OF QTS-2000								

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APPENDIX Z

PROCEDURE AFTER REVISION OF QTS-2000

The QML manufacturer shall incorporate the items specified in JAXA-QTS-2000D into the quality assurance program, within six months from the established date of JAXA-QTS-2000D, which shall then be reviewed by JAXA. JAXA will provide consultations to the QML manufacturer about necessary dates and period such as the time to be needed for the manufacturer to incorporate the items into the quality assurance program implemented by the manufacturer, the period of JAXA review, and the effective date.