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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: November 12, 2021

JAXA-QTS-2000E 15 March 2021		5-2000E 1 2021	J A X A Parts Specification	Page	— i —
	Revision History				
Rev.	Date		Major changes		
NC	3 Dec. 1999	Original			
A	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	improvements. ne definition of "failure." ne definitions of Groups A, B and C of the quality conformance visions required for transition from the QPL certification system 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: (• Appendix G, for Application • Appendix K, items. Paragraph K.3 to scheduled r	changes contained in Notices of Change 1 and 2 of JAXA- Major additions and modifications are as follows. 3.2.2: Modified to allow JAXA to prepare detail specifications. 3.4.1.10: Added a certification requirement on JAXA-developed , Paragraph A.3.1.4: Changed "NASDA" to "JAXA" in part , Paragraph E.5.3.4: Clarified the provision for review of the or Retention of qualification. Clarified the flowchart for initial qualification. Gasetion G.3: Added a provision on issuing Notice of Change on Data Sheet. , Paragraph K.3.5.1.5: Added material changes to the review .3.6.2, item c): Clarified items to be reported to JAXA in addition		JAXA- fications. -developed n part w of the of Change ne review
D	 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. Registered inspector QML manufacturer Quality assurance manager Paragraph 1.5: Added the following definitions. Anomaly a) manufacturer 		o text. text after 01. y and		

JAXA-QTS-2000E 15 March 2021

Rev.	Date	Major 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 in qualification test upon approval of the qualification 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 for procedure of suspending the shipment of a part of qualified parts. 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 be confident parts. Paragraph 3.4.6: Clarified that detail specifications, Application Data Sheet and notices of changes shall be prepared and established by QML manufacturer in case of nonconformance. Also clarified the conditions to ill the stor shipment and disposition of the products in the storage.<

JAXA-QTS-2000E 15 March 2021

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 S.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 application of certification. Paragraph K.3.2 d), e), f): Added to clarify that TRB's responsibility includes planning phase of failure analysis, corrective action, and changes to tests and inspections. Paragraph 3.5.3 a) 4): Clarified the action when TRB status report submission is exempted. 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 C.4.11" due to omission of these numbers. Added Appendix Z "Procedures after Revision of QTS-2000"

15 March 2021 Parts Specificat	tion Page	— iv —
 Revised completely to address the is to make certification system efficient, requirements of JAXA-QTS-2000, to coperational issues, to utilize electronic for the company, and to clarify issues Reflected Change Notices 1 and 2 o Paragraph 1.5: Integrated and revise Paragraph 3.3.1: Clarified that ISO9 Paragraph 3.3.2: Clarified that qualit reviewed at least once a year. Paragraph 3.4.1.8: Clarified that effective eyears. Paragraph 3.4.1.9: Clarified criteria a that certification cancellation of JAXA specifications and ADS are required for system. Paragraph 3.4.1.10: Clarified that preequivalent to qualification test application for Retention of qualification of JAXA-QTS-2000D to the text). Paragraph 3.4.2.1: Corrected that" Paragraph 3.4.2.3: Established a provide disposition conducted at existing production line of disposition when certification period w review and clarified that retention of qualification. Paragraph 3.4.5: Specified that certification. Paragraph 3.4.5: Specified that certification. Paragraph 3.4.6: Changed "Stop Sh" "Declination of Certification" and clarific certification and rules for returning certification. Paragraph 3.4.9: Established a prov suspended temporarily and clarified disposition certification. 	sues identified at certification to utilize ISO9001 for gener clarify JAXA requirements, to clata or e-mail, to clarify re- necessary for certification at f JAXA-QTS-2000D in to te ed "Terms and Definitions". 001 is basic requirement. y assurance program plants d requirements for qualities gistered inspector. Furthern ective period of certification at at on-site audit. Furthermore QPL parts and cancellation or transition to QML certification or transition to QML certification in a manner similar to ordir "he QML manufacturer shall tion review. Clarified that co- in a manner similar to ordir "he QML manufacturer shall on to JAXA no later than 90 on period" (Reflected Chang ovision of postponement for when certification period wi n when production or shipm during requalification period will be expired during requali ualification application will to n period to coordinate with s fication was removed when nitted within the effective pe ipment of the Qualified Part ied procedures for declinati rtificate. ision of available supplies p ision of disposition when sh isposition in time of disaste n and reorganized complete	on activity, ral o improve quirements activity. xt. shall be and ability nore, shall be re, clarified of detail ation be ertification nary review. I submit an days prior ge Notices 1 retention of II be nent is Defined fication be required. JAXA retention of riod of s" as on of part list. ipment was r

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	- v -
 requirements when nonconformance was identified and to refine the requirements. Paragraph 3.6.1: Reviewed and clarified disposition when anomaly or nonconformance occurred from the point of view of the rapid response. Paragraph 3.6.2: Reviewed and clarified disposition after nonconformance notification from the point of view of the successive information sharing. Paragraph 3.6.3: Regarding to stop shipment, clarified procedures from nonconformance occurrence to stop shipment. Paragraph 3.6.4: Clarified procedures of release from stop shipment. Paragraph 3.6.5: Established a provision when certification period will be expired during nonconformance disposition. Furthermore, clarified that requalification application will be required when nonconformance dispositio completed. Paragraph 4.3.3.2: Clarified disposition when production or shipment was not conducted within the effective period of certification. Paragraph 6: Reviewed completely and resolved duplication with Appendi A (to be defined in Appendix A). Paragraph 7: Integrated into paragraph 1.5 "Terms and Definitions" and deleted paragraph 7. 				the aly or oonse. nformance naring. res from ment. od will be ed that disposition ment was h Appendix ons" and
	 deleted paragraph 7. Paragraph A.2.1.3: Clarified requirements and correspondence to revision and supersession of applicable specifications (Reflected Change Notices 1 of JAXA-QTS-2000D in to text). Paragraph A.2.4.8: Added example of tolerance expression with reference to JIS etc. Paragraph A.3: Clarified that reasons for revision shall be included in revision history. Paragraph A.3.4.9: Clarified and itemized tests and inspections available for change and optimization. Paragraph A.4.2: Clarified that reasons for revision shall be included in revision history. Paragraph A.4.2: Clarified that reasons for revision shall be included in revision history. Paragraph A.4.2: Clarified that reasons for revision shall be included in revision bistory. Paragraph A.4.2: Clarified that applicable documents shall be the latest version basically and clarified the requirements when revision of applicable documents was specified. Paragraph A.4.4.1: Added a provision when previous revision of applicable document was applied. Paragraph A.5.1: Clarified criteria for release of change notice. Example: Format A-2: Revised on the basis of release of detail specification by JAXA at certification. Paragraph C.1: Clarified that ISO9001 is a requirement item of JAXA-GTS 2000. Furthermore, clarified that Appendix C provided only JAXA-specific requirements. Paragraph C.2.1: Deleted ":2000" from "JIS Q 9001: 2000". Paragraph C.4: Defined only JAXA requirements as requirements and 			to revision Notices 1 In reference led in available led in the latest applicable f applicable JAXA-QTS- A-specific ts and

JAXA-QTS-2000 15 March 2021	E	J A X A Parts Specification	Page	— vi —
 Paragraph C.4.3.4: Provided that JAXA-specific requirements are also within the scope of QMS internal audit. Paragraph C.4.3.7.1: Changed retention of quality records to 15 years. Paragraph C.5: Clarified that no requirements for format of quality assurance program plan existed and deleted example of format. Paragraph C.5.1: Added A3 paper size. Paragraph C.5.2.3.3: As requirements for approval of quality assurance program plan, clarified that registered inspector verified the plan and quality assurance manager approved the plan. Paragraph C.5.2.4: Clarified that reasons for revision shall be included in revision history. Paragraph C.5.2.5: Deleted "Education and training", "Design control" and "Management system of measuring instruments", since the requirements are general requirements and no JAXA-specific requirements existed. Paragraph C.5.3: Deleted examples of format, except for JAXA-specific requirements "Flow chart", "FMAT" and "List of change category". 				
assur was o • Par clarifi • Par dema regis	 Paragraph D.3. Clarified that assistant could be assigned for quality assurance manager. Furthermore, clarified that quality assurance manager was decision authority of TRB. Paragraph D.4: Rearranged items a) to j) in the order of priority and clarified TRB report destination. Paragraph D.5: Clarified qualities and abilities of registered inspector demanded by JAXA. Provided only that assistant could be assigned for registered inspector. 			
 Particondi description Furthis possi DPA prior (Refletion Partis point Partis Partis and a 2000 Partis Partis<th>agraph E. ucted prio iption whe ermore, a ble". Add manual. to planned ected Cha agraph E. liers) was rements. of view of agraph E. application D in to tey agraph E. alification agraph E. alification</th><td>5.2.2: Clarified that qualification terms to sample manufacturing for qualification tests with a ded description that quality manufact description that quality manufact description that quality manufact description and clarified deadline for submission and starting date of sample manufact ange Notices 1 of JAXA-QTS-2000 5.2.3: Added that on-site audit of included in qualification test revier Furthermore, clarified that audit s f system and processes. 5.2.8: Clarified requirements for quality of withdrawal (Reflected Change Note) S.2.9: Clarified that TRB reports stapplication. 5.3.3: Changed submittal deadline as "no later than 90 days prior to state that a state of the st</td><td>est application sh alification tests. A was applicable. ual should be sul d submittal require as "no later than cturing for qualific DD in to text). the company (inc w and clarified shall be conducted ualification test te lotices 1 of JAXA shall be submitted whall be submitted</td><td>all be Added omitted "if ements for 90 days lation tests" cluding d from the ermination -QTS- I for f</td>	agraph E. ucted prio iption whe ermore, a ble". Add manual. to planned ected Cha agraph E. liers) was rements. of view of agraph E. application D in to tey agraph E. alification agraph E. alification	5.2.2: Clarified that qualification terms to sample manufacturing for qualification tests with a ded description that quality manufact description that quality manufact description that quality manufact description and clarified deadline for submission and starting date of sample manufact ange Notices 1 of JAXA-QTS-2000 5.2.3: Added that on-site audit of included in qualification test revier Furthermore, clarified that audit s f system and processes. 5.2.8: Clarified requirements for quality of withdrawal (Reflected Change Note) S.2.9: Clarified that TRB reports stapplication. 5.3.3: Changed submittal deadline as "no later than 90 days prior to state that a state of the st	est application sh alification tests. A was applicable. ual should be sul d submittal require as "no later than cturing for qualific DD in to text). the company (inc w and clarified shall be conducted ualification test te lotices 1 of JAXA shall be submitted whall be submitted	all be Added omitted "if ements for 90 days lation tests" cluding d from the ermination -QTS- I for f

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– viii –		
 certification application. Paragraph F.3.6.2 and paragraph F.3.6.4: Clarified that company's format was also acceptable. Paragraph F.3.6.5: Added requirements to describe reason for change. Paragraph F.3.12: Added guidelines of request for postponement of retention of qualification review. Paragraph F.3.13: Added example format of technical notice. 					
Example for text. Example: For qualification a • Example: For QTS-2000D in • Example: For	 Example format: Changed following formats correspondingly to Appendix F text. Example: Formats F-2, F-15, F-20 and F-24: Added "/ not approved", since qualification application may not be approved. Example: Format F-15 and F-20: Reflected Change Notices 2 of JAXA-QTS-2000D in to text. Example: Format F-28: Added column of JAXA review results. 				
• Paragraph G • Paragraph G application da • Paragraph G revision histor	 Paragraph G.2: Clarified management of application data sheet. Paragraph G.3: Clarified that part manufacturer shall prepare and establish application data sheet. Paragraph G.4: Added requirements to include reasons for change in revision history. 				
• Paragraph H • Paragraph H • Paragraph H into Appendix	I.3.2: Reviewed completely to clarif I.3.2.3: Reviewed completely to cla I.3.3.1, paragraph H.3.3.2, and par A, paragraph A.3.4.6.5 "disposition	fy provisions. arify provisions. agraph H.3.3.3: I n after tests" and	ntegrated deleted.		
 Paragraph K authority of TF Paragraph K Paragraph K confirmation c Paragraph K Paragraph K all at once. C the date of predescribed in T Paragraph K that status representation c 	A.3.3: Clarified that quality assurance RB. Deleted management of supple A.3.4: Added and clarified requirement A.3.5.1.3 and paragraph K.3.5.3: Action revision and cancellation status A.3.5.5: Added requirements for TR A.3.6.1: Added provision that status larified that status reports shall be evious reporting. Added description RB minutes of meeting shall be at A.3.6.2: Clarified omission rules of so porting shall not be omitted at reten	ce manager was lier TRB. ents for FMAT / F dded requirement of applicable doc B minutes of me reports may be submitted within n that review mat tached as necess status reporting.	decision FMEA. rs for ruments. eting. submitted 1 year from terials sary. Clarified on.		
Appendix Z: assurance pro	Defined 6 months as transition per ogram plan shall be reviewed by JA	riod and clarified XA at TRB statu	that quality s report etc.		

JAXA-QTS-2000E	JAXA Parts Specification	Page	— ix —		
15 March 2021	Parts Specification				
	Contonto				
	Contents				
1 GENERAL			1		
1.1 Objective					
1.2 Scope					
1.3 Certification and JAXA	Qualified Parts				
1.3.1 Certification					
1.3.2 JAXA Qualified Pa	arts		1		
1.4 Obligations			1		
1.4.1 Obligations of JAX	άΑ		1		
1.4.2 Responsibilities a	nd Obligations of the QML manufac	turer	2		
1.5 Terms and Definitions	~		2		
1.6 Classification of JAXA	Qualified Parts		6		
1.6.1 Reliability Categor	γ		6		
1.6.2 Quality Assurance	Level		6		
2. APPLICABLE DOCUMENT	⁻ S		6		
2.1 Applicable Documents			6		
2.2 Reference Documents			7		
2.3 Order of Precedence			7		
3. REQUIREMENTS			7		
3.1 General Requirements			7		
3.2 Detail Requirements			7		
3.2.1 Requirements for	Each Product Type		7		
3.2.2 Detail Requirement	nts		7		
3.3 Requirements for a Qu	ality Assurance Program		7		
3.3.1 Establishment of a	a Quality Assurance Program		7		
3.3.2 Quality Assurance	Program Plan		8		
3.3.3 Quality Assurance	Manager		8		
3.3.4 Registered Inspec	tor		8		
3.3.5 TRB			8		
3.3.6 Audit of the Qualit	y Assurance Program		8		
3.4 Certification Requirem	ents		8		
3.4.1 Initial Qualification	۱		9		
3.4.2 Retention of Quali	fication		11		
3.4.3 Requalification					
3.4.4 Certificate Notifica	tion				
3.4.5 De-Certification					
3.4.6 Cancellation of Ce	ertification				
3.4.7 Arranging the Cer	tification Periods				
3.4.8 Available Supplies	Parts List				
3.4.9 Disposition of Len	porarily Stopped Shipment				
3.5 Part Number and Mark	ung				
3.5.1 Part Number					
3.5.2 Marking					
3.6 Anomaly and Nonconf	prmance				
3.6.1 Anomaly or Nonco	phiormance information		15		

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	- x -	
3.6.2 Nonconformance Report				
3.6.3 Suspension of Ship	oment		16	
3.6.4 Removal of Susper	nsion of the Shipment		16	
3.6.5 Nonconformance Disposition over Expiration Date of Certification				
4. QUALITY ASSURANCE PR	OVISIONS		17	
4.1 Implementation of the Quality Assurance Program				
4.2 Change Control for the Quality Assurance Program1				
4.3 Requirements for Tests and Inspections				
4.3.1 In-Process Inspect	on		17	
4.3.2 Qualification Test			17	
4.3.3 Quality Conforman	ce Inspection		18	
4.3.4 Products Stored for	r Long-Term		19	
4.3.5 Changes or Optimiz	zation to Test and Inspections		19	
5. PREPARATION FOR DELI	/ERY		19	
6. CONTROL OF APPLICABL	E SPECIFICATIONS		20	
7. APPENDIX			20	
Appendix B Deleted. Appendix C Requirements for Quality Assura Appendix D Quality Assurance Manager and Appendix E Certification Procedures Appendix F Application Forms and Procedure	nce Program Registered Inspector			
Appendix G Guidelines for Preparation of Application Data Sheet				
Appendix H Supplementary Requirements fo	r Tests and Inspections			
Appendix J Deleted				

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	— xi —
Appendix K		•	•
TRB Guidelines			
Appendix Z			
Procedure after Revision of JAXA	A-QTS-2000		

	JAXA-QTS-2000E JAXA 15 March 2021 Parts Specification Page -1 -					
	COMMON PARTS/MATERIALS, SPACE USE, GENERAL SPECIFICATION FOR					
1. 0	GENERAL					
1.1	1.1 Objective The purpose of this specification is to define requirements for companies involved in Japan Aerospace Exploration Agency (herein after referred to as "JAXA") qualified parts commonly used for JAXA electronic equipment installed on space systems and to define required items for qualification activity by JAXA, companies and users.					
1.2	1.2 Scope This specification is applicable for preparation and maintenance of documents related to certification, quality assurance and applicable specifications of JAXA qualified parts, when parts and materials (herein after referred to as "common parts/materials"), of which reliability and quality shall be confirmed by JAXA, shall be qualified as JAXA qualified parts.					
1.3	Certification and JAXA Qu	ualified Parts				
1.3.1	1.3.1 Certification Certification is that JAXA recognizes that a company has the capability of supplying JAXA qualified parts on the basis of this specification and applicable specifications by reviewing the conditions of design, production, reliability, quality control requirements and the qualification test results using samples of common parts/materials.					
1.3.2	JAXA Qualified Parts JAXA qualified parts are quality assurance provis the QML manufacturer.	e the common parts/materials whic sions specified in applicable specif	ch will be supplied	d under the re fulfilled by		
1.4	Obligations					
1.4.1	 1.4.1 Obligations of JAXA a) JAXA establishes and maintains the applicable specifications as well as defining the requirements of quality, tests and inspections for qualification therein. b) JAXA determines whether the qualification test results using quality control system and the samples are conformance to the requirements of the applicable specifications, and decides whether to certify the company based on its application for certification. c) JAXA reviews the quality control system of the QML manufacturer periodically and as needed, and confirms that the system is maintained. d) JAXA provides technical supports such as cause analysis of anomaly/ 					

	JAX/ 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	- 2 -	
	 e) JAXA issues "Shinraisei Gijutsu Jouhou" (Reliability Technical Alert Information) when anomaly or nonconformance of the JAXA qualified parts which are considered pervasive is found, and notifies all relevant parties. f) JAXA verifies the measures proposed by the QML manufacturer, and corrective actions with the verification results when nonconformance of the JAXA qualified parts is found. 					
1.4.2	Re	esponsibilities and Ob	ligations of the QML manufacture	r		
 a) The QML manufacturer is responsible for that the delivered products conform to the requirements of applicable specifications. The 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) The QML manufacturer shall address the issues when anomaly or nonconformance is found in the delivered products. c) In the case of certification removal, the de-certified QML manufacturer shall notify the users of the de-certified JAXA qualified parts and the user considering a purchase at once of its de-certification. d) In the case of suspending the shipment of the JAXA qualified parts, the QML manufacturer shall notify the users at once of the suspension of the shipment. 						
1.5	Tern	ns and Definitions				
	 The following terms and definitions are used in this specification: a) DPA (Destructive Physical Analysis): Inspections or analyses performed destroying the device to confirm the compliance with the applicable design, manufacturing processes, structure, materials and workmanship requirements. b) FMAT (Failure Mechanism and Assurance Technique): Failure mechanism and approximate technique 					
	 c) FMEA (Failure Mode and Effect Analysis): The systematic methods to analyze potential failures in order to prevent failures and nonconformance. The technique to analyze failure modes in each element and the effectiveness of upper level item in order to identify incomplete design and potential faults. There are different FMEA types such as Design FMEA used on design phase and Process FMEA focusing on manufacturing process elements of operation and control IATF 16949: International standard for quality management system to specialize in 					
	 e) ISO9001 (Quality Management Systems – Requirements): Quality management systems – requirements established by International Organization for Standardization (ISO). ISO 9001 establishes the requirements for a quality management system in which the concept of quality assurance is taken one step further by covering the improvement of customer satisfaction. JIS Q 9001 is established as domestic industrial standard. 					
	f) a)	JAXA-developed part JIS Q 9100: JIS stand	s: JAXA qualified parts developed	under a contract	t with JAXA.	
	3/	ISO9001 and specific is obtained among US	tiems for aerospace industry are standard, AS9100 and Europear	added. Mutual a n standard, EN91	uthentication 00.	

JAX	(A-QTS-2000E	JAXA	Deve	<u> </u>
15	5 March 2021	Parts Specification	Page	- 3 -
		-		
h)	OML (Qualified Man	facturers List). The OML is a list o	f companies cert	ified on the
•••	OMI system The lis	t provides information such as the	names of compa	
	availabilities and a second	(provides information such as the		ines,
	production sites, nan	ies of parts (products), qualification	i coverage, appli	Cable
:)	specifications (titles and specification numbers) and contact information.			
I)	i) QML qualification: Certification of common parts/materials in accordance with the			
	specification system defined in the General Specification for Space Use Common			
	Parts/Materials (JAX/	A-QTS-2000).		
j)	QPL (Qualified Produ	icts List): The QPL is a list of quali	fied parts. The li	st provides
	information on parts of	certified on the QPL system includ	ing the names of	the QML
	manufacturers, produ	iction sites, name of parts, summa	ry of part charact	teristics,
	applicable specification	ons (titles and numbers) and conta	act information.	
k)	QPL qualification: Ce	rtification of common parts/materia	als in accordance	e with the
	specification system	defined in the Common Parts etc.,	Space Developm	nent Use,
	General Specification	for (NASDA-QTS-38100).		
I)	TRB (Technology Re	view Board): The TRB is a multi-fu	Inctional organiza	ation
	established by the QI	ML manufacturer to review and de	termine the validi	ty of
	establishment, mainte	enance, revisions (changes) and ir	nplementation of	the quality
	assurance program a	nd as well as corrective actions.		
m)	Anomaly: Abnormal of	or questionable condition. Anomal	y includes questi	onable
	symptoms identified a	at manufacturing process of JAXA	qualified parts (ir	ncluding in-
	process inspection) a	nd abnormal symptoms identified	at screening, qua	alification
	tests and quality conf	ormance inspections.	0.1	
n)	Spacecraft: A generic	term referring to satellites, space	experiment equi	pment, space
,	stations and their lau	nch vehicles.		
o)	Entrustment: To outs	ource whole or a part of manufactu	uring, inspection	and test
,	processes.	·		
(q	Supplier: Company e	ntrusted with whole or a part of ma	anufacturing, insp	pection and
1,	test processes.		0, 1	
a)	Development test: Te	ests to confirm quality and perform	ance of parts at f	inal stage of
-17	parts development.			ge en
r)	Company: Generic de	esignation of company. QML man	ufacturer, manufa	acturer and
• /	supplier, which wish t	o acquire certification		
s)	Available Supplies Pa	arts List: List of parts which are to	be supplied by th	ne OMI
0)	manufacturers listed	in JAXA OML as JAXA qualified p	arts and list of sa	ales volume
t)	Retention of qualifica	tion: A process to retain qualification	on of the JAXA a	ualified narts
()	conducted at the end	of effective period of qualification		damed parts
LI)	Defect: A state in whi	ch IAXA qualified parts are upable	a to fulfill the inte	nded
u)	applications or requir	ements for specified applications		naca
V)	Inspection Lat: An ins	ements for specified applications.	or quality confor	manco
v)	inspection Lot. An Ins	an increation lot consists of a pro-	duction lot	mance
		, and process audit based on the		brogrom
W)	On-site Audit: System	and process audit based on the o		e program
	performed at the corr	ipany's site in order to review com	prenensively that	quality
	assurance program is	s definitely maintained and operate	a.	
X)	in-process Inspection	: inspections which are performed	i during the manu	Itacturing
	process to detect def	ects which could significantly affect	t the reliability ar	nd quality of

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JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	- 4 -			
	the product or to examine the product or to examine the second second second second second second second second	nine the characteristics of the proc ned products.	duct which canno	t be			
y)	Purchase: Parts proc assured by the QML	ourchase: Parts procured as a basis of JAXA qualified parts and of which quality is assured by the QML manufacturer.					
z)	Failure: The loss of th functions.	ne ability of a JAXA qualified part t	o perform its requ	uired			
aa)	Failure Rate Level: N	umerical representation of a degre	e of reliability ba	sed on failure			
ab)	Requalification: A qua coverage.	alification process performed to ch	ange the qualific	ation			
ac)	Non-JAXA-Developed	d Parts: Common parts/materials o ire certification without a JAXA co	developed by a contract.	ompany at its			
ad)	Field Data: The test of products which are m similar design, proces qualified.	Field Data: The test data, actual failure rate and nonconformance information of the products which are manufactured in the same production line and with the same or similar design, processes and quality assurance program as the product group to be					
ae)	Sales Volume and Cu customers (including	ustomers List: A list of the number trading companies) of JAXA qualit	of shipment and fied parts.	primary			
af)	Passive Part: Parts c	onsuming, accumulating and disch	narging supplied	electrical			
ag)	Registered inspector: A person to control that the QML manufacturer certainly fulfils the functionality, performance and quality assurance requirements of the JAXA qualified parts, independent from any quality assurance section in the production						
ah)	Initial qualification: A	department of the company by acting as an inspector of JAXA. Initial qualification: A qualification process to register new common parts/materials as					
ai)	High Reliability Parts: JAXA qualified parts whose failure rate level is not specified in the applicable specification, however, whose quality is assured by means of stringent design control, process control and quality conformance inspections for each						
aj)	Established Reliability the applicable specific design control, process production lot.	Established Reliability Parts: JAXA qualified parts whose failure rate is specified in the applicable specification and whose quality is assured by means of stringent design control, process control and quality conformance inspections for each					
ak)	Quality Conformance Inspection at Restarting Production: Quality conformance inspection performed when certification is retained without performing quality conformance inspection within effective period of certification and production of JAXA qualified parts restarts						
al)	Manufacturer: A com of the parts and mate products.	pany which performs most of fabri rials purchased or provided, and r	cation process ar nanufactures the	nd assemble finished			
am)	Quality Conformance	Inspection during the Production prior to shipment of JAXA qualifie	Process: Quality d parts.	conformance			
an)	Production Lot: A pro regards to the product	duction unit whose products can b tion line continuity, production effi	e considered as ciency and qualit	identical in y.			

JAX	A-QTS-2000E	J A X A	Paga	5
15	March 2021	Parts Specification	Page	- 5 -
30)	Products: The QML s	system certifies a group of products	s represented by	the test
	vehicles or samples.	The QML manufacturer, therefore	is allowed to de	evelop new
	detail specifications a	and supply products as JAXA quali	fied parts within t	the
	qualification coverage	The term "products" in the QMI	system is used	
	corresponding to "pai	rt" in the OPL system to help users	s understand this	concept
an)	User: Parts user (incl	uding trading company)		oonoopt.
ad)	Applicable specificati	Applicable specifications: Applicable specifications include generic specifications for		
uq)	each part type and de	etail specifications applicable to IA	XA qualified part	incation of tor
ar)	Application Data She	et: A sheet summarizing test data	and applications	of the JAXA
	qualified parts			
as)	Qualification test: A s	eries of tests to certify common pa	arts/materials as .	ΙΑΧΑ
	qualified parts The t	ests are performed to verify that the	e common parts	/materials
	meet the requirement	ts of applicable specifications		materiale
at)	Qualification coverage	e: Qualification coverage is a scor	e of characteristi	ics.
	performance and tec	hnology which are represented by	a test vehicle. Q	ualification
	coverage shall be de	fined in the applicable specification	ns.	
au)	QML manufacturer: A	manufacturer that acquired certifi	cation.	
av)	Quality Conformance	Inspection within the Effective pe	riod of Certificatio	on: Quality
,	conformance inspect	ion to confirm process stability, usi	ng first productio	n lot
	manufactured within	the effective period of certification	one time.	
aw)	Active part: Parts am	plifying or rectifying by supplied el	ectrical power.	
ax)	Catastrophic failure:	A failure leading to loss of function	ality and perform	ance of
	JAXA qualified parts.	-		
ay)	Test vehicle: A device	e or sample that represents the pro	oducts manufactu	ured in the
	manufacturing line to	be qualified.		
az)	Quality conformance	inspection: Tests specified in the a	applicable specifi	cations and
	performed by the QM	IL manufacturer to confirm the lot i	ntegrity of JAXA	qualified
	parts.			
ba)	Quality assurance ma	anager: A person who has the resp	oonsibility and au	thority to
	establish, implement,	maintain and control the quality a	ssurance prograr	n and to
	assure quality of the	JAXA qualified parts as a represer	ntative of the QM	Ĺ
	manufacturer.			
bb)	Quality assurance pro	ogram: A program that includes all	quality assurance	e activities
	required to manufact	ure and supply JAXA qualified part	ts.	
bc)	Quality Assurance Pr	ogram Plan: Document in which th	ne complete quali	ty assurance
	program is establishe	ed.		
bd)	Quality Assurance Le	evel: A category of quality assurance	ce for parts. Scre	ening,
	quality conformance	inspection, etc. are required accord	ding to risk.	
be)	Part Group: Names c	of parts when the parts are sorted to	by class. There a	are 22 part
	groups, consists of 2	U OF EEE (Electrical, Electronic and		cal) parts
	and z materials; integ	grated circuits, hybrid integrated cir	cuits, transistors	, diodes,
	switches transformer	connectors, crystals and cobles, and	ar celle printed w	tiays,
	thermistore bestore	sonsore fuses RE dovices therm	al control films o	nd thermal
	control naint			

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JA	XA-QTS-2000E	JAXA	-	2		
1	5 March 2021	Parts Specification	Page	- 6 -		
bf)	bf) Nonconformance: The performance of the JAXA qualified parts inconsistent with requirements. Nonconformance includes failure, deviation, defect, lack and malfunction.					
bg	bg) Failure analysis: The detailed analysis of reliability data such as life, numbers of failed parts, failure conditions and degree of deterioration to physically characterize					
bh	bh) Part Type: Part identification further classifies the part group. The part type is described such as "Microcircuits, CMOS 32 bit MPU, monolithic silicon, high reliability, space use", "Resistors, fixed, film, high reliability, space use", and "Capacitors,					
bi)	 multiple layer, fixed, ceramic dielectric, high reliability space use" bi) Storage Temperature Range: Ambient temperature range that JAXA qualified parts can be stored with no loads. 					
1.6 Cla	assification of JAXA Qu	alified Parts				
JA	XA qualified parts, defir	ned in the applicable specifications	which are devel	oped in		
ac	cordance with this spec	ification shall be classified as follo	ws:			
161	Poliobility Cotogony					
1.0.1	a) Established reliability	parte				
	b) High reliability parts	parts				
	s) ingritenciality parter					
1.6.2	Quality Assurance Leve	9 1				
	Quality assurance level	for parts shall be classified as follo	ows:			
	 a) Class I parts: Official lowest risk. 	ly qualified parts with highest qual	ity assurance lev	el and the		
	 b) Class II parts: Officia Class I parts and a log 	Ily qualified parts with next-highes wer risk.	t quality assurand	ce level after		
	c) Class III parts: Officia Class II parts and a h	ally qualified parts with quality assunigh risk.	urance level lowe	er than the		
2. APP	LICABLE DOCUMENTS	3				
2.1 Ap	plicable Documents					
Th	e documents listed belo	w form a part of this specification	to the extent spe	cified herein.		
Th	e issues of these docur	nents are the latest issues availab	le at the time of c	contract		
aw	ard or application.					
a)	JIS Z 8201	Mathematical Symbols	Conoral Drive air I	on through		
(מ	JIS Z 8202	Quantities and Units – Part 0: Part 13: Solid State Physics	General Principl	es through		
c)	JIS Z 8203	SI Units and Recommendation Multiples and of Certain Other	ns for the Use of r Units	their		
d)	JIS Z 8301	Rules for the layout and drafti	ng of Japanese I	ndustrial		
e)	JIS Z 8401	The Rounding of Numbers				

	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	-7-	
	 f) JIS Z 9015-1 Sampling Procedures for Inspection by Attributes – Part 1: Sampling Plans Indexed by Acceptable Quality Level (AQL) for Lot-by-Lot Inspection g) ISO 9001 (JIS Q 9001) Quality management Systems – Requirements 				
2.2	Potoronco Documento				
2.2	Reference documents are as follows: a) JMR-004 Reliability Program Standard b) JMR-005 Quality Assurance Program Standard c) JMR-012 Electrical, Electronic, and Electrochemical Parts Program Standard d) JMR-013 Quality Assurance Program Standard (basic requirements: JIS Q 9100)				
2.3	Order of Precedence				
	 In the event of a conflict between the text of this specification and the applicable specifications, the following order of precedence shall apply: a) Detail specification b) Generic specification for each product type c) This specification d) Applicable documents of this specification (paragraph 2.1) 				
3. R	REQUIREMENTS				
3.1	General Requirements General requirements for requirements specified in	JAXA qualified parts shall be in ac this specification.	cordance with th	е	
3.2	Detail Requirements				
3.2.1	 3.2.1 Requirements for Each Product Type General requirements for each product type of JAXA qualified parts shall be in accordance with generic specifications for each product type. JAXA shall prepare and establish the generic specifications for each product type in accordance with Appendix A (Preparation of Applicable Specifications). 				
3.2.2	Detail Requirements				
	Detail requirements for individual JAXA qualified parts which are not covered in the generic specifications for each product type shall be in accordance with the detail specification. The QML manufacturer or company which wishes to acquire certification shall prepare detail specifications in accordance with Appendix A.				
3.3	Requirements for a Qualit	y Assurance Program			
3.3.1	 Requirements for a Quality Assurance Program 1 Establishment of a Quality Assurance Program The company shall establish a quality assurance program in compliance with Appendix C to assure that the JAXA qualified parts meet the requirements for space use and that 				

- 8 -

the company is able to sustain production and supply of the product with a consistent quality.

At the establishment of quality assurance program, ISO9001 requirements form a part of JAXA requirements.

The company may utilize public certification standards, JIS Q 9100 and IATF16949, of which basic requirements are ISO9001.

The company shall store applicable documents to be available at all times and shall utilize them in accordance with quality assurance program.

3.3.2 Quality Assurance Program Plan

The quality assurance program, which is established in accordance with paragraph 3.3.1, shall be comprehensively documented as the Quality Assurance Program Plan (hereinafter referred as "QAP Plan") and the QAP plan shall be submitted to JAXA for review. After a certification is granted, the company shall implement the quality assurance activity in accordance with the QAP plan. Any change to the quality assurance program shall be documented at the timing of at least TRB status reporting in accordance with Appendix C to insure accurate program status in the QAP plan.

3.3.3 Quality Assurance Manager

The company shall select and designate a quality assurance manager, who is available for performing tasks defined in paragraph D.3 and register this person with JAXA. Any change to quality assurance manager shall be promptly reported to JAXA in accordance with paragraph D.6.

The company shall designate assistant quality assurance manager in accordance with paragraph D.3 when applicable.

3.3.4 Registered Inspector

The company shall select and designate a registered inspector, who is available for performing tasks defined in paragraph D.4 and register this person with JAXA. The company shall designate assistant registered inspector in accordance with paragraph D.5 when applicable.

3.3.5 TRB

The company shall establish and manage TRB in accordance with Appendix K. JAXA shall review the TRB status report at each submission and notify the QML manufacturer of the results.

3.3.6 Audit of the Quality Assurance Program

At an audit, JAXA shall evaluate implementation status of the quality assurance program which was established by the company. The company shall cooperate with JAXA audit. If JAXA requests corrective action, the company shall take appropriate actions.

3.4 Certification Requirements

The company, which wishes to supply JAXA qualified parts, shall acquire QML certification. The QML certification consists of following three types.

	JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	- 9 -	
	 a) Initial qualification b) Retention of qualification c) Requalification The qualification procedures shall be as specified in Appendix E. The qualification application and formats to acquire a QML certification shall be as specified in Appendix F. 					
3.4.1	lr a)	nitial Qualification The company shall a 1) The company su first time. 2) The company ac	 ial Qualification The company shall acquire JAXA certification in the following cases that: The company supplies common parts/materials as JAXA qualified parts for the first time. The company adds product(s) which are not included in certification coverage. 			
	b)	 The company ap 3.4.5). For initial qualification Application for Q Application for C 	oplies certification again after de-ce n, the company shall submit the fo qualification Test certification	ertification (refer t	o paragraph	
3.4.1.1 Application for Qualification Test The company shall submit the Application for Qualification Test to JAXA in accordance with Appendix E.				in		
3.4.1.2 Approval of Application for Qualification Test JAXA shall review the application for qualification test and perform an audit of the quality assurance program in accordance with paragraph 3.3.6. If the application is acceptable, JAXA approves the application and notify the company of the approval. The company shall start manufacturing the test vehicle or the sample for the qualification test upon receiving the approved qualification test application from JA>				udit of the oplication is e approval. • the on from JAXA.		
3.4.1.3	3	Changes to Qualificat After approval of the qualification test cont with paragraph E.5.2	tion Test Application for Qualification Test, a ents by the company shall be app .7.	any changes to th roved by JAXA in	ne accordance	
3.4.1.4	 3.4.1.4 Witnessing of Qualification Tests Upon approval of the Qualification Test Application, JAXA shall designate a witness for the qualification test in accordance with paragraph E.5.2.5 and perform witness i accordance with paragraph 5.2.6. JAXA coordinates with the company on the schedule, etc. 				e a witness m witness in	
3.4.1.5	5	Performing Qualificat The company shall per application which was When start of qualific qualification test appl for qualification test to	ion Test erform qualification test in accorda s approved by JAXA. ation test is more than 3 months b ication, the company shall submit o JAXA for approval.	nce with qualifica ehind start date s change request o	ation test shown in of application	

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	- 10 -	
	If the change request of application for qualification test is not submitted to JAXA and the company does not initiate the qualification test within 3 months after the approved start date, JAXA will revoke approval of the Qualification Test Application and notify the company.				
3.4.1.6	 3.4.1.6 Termination of Qualification Test In the event of nonconformance, erroneous tests or an excess of the allowable numbers of failure on test vehicles or samples at qualification tests, the company shall report the event to JAXA promptly. As a result, if the qualification test is to be terminated, the company shall submit a Notice of Qualification Test Termination / Application Withdrawal to JAXA in accordance with paragraph E.5.2.8. 				
3.4.1.7	 3.4.1.7 Application for Certification After all the qualification tests are completed in accordance with the Implementation Plan for Qualification Test, the company shall submit an Application for Certification in accordance with paragraph E.5.2.9 within 30 days after completion of the qualification test. 				
3.4.1.8	 3.4.1.8 Approval of Certification JAXA shall review the application for certification and shall approve the application when the Application for Certification meets all the requirements in this specification and applicable specifications. Effective period of certification shall be 3 years. QML manufacturer is allowed to supply products within an approved qualification coverage in accordance with detail specifications registered with JAXA. After approval of certification application, JAXA shall add the certification to JAXA QML. 			application specification alification n to JAXA	
3.4.1.9	 Transition from QPL (In the event of transition manufacturer may surplication test, provision workers, materials, provision shall be as a) Qualification Test Submittal of a Qualification table of the detail specification table of the detail specification table of the QPL manufacturer and criterial certification and for QPL certification and for QPL conformation (Certification to QML Certification ion from QPL certification to QML bmit the Application for QML Certi- vided that there are no changes to roduction processes and facilities. follows. at Application ualification Test Application may b ons and Notice of Quality Assuran- e attached to the Application for Q of the qualification test items and ation acturer shall prepare a table correl a specified in the respective applic QML certification. It shall demons tion conforms to that of QML certificance inspection within the effective	certification, the fication without th the test items an The detailed rec e exempted. How ce Manager/Regi ML Certification. criteria in QPL co ating the qualification trate that the qua- ication. e period of QPL co	QPL ne nd criteria, quirements for wever, the istered ertification ation test ns of QPL alification test ertification	

JA	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	- 11 -
	The quality confe certification may inspection requir d) On-site audit The quality assu as specified on t review reflection procedures, ope	ormance inspection within the effect be performed as Group B inspection red for the first production lot of QM rance program shall be audited by he certification application. The put and implementation status of docu ration standards and process reco	ctive period of QF ion of the quality /L certification. / JAXA at the con urpose of this aud uments such as s ords which compri	PL conformance npany's site dit is to specifications, ise quality
 assurance program. e) QPL products manufactured in the transition to the QML certification If QPL products were manufactured during transition to the QML certification, QPL products in progress and inventory of finished QPL products are consider 				า rtification, re considered
 to be QML parts. f) The company shall report certification declination of QPL parts and cancellation of detailed specifications and application data sheets to JAXA by technical notion 				
 3.4.1.10 Certification of JAXA-Developed Parts When the company acquires certification for parts/materials developed under a contract with JAXA (hereinafter referred to as JAXA-developed parts) and acquires certification based on the results and recorded data of development tests, the following provisions shall apply. a) Preliminary Review Prior to start of manufacturing samples for development tests, at the review of quality assurance program in accordance with paragraph 3.3.6, establishment of quality assurance program plan and detail specifications, selection and registration of quality assurance manager and registered inspector, establishment of TRB, manufacturing and test processes, development test items and conditions, etc. shall be reviewed. This review includes on-site audit of the company (including suppliers). JAXA shall review in accordance with paragraph 3.4.1.2 and judge manufacturing readiness. b) Correlation Table between Qualification and Development Test Items Correlation table between the qualification test items specified in applicable specifications and development tests. c) Certification Application The company shall prepare certification application in accordance with paragraph 3.4.1.7 and submit the application to JAXA. For any changes after preliminary review, JAXA may perform on-site audit at certification application review. 				Inder a Ind acquires s, the e review of ablishment of and nent test on-site audit hs oplicable company in sts with the vith e audit at
3.4.2	Retention of Qualification When QML manufacture manufacturer shall application	on er wishes to acquire retention of q ly for retention of qualification in ac	ualification, the G ccordance with pa	≀ML aragraph

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	- 12 -	
E.5.3.3 and shall acquire retention of qualification within the effective period of certification. If it revealed that the JAXA qualified parts are not produced as specified in the quality assurance program, JAXA may revoke the certification or request the QML manufacturer to perform requalification procedures.				
 3.4.2.1 Application for Retention of Qualification The QML manufacturer shall submit an Application for Retention of Qualification and following documents to JAXA no later than 90 days prior to the expiration date of the certification period in accordance with Appendix E. a) Report of Quality Conformance Inspection Status (paragraph F.3.6.2) b) Quality Assurance Program Plan (the latest version) c) TRB Status Report (paragraph F.3.7) Report of Qualification and Delivery Status (paragraph F.3.6.4) Change Status Report of Quality Assurance Program (paragraph F.3.6.5) Nonconformance information (paragraph F.3.9) Submission of the Report of Quality Conformance Inspection Status is not required when it was included in the TRB Status Report. Target period of TRB Status Report is from the latest TRB status report submitted as a part of the application documents for retention of qualification in accordance with paragraph 3.3.5. 				
3.4.2.2 Approval for Retention Based on the application accompanied docum paragraph 3.3.6. On when it meets all the The retention of qual current qualification p	on of Qualification ation for retention of qualification, Ja ents and quality assurance program the basis of review results, JAXA requirements of this specification a ification shall be effective on the da period and remain effective for thre	AXA shall review m in accordance shall approve the and applicable sp ay following the la ee years.	with application becifications. ast day of the	
3.4.2.3 Postponement of Re When QML manufact considered to be long manufacturer shall su review. After confirmation an qualification, JAXA s list at expiration date JAXA Qualified EEE The QML manufactu suffering from disaste When retention of qu period is expired and	tention of Qualification turer suffers from disaster ^(*1) and p g-term over effective period of certi ubmit request for postponement of d approval of request for postpone hall remove the concerned JAXA of of certification, and shall announce Parts and Materials. rer shall submit recovery plan to JA er. lalification review is postponed, cer I the concerned JAXA qualified par	period of recovery ification, the QML retention of quali ment of retention qualified parts from the removal on AXA within 3 mon AXA within 3 mon tification during p ts shall not be sh	/ operation is - ification n of m JAXA QML Database of oths after postponement hipped.	

	JAXA-QTS-2000E	JAXA	5	10
	15 March 2021	Parts Specification	Page	- 13 -
	When recovery opera practical, the QML ma with paragraph 3.4.2. For any changes to q manufacturer shall ap When JAXA judges the results of retention of qualification and define commencing date of For requalification, the a) When all requalified tests), approval of b) When requalification certification is co	ation is completed and retention of anufacturer shall apply retention of 1 immediately. ualification coverage due to the re oply requalification in accordance w nat retention of qualification is accor- qualification, JAXA shall approve ne the day following expiration data retention of qualification. e commencing date is as follows: cation tests are performed (without date of requalification is commenci- on tests are optimized, the day fol mmencing date. of QML manufacturer is not opera- nd supply chain is not established	qualification revi f qualification in a covery operation with paragraph 3. eptable based on the application for e of certification a t optimizing requa ng date. lowing the expira	ew is accordance , the QML 4.3. the review or retention of as the alification tion date of erial supplies
	suffer from disaster a	nd supply chain is not established		
3.4.3	Requalification			
	The QML manufacturer E.5.4 in order to change When the QML manufa with existing specification manufacturer shall add the period of the produce When it is obvious that effective period of curren for retention of qualification paragraph 3.4.2. In the submitted together with Furthermore, when required period of certification, the current qualification cover regardless of requalification	shall apply for requalification in ac e the qualification coverage for the cturer produces and delivers JAXA ons prior to approval of requalification implementation methods of quality ction and shipment in requalification a series of requalification review we ent certification, the QML manufact tion of current qualification covera t case, application for the retention application for the requalification to ualification process proves not be the QML manufacturer shall apply for verage immediately in accordance ation process in progress.	ccordance with parts JAXA qualified parts in A qualified parts in tion application, the assurance progen test application will not be comple- turer shall submiting of qualification statest. completed within or retention of qui with paragraph 3	aragraph oarts. n accordance he QML ram within ted within application with shall be effective alification of 5.4.2
3.4.4	Certificate Notification JAXA will send a Certific the initial qualification, r specify the name of the numbers of applicable s certification number, the The QML manufacturer the JAXA qualified parts	cate (format: F-30) to the QML ma etention of qualification or requalif QML manufacturer, production sit specifications and the quality assur- e certification date and the effective shall present the certificate if requise.	inufacturer upon ication. The cert ies, titles and doc rance program pl e period of certific uested by JAXA c	completion of ificate shall ument an, the cation. or a user of
3.4.5	De-Certification JAXA may revoke the c certification is revoked,	ertification if any of the following c JAXA will notify the QML manufac	ases, a) through cturer of the de-ce	j). If the ertification

JAXA 15 N	-QTS-2000E /arch 2021	J A X A Parts Specification	Page	- 14 -
 and request for return of the certificate. And the information on the relevant products shall be removed from the JAXA QML. If any of the following cases, a) through j), JAXA will cooperate with QML manufacturel and establish period needed for corrective operation. When JAXA judges that the events are not eliminated after the established period for corrective operation, JAXA will revoke certification. However, JAXA may revoke certification even within the period for corrective action or without de-certification notification in the cases of d), f) and i). a) Application for retention of qualification was not submitted within effective period c certification. b) Application for retention of qualification fails to meet the requirements for retention of the qualification. c) Review results of qualification retention or an audit requested by JAXA indicate that the quality assurance program has been implemented falsely. d) The QML manufacturer applies for declination of the certification. e) An uncorrectable defect is found in the manufacturing process of the JAXA qualified parts. f) Applicable specifications are changed and requalification tests in accordance with the new specification is required, the requalification tests are not performed. h) There is false statement in the test results or in the application for the JAXA qualified parts. j) All supplies of the JAXA qualified parts are no longer available. j) The QML manufacturer is found to have no ability to acquire certification. 				
3.4.6 Der Wh sha Afte anr JAX ma Wh ma dec Wh in a Afte bef	 Declination of Certification When the QML manufacturer declines whole or a part of certification, the declination shall be processed in accordance with paragraph E.5.5. After approval of advance notice submitted by the QML manufacturer, JAXA will announce the last time buy. JAXA will approve notification for certification declination received from the QML manufacturer after final order, and notify the date of certification declination. When notification for certificate to JAXA promptly after the date of certification declination. When declination of a part of certification is approved, JAXA shall issue new certificate in accordance with paragraph 3.4.4. After receiving new certificate, the QML manufacturer shall return the certificate issued before certification declination to IAXA 			
3.4.7 Arr In t ma tim pur be	anging the Certificati he case of having ce nufacturer may aggr ing of retention of qu pose of aggregating submitted anytime re	on Periods ertifications for more than one appl egate those different certification p alification or requalification for one certifications, the application for re egardless of the specific timing sta	icable specification periods in one periods in one periods in one period of the certification etention of qualifientiation of	ons, the QML riod at the ons. For that cation may 3.4.2.1 and

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– 15 –	
on-site audit may be aggregated. However, the current certification period cannot be expired.					
3.4.8 Available Supplies Parts List The QML manufacturer shall prepare list of available JAXA qualified parts and shall operate and maintain the list up to date. The QML manufacturer shall prepare the available supplies parts list in accordance with Appendix F, Format F-31 or original format by the QML manufacturer, and submit the available supplies parts list to JAXA at the time of initial qualification and TRB status reporting. When the type of the JAXA qualified parts is specified in detail specification, submission of the list may be exempted.					
3.4.9 Disp Whe effect shall JAXA EEE Whe poss How opera para Whe quali JAXA and I	 Disposition of Temporarily Stopped Shipment When production and shipment of JAXA qualified parts are not possible within the effective period of certification due to suffering from disasters, the QML manufacturer shall report to JAXA. JAXA shall confirm the report and announce the status at Database of JAXA Qualified EEE Parts and Materials. When recovery operation is completed and production of JAXA qualified parts is possible, the QML manufacturer shall report to JAXA promptly. However, for any changes to qualification coverage accompanied with recovery operation, the QML manufacturer shall apply for requalification in accordance with paragraph 3.4.3. When JAXA confirms application for requalification and judges that production of JAXA qualified parts is possible, JAXA will approve restarting of production and shipment of JAXA qualified parts and announce the status at Database of JAXA Qualified EEE Parts 				
3.5 Part Nu	Imber and Marking	I			
3.5.1 Part The appli	Number part number shall t cable specification	be identified as JAXA qualified parts s in accordance with paragraph A.	ts and shall be sp 3.1.4.	pecified in the	
3.5.2 Mark Each QML All m Whe spec	ing product shall be n manufacturer as s arkings shall be ea n markings cannot ified in detail speci	narked with the part number, lot nuspecified in the applicable specifica asily visible when the product is us be conducted on individual product fication (for example, label indicati	umber and other i ations. ed in a normal co ct, indication metl on for each pack	tems by the onfiguration. hods shall be ing unit).	
3.6 Anoma	ly and Nonconform	nance			
3.6.1 Initia If any perso	I Report of Anomal / of the following e onnel of the QML n	ly or Nonconformance vents occurs and quality assurance nanufacturer identifies anomaly or	e manager or aut nonconformance	horized of JAXA	

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JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– 16 –		
 qualified parts, registered inspector shall inform JAXA of the anomaly or nonconformance status. a) When quality assurance manager of QML manufacturer judges that the anomaly or nonconformance may impact on the reliability and quality of the shipped JAXA qualified parts. b) When quality conformance inspection by QML manufacturer was failed (including quality conformance inspection for long-term storage products). c) When the QML manufacturer receives anomaly or nonconformance of JAXA qualified parts is concluded as a result of consultation with the user. Contact address for anomaly/noncomformance shall be "BUHIN-FUGUAI@ml.jaxa.jp" and the QML manufacturer shall report date and time of occurrence, site of incidence, target parts (product name and parts number), quantity and descriptions of anomaly or nonconformance. For nonconformance in the quality conformance inspection, the QML manufacturer shall dispose the lots containing the failed products as specified in the applicable 					
 3.6.2 Nonconformance Report As soon as extent of the accordance with paragreextent of the impact to a The QML manufacturer cooperate with JAXA or a) Disposition of failed b) Failure analysis an c) Corrective and preverse When corrective actions completed, the QML manufacturer on FMAT and FMEA as JAXA will review final ner requalification tests may JAXA will conduct on-site 	 .6.2 Nonconformance Report As soon as extent of the impact of anomaly and nonconformance informed to JAXA in accordance with paragraph 3.6.1 is specified, the QML manufacturer shall report the extent of the impact to JAXA. The QML manufacturer shall share information with JAXA in a timely way and cooperate with JAXA on the following issues: a) Disposition of failed parts b) Failure analysis and investigation of root cause c) Corrective and preventive actions When corrective actions (including verification and rolling-out to other dept.) are completed, the QML manufacturer shall submit final nonconformance report to JAXA. Furthermore, the QML manufacturer shall reflect results of final nonconformance report on FMAT and FMEA as necessary. JAXA will review final nonconformance report according to paragraph 3.4.3. However, requalification tests may be omitted according to corrective actions. 				
3.6.3 Stop Shipments When nonconformance shipment. When stop s extent of the impact at I Under the direction of J JAXA qualified parts imp	of JAXA qualified parts is identifie hipment is directed, JAXA will ann Database of JAXA Qualified EEE F AXA, the QML manufacturer shall mediately.	ed, JAXA can imp nounce target pro Parts and Materia stop the shipmer	ose stop ducts and ls. nt of the		
3.6.4 Lifting of Stop Shipmen When final nonconforma with paragraph 3.6.2 is	t ance report submitted by the QML approved by JAXA, JAXA will lift tl	manufacturer in he stop shipment	accordance of the JAXA		

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– 17 –		
qualified parts and announce the status at Database of JAXA Qualified EEE Parts and Materials.					
3.6.5 Nonconformance Dispo	osition over Expiration Date of Cert	ification			
When disposition of no completed within the ef request for postponeme 3.4.2.3.	When disposition of nonconformance is taking a long time and the disposition will not be completed within the effective period of certification, the QML manufacturer shall submit request for postponement of qualification retention review in accordance to paragraph 3.4.2.3.				
Shipment of JAXA qual of qualification review a When nonconformance requalification in accore	lified parts is not allowed within the as well as the requirements specifie disposition is completed, the QML dance with paragraph 3.4.3.	e postponed perio ed in paragraph 3 _ manufacturer sh	d of retention 6.4.2.3. nall apply for		
4. QUALITY ASSURANCE PR	OVISIONS				
4.1 Implementation of the Qu The QML manufacturer is established in accordance	ality Assurance Program responsible for implementing the with paragraph 3.3.	quality assurance	e program		
4.2 Change Control for the Q	uality Assurance Program				
The QML manufacturer s accordance with paragrap	The QML manufacturer shall control any changes to the quality assurance program in accordance with paragraph C.4.3.3.				
 4.3 Requirements for Tests and Inspections The QML manufacturer shall perform the tests and inspections shown below to verify the functionality, performance and quality assurance requirements of the JAXA qualified parts specified in Section 3 of this specification. a) In-process inspection b) Qualification test 					
4.3.1 In-Process Inspection					
The in-process inspection defects that could signi examine characteristics process inspections ma during the manufacturin accordance with the co the in-process inspection	ion is performed during the manufa ficantly affect the reliability and qua s which cannot be measured with fi ay also be used as the data on qua ng. In that case, the pass/fail criter nditions specified in quality conform on shall be defined in the applicable	acturing processe ality of the products. Inished products. Inity conformance in for the lot shal mance inspection e specifications.	s to detect cts, and to Data on in- inspection I be in . Details of		
4.3.2 Qualification Test					
The qualification test is qualified parts and to version specified in the applica defined in the applicable	performed to qualify common part erify that the common parts/materia ble specifications. The details of the e specifications.	s/materials as a a las meet the requine qualification te	JAXA irements st shall be		

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JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– 18 –		
4.3.3 Quality Conformance Inspection The quality conformance inspection shall be performed to verify that the products meet the functionality, performance, and quality as confirmed by the qualification. The quality conformance inspection shall be classified in following three groups. These three groups are further divided into the groups specified in applicable specifications. This classification is in accordance with paragraph A.3.4.6.1. Inspection items and methods shall be defined in the applicable specifications.					
4.3.3.1 Quality Conformance The quality conforma during manufacturing	1 Quality Conformance Inspection during the Manufacturing Process The quality conformance inspection shall be performed by the QML manufacturer during manufacturing process of JAXA qualified parts for all inspection lots.				
4.3.3.2 Quality Conformance The quality conformance using the first product Inspection samples a conformance inspect The manufacturer sh by the TRB status re the inspections. In the case of applyin of JAXA qualified par quality assurance pro paragraph may be on for retention of qualifi as that production ar to that of JAXA quali When the QML many conformance inspect	Quality Conformance Inspection within the Effective Period of Certification The quality conformance inspection shall be performed by the QML manufacturer using the first production lot within the effective period of certification. Inspection samples shall be taken from products which have completed the quality conformance inspections specified in paragraph 4.3.3.1. The manufacturer shall report the results of quality conformance inspection to JAXA by the TRB status report or application for retention of qualification after completion of the inspections. In the case of applying for retention of qualification when no production or shipment of JAXA qualified parts within effective period of certification, and no change made to quality assurance program, quality conformance inspection specified in this paragraph may be omitted based on the consultation with JAXA prior to application for retention of qualification if process stability can be verified by another means such as that production and shipment of similar products, whose production line is identical to that of JAXA qualified parts, are conducted continuously. When the QML manufacturer acquires retention of qualification with omitted quality conformance inspection, the QML manufacturer shall conduct quality conformance				
4.3.3.3 Quality Conformance The quality conformance the time of restarting qualification without of effective period of the Inspection samples as inspections specified The QML manufactu in paragraph 4.3.3.2 The results of quality status report after co	e Inspection at Restarting Production ince inspection shall be performed the production when the manufact quality conformance inspection due e certification. Shall be taken from products which in paragraph 4.3.3.1. rer shall complete the quality confor and this paragraph prior to shipme conformance inspection shall be r mpletion of the inspections.	by the QML mar surer acquires the to no production have completed ormance inspection ant of JAXA qualific ported to JAXA	nufacturer at e retention of n within the the on specified fied parts. by the TRB		

JAXA-QTS-2000E	J A X A	Paga	10
15 March 2021	Parts Specification	Faye	- 19 -

4.3.4 Long-Term Storage of Products

4.3.4.1 Disposition of Lots Stored for a Long-Term at the QML Manufacturer's Site

When products have been stored longer than specified in the applicable specifications after the completion of the quality conformance inspection required at the time of shipment, the QML manufacturer shall perform the inspections required at the time of shipment of the long-term stored products prior to delivery as specified in the applicable specifications.

The QML manufacturer shall conduct failure analysis of lots that failed the inspection, verifying that the cause of the failure is not due to lot dependency or long-term storage, and shall confirm extent of impacts and determine propriety of shipment of the accepted products.

The date of the inspection shall be marked on the package.

4.3.4.2 Storage by User

Storage conditions and shelf life requirements for the user shall be specified by the QML manufacturer in the detail specifications or application data sheets.

4.3.5 Changes or Optimization of Test and Inspections

When a part of quality conformance inspections and in-process inspections specified in the generic specification for each product type is changed or optimized, the company shall deal with the changes or optimization in accordance with paragraph C.4.3.3. The company shall specify the changed or optimized items in detail specification.

5. PREPARATION FOR DELIVERY

For delivery from the QML manufacturer to the users, the JAXA qualified parts supplied in accordance with this specification shall be properly packaged as JAXA qualified parts, and shall have required markings. The packaging materials shall not degrade the quality and reliability of the JAXA qualified parts. The QML manufacturer shall prepare a packaging specification as part of the quality assurance program. The markings on packages shall include the following items as a minimum:

- a) Part name
- b) Part number
- c) Document number of applicable specifications
- d) Lot identification code
- e) Name of customer
- f) Name of the QML manufacturer
- g) Quantity of packages
- h) Inspection date (day, month, year)
- i) Inspection results
- j) ESD sensitive (if specified)
- k) Prohibited materials (in accordance with paragraph C.4.4.1) (when used)

If the JAXA qualified parts require electrostatic discharge protection, an appropriate action shall be taken. In addition, an "ESD sensitive" marking shall be provided on the package. If the JAXA qualified parts contain prohibited materials (refer to paragraph C.4.4.1, item a)),

	JAXA-QTS-2000 15 March 2021	E	J A X A Parts Specification	Page	- 20 -		
	detailed issues regarding marking methods on packages and handling precautions including disposal and DPA shall be specified in detail specifications.						
6.	 6. CONTROL OF APPLICABLE SPECIFICATIONS Applicable specifications are controlled with regard to establishment, revisions, changes, cancellation and registration. Detailed control is specified in Appendix A. Certification of the JAXA qualified parts manufactured, stored or procured under a cancelled version of the applicable specifications prior to the cancellation date shall remain effective after the cancellation date. JAXA establishes and release generic specification, generic specifications for each product type, detail specifications and application data sheet through Database of JAXA Qualified EEE Parts and Materials.						
7.	APPENDIX Appendix A P Appendix B D Appendix C R Appendix D Q Appendix E C Appendix F A Appendix F A Appendix G G Appendix H S Appendix J D Appendix K T Appendix Z P	Preparation Deleted Requiremen Quality Ass Certification Guideline f Supplemen Deleted RB Guide Procedure	n of Applicable Specifications ents for Quality Assurance Program surance Manager and Registered in Procedures or Preparation of Application Data intary Requirements for Tests and elines after Revision of JAXA-QTS-2000	n Inspector Sheet Inspections			

JAXA-QTS-2000E	JAXA Barta Specification	Page	- A-i -			
15 March 2021	Faits Specification					
	AFF LINDIA A					
PREPARATI	ON OF APPLICABLE SPECIFICA	TIONS				
A.1. Scope			A-1			
A.2. General			A-1			
A.2.1 Sub-Tier Specifica	tions and Contents of Applicable S	Specifications	A-1			
A.2.1.1 Sub-Tier Spec	cifications		A-1			
A.2.1.2 Contents			A-1			
A.2.1.3 Management			A-2			
A.2.2 Document Numbe	r of Applicable Specifications		A-3			
A.2.2.1 Generic Spec	ification		A-3			
A.2.2.2 Document Nu	mber of Detail Specification		A-3			
A.2.2.3 Cancellation of	of Applicable Specification		A-4			
A.2.2.4 Numbering of	Change Notice		A-5			
A.2.3 Little			A-5			
A.2.3.1 Nomenciature			A-6			
A.2.3.2 Name of JAX			A-6			
A.2.4 Description Bulas	of Applicable Specification		A-0			
A.2.4 Description Rules	of Applicable Specification		A-0			
A.2.4.1 Faragraphing	Figures Tables and Pages		A-0			
$\Delta 243$ Notes			Δ_7			
A 2 4 4 Unit Symbol			A-7			
A 2 4 5 Mathematical	Symbols and Formula		A-8			
A 2 4 6 Rounding of N	Jumbers		A-8			
A.2.4.7 Drafting of Sp	ecifications		A-8			
A.2.4.8 Tolerances			A-8			
A.3. Generic specification for	or Each Product Type		A-8			
A.3.1 General			A-9			
A.3.1.1 Scope			A-9			
A.3.1.2 Definition of T	erms		A-9			
A.3.1.3 Classification	of Product Type		A-9			
A.3.1.4 Part Number.			A-10			
A.3.2 Applicable Docum	ents		A-11			
A.3.2.1 Applicable Do	cuments		A-11			
A.3.2.2 Reference Do	cuments		A-11			
A.3.2.3 Order of Prec	edence		A-11			
A.3.2.4 Detail Specific	A-11					
A.3.3 Requirements	A-12					
A.3.3.1 General Requ	irements		A-12			
A.3.3.2 Certification	~		A-12			
A.3.3.3 Quality Assura	ance Program		A-13			
A.3.3.4 Materials			A-13			
A.3.3.5 Design and C		Monkin -	A-14			
A.3.3.6 External View	, Physical Dimensions, Mass and	warking	A-14			

JAXA-QTS-2000	E	JAXA	Page	- A-ii -
15 March 2021		Parts Specification		
A.3.3.7 Work	manship			A-14
A.3.3.8 Ratin	ıg			A-14
A.3.3.9 Preve	ention of	Initial Failure		A-14
A.3.3.10 Elect	rical Perf	ormance		A-14
A.3.3.11 Mech	nanical Pe	erformance		A-14
A.3.3.12 Envir	onmenta	I Performance		A-15
A.3.3.13 Dural	bility			A-15
A.3.4 Quality As	ssurance	Provisions		A-15
A.3.4.1 Gene	eral Requ	irements		A-15
A.3.4.2 Class	sification	of Tests and Inspections		A-15
A.3.4.3 In-Pr	ocess Ins	spection		A-16
A.3.4.4 Quali	ification T	est		A-16
A.3.4.5 Preve	ention of	Initial Failure		A-17
A.3.4.6 Quali	ity Confo	rmance Inspection		A-17
A.3.4.7 Test	Method	·		A-19
A.3.4.8 Long	-Term St	orage		A-21
A.3.4.9 Chan	nge and C	Optimization of Tests and Inspectio	ns	A-21
A.3.5 Preparatio	on for De	livery		A-21
A.3.6 Notes		, ,		A-22
A.3.7 Appendix				A-22
A.4. Detail Specific	ation			A-22
A.4.1 General				A-22
A.4.1.1 Scop	e			A-22
A.4.1.2 Part I	Number			A-22
A.4.1.3 Ratin	a			A-23
A.4.1.4 Misce	ellaneous	5		A-23
A.4.2 Applicable	e Docume	ents		A-23
A.4.3 Requirem	ents			A-23
A.4.4 Quality As	ssurance	Provisions		A-23
A.4.4.1 Gene	eral			A-23
A.4.4.2 Chan	ae or Op	timization of Tests and Inspections	S	A-23
A.4.5 Preparatio	on for De	livery		A-24
A.4.6 Notes				A-24
A 5 Change Notice	ė			A-24
A 5 1 Scope				A-24
A 5 2 General R	Requirem	ents		A-24
A 5.3 Instruction	A.5.2 General Requirements			A-24
A 6 Formats of Ap	nlicable S	Specifications		A-24
Example: Format A	-1 Gener	ic specification for each Product T	уре	A-25
Example: Format A	-2 Detail	Specification		A-29
Example: Format A	-3 Chang	ge Notice		A-39
1				
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-2000E 15 March 2021		J A X A Parts Specification	Page	– A-1 –
			I	
	PREPARATIO	ON OF APPLICABLE SPECIFICA	TIONS	
A.1.	Scope			
	This appendix establishes required in paragraph 3.2	the rules for preparation of applic of this specification.	able specificatior	is as
A.2.	General			
	This specification defines In order to acquire certification, applicable requirements. JAXA establishes generic requirements for each pro In order to acquire certification specify detailed requirements specification.	general requirements for JAXA quation from JAXA for JAXA qualified le specifications shall be prepared specifications for each product typ duct type of JAXA qualified parts. ation, the company shall prepare of ents for individual JAXA qualified p	alified parts and d parts in accorda d to define detail pe to specify gen detail specification part on the basis o	others. ance with eral ns to of this
A.2.1	Sub-Tier Specifications	and Contents of Applicable Specil	ications	
A.2.1.	 Sub-Tier Specification Applicable specifications a) Generic specification a) Generic specification a) Generic specification define general reports. b) Detail specification coverage and reported and re	ns ons shall be composed of the follo ations for each product type: Gene equirements common to each proc ons: Detail specifications which de quirements unique to the individua which partially changes generic s detail specifications, shall constitu- each product type or detail specifi	wing sub-tier eric specifications luct type of JAXA efine qualification al JAXA qualified pecifications for e ite a part of gene fication.	s which qualified part. each ric
A.2.1.	2 Contents Unless otherwise spe as shown in Table A-	cified, applicable specifications sh	nall consist of the	contents

JAXA-QTS-2000E	JAXA	Dege	A 0
15 March 2021	Parts Specification	Page	– A-2 –

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

A.2.1.3 Management

- a) Applicable specifications shall be maintained and controlled. Applicable specifications shall be revised in the following cases that:
 - 1) Number of pages of main body of change notice will be equal to or more than 10 pages, or the 10th change notice will be issued.
 - 2) Equal to or more than half of applicable specification will be corrected.
 - 3) Applicable documents will be cancelled or replaced by an alternative documentation.
 - 4) JAXA receives revision request from the QML manufacturer and considers the request to be appropriate.
- b) Generic specifications for each product type shall be prepared by JAXA in accordance with Appendix A and shall be established by JAXA after discussion at review board and review by experts.
- c) Detail specifications and change notices shall be prepared and established by the QML manufacturer or the company which wishes to acquire certification and shall be registered with JAXA after review and agreement on contents.

Based on the request from the QML manufacturer or the company which wishes to acquire certification, JAXA shall register after review and agreement on contents.

- d) The applicable specifications shall be issued by JAXA and shall be published on Database of JAXA Qualified EEE Parts and Materials.
- e) When the generic specifications for each product type are revised, the previous version (including change notices) shall be cancelled on the date the new revision is established.

When the detail specifications are revised, registration of the previous version (including change notices) shall be cancelled on the date the new revision is established.

The JAXA qualified parts manufactured in compliance with the previous version of the applicable specifications prior to the cancellation data shall remain effective as JAXA qualified parts after the cancellation date.

JAXA- 15 N	-QTS-2000E larch 2021	J A X A Parts Specification	Page	– A-3 –
f) g h	 When the previor date the new verticlearly stated in the specifications are shown in change JAXA will revoke applicable specification is different requirements. Application is different requirements. Alternative applicable The applicable The QML mation applicable Other cases 	us version of the specifications are sion is established, the extended main body or on the cover of the re e cancelled without revision, cance e notices. The applicable specifications or su fications in the following cases that ficult due to obsolescence of techr oplicable specifications are establis le specifications are considered to unufacturer declines certification. when JAXA accepts cancellation.	e not cancelled o cancellation date evised version. V ellation date shall uspend release o t: nical or control ished.	n the shall be When the I be of the
A.2.2 Doc	cument Number of A	oplicable Specifications		
A.2.2.1 G T s	Generic Specification The document numbe hall be provided as f	er of applicable specifications to be follows.	e established by	JAXA
ل `) (1 (2	AXA-QTS- <u>2xxx</u> (1) 1) Document numbe (.2.2.1.1) 2) Revision letter (pa	□ (2) er of generic specification for each aragraph A.2.2.1.2)	product type (pa	ragraph
A.2.2.1.1	Document Number Document number four-digit number fo with "2010."	of Generic specification for each I of generic specification for each p or which the first generic specificat	Product Type product type shall tion number is pro	be a ovided
A.2.2.1.2	Revision Letter A revision letter sha shall be identified b revision letter. a) Where a gene Example: JAX	all be assigned in an alphabetical by "A". Alphabets of "I", "O" and "Z ric specification for each product t A -QTS-2040 \rightarrow JAXA -QTS-2040	order. The first ro " shall not be use ype is revised.)A	evision ed as a
A.2.2.2 [5 J/	Oocument Number of Oocument number of hall be provided by A AXA-QTS- <u>2xxx / A</u> (1) (2) 1) Document numb A.2.2.2.1)	Detail Specification detail specification established by JAXA at certification as follows. $\frac{XXX}{(3)}$ (4) er of generic specification for each	v the QML manufa	acturer aragraph

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-4 –
A.2.2.2.1	 (2) Appendix letter of A.2.2.2.2) (3) Individual identified (4) Revision letter (procument Number Document number specification for each of the specification for each o	of generic specification for each pr ication (paragraph A.2.2.2.3) paragraph A.2.2.2.4) of Generic specification for each I shall be the document number of ch product type. However, no rev	oduct type (parag Product Type applicable gener rision letter shall t	graph ic be
A.2.2.2.2	involved. Appendix Letter of The appendix lette generic specificatio omitted for the follo a) The generic sp b) Appendixes of to the whole o	Generic specification for each Pro r shall be provided to identify the a on for each product type. The app owing cases. pecification for each product type of f the generic specification for each f the target product type.	duct Type applicable append endix letter shall contains of main product type are	dix of the be body only. applied
A.2.2.2.3	Individual Identifica The individual iden detail specification shall be assigned to QML manufacturer	tion Number tification number shall be a three-o . The first digit shall identify the Q by JAXA, and the other two digits s :	digit number to id ML manufacturer shall be assigned	entify and by the
A.2.2.2.4	 2-digit n 1-digit n Revision Letter A revision letter sh shall be identified b a) When a detail Example: JAX b) When the detai generic specifies Example: JAX c) When the apprevised generic Example: JAX (The detail specifies 	all be assigned in an alphabetical by "A". Alphabets of "I", "O" and "Z specification is revised. A-QTS-2040/A101 \rightarrow JAXA-QTS- ail specification is revised to reflect ication for each product type. A-QTS-2040/A101A \rightarrow JAXA-QTS licable detail specification is not af ic specification for each product ty A-QTS-2040/A101A \rightarrow JAXA-QTS correctly and the specification is not af it specification for each product ty A-QTS-2040/A101A \rightarrow JAXA-QTS	order. The first ro order. The first ro " shall not be use 2040/A101A t changes in the r S-2040/A101B ffected by change pe. S-2040/A101A	by JAXA evision ed. revised es in the
A.2.2.3	Cancellation of Applic When an applicable s cancelled on the date the cancelled applica the revised applicable	cable Specification specification is revised, the previou the new revision is established. ble specification and date of cance specification.	us version shall b The document nu ellation shall be s	e ımber of hown in

JAX 1	XA-QTS-2000E 5 March 2021	J Parts S	A X A Specification	Page	– A-5
	a) When generic sp are revised, the revision is establ and date of canc	pecification and previous version lished. The do cellation shall t	d generic specificatio on shall be cancelled ocument number of t be shown on the revi	ons for each proc d on the date the he cancelled spe ised specification	luct type new cification
	Example: Where revised as "r	evision A".	JAXA-QTS-2010A DD MM 20YY	A	
			Superseding JAXA-QTS-2010 Cancelled DD MM 20YY		
	b) When detail spect shall be cancelle document numbe cover of the revis	cifications are d on the date er of the cance sed detail spec	revised, registration the new revision is e elled detail specificat cification.	of the previous v established. The tion shall be show	version vn on the
	Example: Where revised as "r	evision A".	JAXA-QTS-2010/ DD MM 20YY	101A	
			Superseding JAXA-QTS-2010/ Cancelled DD MM 20YY	101	
.2.2.4	Numbering of Change	e Notice		vision letter) shal	

Example: JAXA-QTS-2000A NOTICE <u>1</u> (1) (1) Serial number provided for each notice

A.2.3 Title

Unless otherwise specified, the title shall be provided as follows.

<u>A, B, C</u> (1) (2) (3)

- (1) Nomenclature (paragraph A.2.3.1)
- (2) Name of JAXA qualified parts (paragraph A.2.3.2)
- (3) Sub-tier specification (paragraph A.2.3.3)

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specif	A ication	Page	– A-6 –
A.2.3.1 Nomenclature Nomenclature reliability" to ic	shall be indicated as either entify reliability category of	"established JAXA qualifie	reliability" or "higl d parts.	า
A.2.3.2 Name of JAXA Name of JAXA standards suc	. Qualified Parts qualified parts shall be det n as JIS standards.	termined in ac	cordance with pu	ıblic
A.2.3.3 Sub-Tier Spec The applicable as either "gen Applicable spec as "detail spec	fications specifications, which are e ric specification" or "generi cifications, which are prepa ification".	established by ic specification ared by the co	JAXA, shall be ir n for each produc mpany, shall be i	ndicated t type". ndicated
A.2.4 Description Rule Applicable speci description rules	of Applicable Specificatior ications shall be prepared i	ו n accordance	with the following	g
A.2.4.1 Paragraph Nu a) In the ma	nbering n body, the paragraph num ✦2. ───	ıber shall be p	provided as follow	'S.
b) In append	2.1 1.1.1 2.1.1 ixes, the paragraph numbe	✓ In principle shall be win or shall be prov	, combination of thin four numbers vided as follows.	numbers 3.
A.1.	A.2. A.2.1 A.1.1.1 A.2.1.1	The first capi appendix lette combination four numbers	tal letter shall be er. In principle, of numbers shall	the be within
c) To itemiz provided	e requirements in a paragra as follows.	ph, the itemiz	ation number sha	all be
a)	$b) \longrightarrow c)$ $2) \longrightarrow 3)$ $1.1) \longrightarrow 1.2)$	→ 1.3)		
A.2.4.2 Numbering of a) Figure an or each a	Figures, Tables and Pages I table numbers shall be se opendix.	equentially ass	signed for the ma	in body

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– A-7 –
b) The identificatior of the figure. Fo the table.	n number and title of a figure shall r a table, the number and title shal	be indicated at th Il be indicated at	ne bottom the top of
	Figure or Table (lef	<u>x</u> - <u>xx</u> Appendix letter Serial r t blank in the main body)	<u>k t</u> number	itle
	Example: Ta	able A-3. Performance		
c) The page numbe	er shall be indicated at the top of th	ne page.	
	- <u>x</u> Appendix lett (left blank in the	- <u>xx</u> - er Serial number main body)		
	Example: - A–3	-		
A.2.4.3 N	lotes			
a) Symbols of note supplementary e a sequential nun	s link terms in the main body to co explanation and shall be given in th nber starting "1" in each paragraph	rresponding ne form of " ^(x) ", wh n.	nere X is
	Example: Note: ⁽¹⁾ Corrosic	on which will affect performance of	the part.	
b) Symbols of note supplementary e a sequential nun	s for figures or tables link figures o explanation and shall be given in the nber starting "1" for each figure or	r tables to corres le form of " ^(x) ", wh table.	ponding here X is
	Example: Note: ⁽¹⁾ Shall ap	ply to qualification tests.		
A.2.4.4 U	Init Symbol			
U	Inless otherwise spe	cified, unit symbols shall comply v	vith the following	
si a b c	tandards.) JIS Z 8202-0) JIS Z 8202-1) JIS Z 8202-2	Quantities and Units - Part 0: Quantities and Units - Part 1: Quantities and Units - Part 2: Phenomena	General Principle Space and Time Periodic and Rel	es ated
d) JIS Z 8202-3	Quantities and Units - Part 3:	Mechanics	
e) JIS Z 8202-4	Quantities and Units - Part 4:	Heat	
(f)	JIS Z 8202-5	Quantities and Units - Part 5: Magnetism	Electricity and	
g) JIS Z 8202-6	Quantities and Units - Part 6: Electromagnetic Radiations	Light and Relate	d

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-8 –
	 h) JIS Z 8202-7 i) JIS Z 8202-8 j) JIS Z 8202-9 	Quantities and Units - Part 7: Quantities and Units - Part 8: and Molecular Physics Quantities and Units - Part 9: Physics	Acoustics Physical Chemis Atomic and Nucl	stry ear
	k) JIS Z 8202-10	Quantities and Units - Part 10 and Ionizing Radiations): Nuclear Reaction	ons
	I) JIS Z 8202-12	Quantities and Units - Part 12 Numbers	2: Characteristic	
	m) JIS Z 8202-13 n) JIS Z 8203	Quantities and Units - Part 13 SI Units and Recommendatio Multiples of Certain Other Un	3: Solid State Phy ons for the Use of its	sics their
A.2.4.5	Mathematical Symbo	ls and Formula		
	Unless otherwise spe the following standar a) JIS Z 8201 Ma	ecified, mathematical symbols and d. thematical Symbols	formula shall cor	nply with
A.2.4.6	Rounding of Number Unless otherwise spe following standard. a) JIS Z 8401 Ro	s ecified, numbers shall be rounded unding of Numbers	in accordance wi	th the
A.2.4.7	Drafting of Specificat	ions		
	Unless otherwise spe following standard	ecified, drafting of specification sha	all comply with the	9
	a) JIS Z 8301	Rules for the Layout and Drat Industrial Standards	fting of Japanese	
A.2.4.8	Tolerances Tolerances shall be in item a). Example: 2000_{0}^{+72} he 2.54 mm ± 0 2.54 mm ± 0	ndicated as follows in accordance ours).25mm 0.25) mm 20 mm	with paragraph A	N.2.4.7,
	2.54±0.25	mm		
A.3. Ger As a gen Cor a) b) c) d)	neric specification for I a minimum, the follow eric specification for e nmon requirements to Revision history (incl General Applicable document Requirements	Each Product Type ng 8 requirements shall be defined ach product type in accordance wi all appendixes shall be defined in uding reasons for revision)	d in the main bod ith this specificati the main body, if	y of on. [:] any.

JAXA-Q 15 Ma	KA-QTS-2000EJ A X A5 March 2021Parts Specification				
e) Qu f) Pre g) No h) Ap A.3.1 Gene The f a) S	ality assurance pro paration for delive tes pendix ral ollowing items sha Scope	ovisions ry Il be defined.			
c) (d) F	Classification of pro Part number	oduct type			
A.3.1.1 Sca a)	A.3.1.1 Scope a) The text of this paragraph shall be in the following format. Example: This appoification establishes the general requirements and quality				
	assurance provis referred to as "re on spacecrafts. This specification Space Use, Gen manufacturing lin	sions for space use, high reliability sistors") which are used for electron of complies with JAXA-QTS-2000 (eral Specification for) which is bas ne system, and replaces the follow -55182G Resistors, Fixed, Film, I	, resistors (hereir onic equipment ir Common Parts/M ed on the qualifie ing specification. High Reliability, S	nafter nstalled faterials, ed Space	
b)	If the above form any necessary n	Use, General Specificat nat cannot adequately define the shodification shall be made.	tion for cope of the speci	fication,	
A.3.1.2 De a) b) c)	finition of Terms Unless otherwise standards such a Special terms, w ambiguous terms If there are so m be provided in th reference to a pa provided here.	e specified, the definition of terms as JIS corresponding to JAXA qua hich are not covered in public stan s shall be listed and defined in the any terms to be defined, the defini le notes paragraph or in appendixe aragraph containing the definitions	shall conform to p lified parts. adards such as JI specification. tions of those ter es. In this case, t of terms shall be	oublic S, and ms may he	
A.3.1.3 Cla Pro per Exa	ussification of Prod oduct type of the J <i>i</i> · configuration or fu ample: The classif	uct Type AXA qualified parts shall be further unctionality. ïcation of resistors shall be specifi	r divided into part ed in Table 1.	groups	

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-10 –			
Table	Table 1. Classification of Product Type					
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	9017C			

A.3.1.4 Part Number

The part number shall be assigned as follows.

a) Use the existing part number and associated information in the following format, if any.

Example 1: JAXA ⁽¹⁾ <u>RNS55</u>	<u>J</u>	<u>1001</u>	<u>F</u>
Style	Characteristic	Nominal	Resistance
		resistance	tolerance
(para. 1.3. ⁻	1) (para. 1.3.2)	(para. 1.3.3)	(para 1.3.4)

Note: ⁽¹⁾ "JAXA" indicates the common part is for space use and may be abbreviated to "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⁾ CKS05	<u>BX</u>	<u>100</u>	<u>K</u>
Style	Characteristic	Nominal	Capacitance
		capacitance	tolerance
(para. 1.3.1)	(para. 1.3.2)	(para. 1.3.3)	(para. 1.3.4)

Note: ⁽¹⁾ "NASDA" indicates the common part is for space use and may be abbreviated to "N."

b)	Otherwise, use the	e following f	ormat.		
	Example: JAXA ⁽¹⁾	<u>2345</u> /	<u>A</u>	<u>101</u>	<u>(-A6G8)</u>
		Generic	Appendix	Individual	Characteristic
	S	pecification	letter	identification	identifier
		number		number	
	(p	ara. 1.2.1)	(para. 1.2.2	2) (para. 1.2.3)	(para. 1.2.4)

Note: ⁽¹⁾ "JAXA" indicates the common part is for space use and may be abbreviated to "J".

c) In addition to items a) and b), unique part numbers may be defined in each generic specification.

Example: Use the JEITA parts' numbering system for semiconductor devices.

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-11 –	
A.3.2 A T a b c d	 A.3.2 Applicable Documents This section shall specify the following items. a) Applicable documents b) Reference documents c) Order of precedence d) Detail specifications 				
A.3.2.1	Applicable Document a) The text of this p	s aragraph shall be in the following	format.		
	Example: The documents specified herein available at the designate an iss	listed below form a part of this spe . The issues of these documents a time of contract award or applications ue, the issue shall be specified in	ecification to the e are the latest ver on. If it is necess the detail specifie	extent sion sary to cation.	
	NASDA-QTS-12 MIL-STD-23456	2345 (Title) (Title)			
	b) A revision letter	shall not be given.			
A.3.2.2	Reference Document Documentation to be shown.	s quoted as a reference for the JAX	A qualified parts	shall be	
A.3.2.3	Order of Precedence The order of precede shall be specified in a	nce of applicable specifications an accordance with paragraph 2.2 of t	id applicable doc his specification.	uments	
A.3.2.4	2.4 Detail Specifications Unless otherwise specified, the text of this paragraph shall be in the following format.				
	Example: Detailed requireme detail specification.	nts for style and performance of th	e resistors are sp	pecified in	
A.3.2.4.1	Detail Specification a) It shall be stat accordance w b) Rules to assig example.	Number ed that the detail specification num ith paragraph A.2.2.2 of this apper n detail specification number shall	nber shall be assi ndix. be illustrated usi	igned in ing an	
A.3.2.4.2	Revision Letter of I It shall be stated th assigned in accord	Detail Specification at a revision letter in the detail spe ance with paragraph A.2.2.2.4 of t	ecification numbe his appendix.	r shall be	

JA	XA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-12 –
A.3.2.4.3	Independency of D The text of this pa Example: The detail specific document numbe	Detail Specification ragraph shall be in the following for cation shall be a stand-alone docun r.	mat. nent with a uniqu	e
A.3.2.4.4	Format of Detail S It shall be stated th with paragraph A. requirements in th paragraph A.4 of t	pecification nat the format of detail specificatior 6, item b) of this appendix. It shall e detail specification shall be speci his appendix.	n shall be in acco be also stated th fied in accordanc	rdance at ce with
A.3.3	 A.3.3 Requirements The following items shall be defined. a) General requirements b) Certification c) Quality assurance program d) Materials e) Design and construction f) External view, physical dimensions, mass and marking g) Workmanship h) Rating i) Prevention of Initial failure j) Electrical performance k) Mechanical performance l) Environmental performance 			
A.3.3.1	General Requiremer General requirement example, it shall be s shall comply with the	nts as shall be specified only when dee stated that detail requirements of th e detail specification.	med necessary. le JAXA qualified	For parts
A.3.3.2	Certification Requirements for ce regard to the items li specification.	rtification and retention of certificati sted in the following paragraphs in	on shall be spec accordance with	ified with this
A.3.3.2.1	Qualification Cove The coverage of q main body or each It shall be stated th specified in the ma specification.	rage ualification for each item (element) a appendix. nat details of qualification coverage ain body or appendix, shall be cove	shall be specifie e, which cannot b ered in the detail	d in the e

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-13 –
A.3.3.2.2	Initial Qualification It shall be stated th paragraph 3.4.1 of	at qualification test shall be condu this specification.	cted in accordan	ce with
	Example: To acquire certifica quality assurance 3.3, conduct the q approval from JAX company shall be Aerospace Explore	ation under this specification, the opportunity of the program that meets the requirement ualification test specified in paragrafication test specified in paragraph 3.4.1 listed on the Qualified Manufacture ation Agency (JAXA QML).	company shall es ents specified in p aph 4.3.2, and ac of JAXA-QTS-20 ers List of the Jap	tablish a paragraph cquire an 00. The pan
A.3.3.2.3	Retention of Qualifi It shall be stated th in accordance with quality conformanc program within the retention of qualific within the effective	cation at the company shall apply for rete paragraph 3.4.2 of this specification is inspection and maintenance state effective period of certification. A sation shall be specified, when no p period of certification.	ention of the qual on, with results o tus of quality ass procedure to app product was man	ification f the urance bly for ufactured
A.3.3.2.4	Effective Period of Effective period of	Certification certification shall be three years.		
A.3.3.2.5	Change of Qualifica When qualification manufacturer shall of this specification It shall be stated th the items which mig	ation Coverage coverage is changed, it shall be st acquire requalification in accordar at, in principle, requalification shal ght be affected by the change.	tated that the QN nce with paragrap I be conducted o	IL oh 3.4.3 nly for
A.3.3.3	Quality Assurance Pr	ogram		
A.3.3.3.1	Quality Assurance It shall be stated th in accordance with assurance program comprehensively d	Program at the company shall establish a q paragraph 3.3 and Appendix C, a n plan (hereinafter referred to as "C ocuments the quality assurance pl	uality assurance nd prepare a qua QAP plan") which rogram.	program lity
A.3.3.3.2	TRB Establishment It shall be stated th paragraph 3.3.5 of	at the company shall establish TR this specification.	B in accordance	with
A.3.3.4	Materials a) Requirements fo b) Prohibited mater	r materials shall be defined. ials for space use shall be specifie	ed.	

JAX 1	KA-Q 5 Mar	TS-2000E rch 2021	J A X A Parts Specification	Page	– A-14 –
	o mai				
	c) d)	It shall be stated the documents the program. If necessary, it s	that general requirements for mat hat define manufacturing condition hall be stated that detail requireme	terials shall be sp is of the quality a ents shall be defi	ecified in ssurance ned in the
	D -		4		
A.3.3.5	Des a)	Sign and Construc	lion r critical design and construction o	of the IAXA quali	fied narts
	a)	shall be defined.			neu parts
	b)	If necessary, it s detail specification	hall be stated that detail requireme on.	ents shall be defi	ned in the
A.3.3.6	Ext	ernal View, Physic	cal Dimensions, Mass and Marking	9	
	a)	Requirements fo	r external view, physical dimensio	ns, mass and ma	irking
	b)	For example, rec	quirements for interface with other	devices including	g leads,
	c)	mounting structu	re, plating and mass shall be defined that detail requirements	ned. ants shall be defi	and in the
	C)	detail specificatio	on.		
A.3.3.7	Wo	rkmanship			
	a) b)	Requirements fo For example, ver	r workmanship shall be defined. rification requirements such as pre	ecap, PIND, radio	graphy
	c)	If necessary, it s detail specification	e specified. hall be stated that detail requireme on.	ents shall be defi	ned in the
A.3.3.8	Rat	ing			
	a)	Rating shall be s	specified.		
	b)	If necessary, it s detail specification	hall be stated that detail requirements on.	ents shall be defi	ned in the
A.3.3.9	Pre	vention of Initial F	ailure		
	a) b)	Requirements fo For example, ver	r prevention of initial failure shall t rification requirements such as the ov or other appropriate methods st	be defined. ermal tests, mech	anical
	c)	If necessary, it s detail specification	hall be stated that detail requirements	ents shall be defi	ned in the
A.3.3.10	Ele	ctrical Performanc	e		
	a) b)	Requirements fo If necessary, it s detail specificatio	r electrical performance shall be d hall be stated that detail requireme on.	lefined. ents shall be defii	ned in the
A.3.3.11	Me	chanical Performa	nce		
	a)	Requirements fo	r mechanical performance shall be	e defined.	
1					

JA	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-15 –
	 b) For example, ve solderability, res c) If necessary, it s detail specification 	rification requirements with regard istance to soldering heat and seal hall be stated that detail requireme on.	to terminal stren shall be defined. ents shall be defii	gth, ned in the
A.3.3.12	Environmental Perfor	mance		
	 a) Requirements for b) For example, very vibration test, restriction test, restriction test, the (reduced) test, the humidity test, the offgas test, outgate c) If necessary, it statistication 	or environmental performance shal rification requirements such as sho sistance to solvent test, salt spray nermal shock test, thermal and imp ermal vacuum test, radiation hardr assing test and odor test shall be o hall be stated that detail requirement on.	l be defined. ock test, accelera test, barometric p mersion cycling te ness test, flamma defined. ents shall be defin	ation test, pressure est, bility test, ned in the
A.3.3.13	Durability			
	 a) Requirements for b) For example, ve shall be defined. c) If necessary, it s detail specification 	or durability shall be defined. rification requirements such as sto hall be stated that detail requireme on.	brage life and ope ents shall be defi	erating life ned in the
A.3.4	Quality Assurance Prov	isions		
	 The following items shataa) General requirements a) General requirements b) Classification of test c) In-process inspection d) Qualification test e) Prevention of initiaa f) Quality conformants g) Test method h) Long-term storage i) Change and optimitaat 	Il be specified in the quality assura ints sts and inspections ion I failure ce inspection ization of tests and inspections	ance provisions.	
A.3.4.1	General Requiremen It shall be stated that quality assurance pro the company shall ha requirements special specified.	ts the company shall be responsible ogram in accordance with paragrap ive the obligation to manage the T ly required for quality assurance p	for implementati ohs 4.1 and 4.2, a RB properly. Oth rovisions shall be	on of the and that ner e
A.3.4.2	Classification of Test Paragraph 4.3 of this JAXA qualified parts defined as necessary	s and Inspections specification shall be referred. Ta and others into accounts, other rea /.	aking classificatio quirements shall	n of the be also

JAX	A-QTS-2000E	J A X A Parts Specification	Page	– A-16 –
		Faits Specification		
A.3.4.3	 In-Process Inspection a) The in-process in which could series the workmanship measured after the series of the workmanship measured after the inspection of the workmanship measured after the workmanship measured after the inspection of the workmanship measured after the workmanship measured after the inspection of the workmanship measured after the inspection of the workmanship measured after the workmanship measured after the workmanship measured after the inspection of the workmanship measured after the inspection of the workmanship measured after the workmanship	n nspection shall be specified, in ord ously affect the reliability and quali p, and identify the characteristic pr finished products. Examples are s ual inspection of semi-finished prod or non-destructive inspection) d chemical inspection of semi-finis or 100% or sampling inspection for ation of semi-finished products (10 or non-destructive inspection) I that the in-process inspection sha rocess flow chart of a QAP plan sp process inspection shall be conduct	ler to detect any f ity of the products operties which ca hown below. ducts (100% or sa shed products (de non-destructive 00% or sampling all be shown in the pecified in Append ted.	failure s, assure annot be ampling estructive e dix C,
A.3.4.4	 Qualification Test The following items s a) Samples b) Production record c) Test items and r d) Criteria for pass e) Miscellaneous 	hall be specified in the provision o rds number of samples /fail	f qualification tes	t.
A.3.4.4.1	Samples a) It shall be stat the manufactu b) Selection of sa coverage.	ed that samples shall be manufact iring conditions specified in the qua amples shall be specified in relatio	tured in accordan ality assurance p n to the qualificat	ce with rogram. ion
A.3.4.4.2	Production Record It shall be stated th archive and manag data of materials, a in-process inspect	s nat the company, which wishes to a ge certificates of materials, incomir and process records during the pro ion data, and submit them upon re-	acquire certification ng inspection data aduction of sample quest.	on, shall a or test es and
A.3.4.4.3	Test Items and Nur a) Test items for b) Sampling plar tests shall be c) If necessary, i shall be define	mber of Samples qualification test shall be provided n, distribution of samples to each te specified. t shall be stated that detail require ed in the detail specification.	l in the form of tal est group and ord ments of test met	bles. er of thods
A.3.4.4.4	Criteria for Pass/Fa a) Criteria for pa	ail ss/fail shall be specified.		

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-17 –
	 b) Disposition of of defectives of specified, but 	the accepted products shall be sp loes not exceed the permitted nun the failure mode of the defectives	ecified, when the nber of defectives is catastrophic.	number S
A.3.4.4.5	Miscellaneous			
	Miscellaneous item disposition of samp	ns such as disposition of non-confe oles, and sample storage shall be	ormance, post-tes specified.	st
A.3.4.5	 Prevention of Initial F The following items s failure. a) Samples b) Test items c) Criteria for pass/ d) Post-test disposi e) Miscellaneous 	ailure hall be specified in the provision o fail tion of sample	f prevention of in	itial
A.3.4.6	Quality ConformanceThe following items sinspection.a)Classification of1)Electrical p2)Mechanica3)Environme4)Durabilityb)Samplesc)Test items and rd)Criteria for pass/e)Post-test disposif)Miscellaneous	Inspection hall be specified in the provision o tests performance il performance ental performance umber of samples fail ition of sample	f quality conform	ance
A.3.4.6.1	Classification of Te Classification of qu follows.	sts ality conformance inspection shall	be basically spe	cified as
A.3.4.6.1.1	 Active Parts Quality conformant following five group shipment as specif c) Group A: Elect d) Group B: Evat e) Group C: Die f) Group D: Pact g) Group E: Race 	ce inspection of active parts shall to be and shall be conducted for each ied in applicable specifications. ctrical characteristic tests luation tests of products stability. related tests. skage related tests liation hardness tests	ວe grouped into th າ inspection lot at	he

JAXA 15 M	-QTS-2000E /arch 2021	J A X A Parts Specification	Page	– A-18 –
A.3.4.6.1.2.	Passive Parts Quality conforman following three gro a) Quality confor during manufa This quality co	ce inspection of passive parts shal ups. mance inspection group A (quality acturing) onformance inspection shall be cor	l be grouped into conformance ins	the spection
	 manufacturing inspected. b) Quality confor within the efference of the efference of the efference of the effect of the first effect of the first effect of the first effect of the equalification of the equalification of the effect of the	of the JAXA qualified parts. All in mance inspection group B (quality ctive period of certification) onformance inspection shall be cor (first production lot manufactured). This quality conformance inspec- ve period of certification after initia	spection lots sha conformance ins nducted for the fir within the effectiv ction is not requir al qualification an	all be spection est ve period red within d
	Inspection sar quality confor The QML mar inspection (gro retention of qu c) Quality confor at restarting p	nples shall be taken from products mance inspection (group A). nufacturer shall report the results o oup B) to JAXA by the TRB status ualification after completion of insp mance inspection group C (quality roduction)	s which have pas f quality conform report or applica ections. r conformance ins	sed the ance tion for spection
	This quality co production, wh effective perio qualification re When quality applicable cer B shall be con Inspection sar	onformance inspection shall be per nen the JAXA qualified parts are no d of certification and the QML man etention without performing quality conformance inspection group C is tification, test items of quality confor- sidered as test items of group C. mples shall be taken from products	formed at restart ot manufactured nufacturer acquire conformance ins s not specified in ormance inspecti	ing within the es pection. on group sed the
	quality conform The QML mar (group B) and prior to shipme The results of to JAXA by the qualification a	mance inspection (group A). nufacturer shall complete the qualit quality conformance inspection sp ent. quality conformance inspection (g e TRB status report or application fter completion of inspections.	ty conformance ir becified in this pa roup C) shall be for retention of	nspection ragraph reported
A.3.4.6.2	Samples Criteria for sample be specified.	selection (including constitution of	f an inspection lo	t) shall
A.3.4.6.3	Inspection Items ar a) Inspection iter proportion to t	nd Number of Samples ns and the number of samples sha hat of qualification test.	all be specified in	

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-19 –
	 b) Order of each be specified. c) If necessary, if the detail specified. 	inspection item of the quality conf t shall be stated that detail require cification.	ormance inspecti ments shall be de	on shall efined in
7.0.4.0.4	 a) Criteria for pa b) Disposition of of failed produs specified, but c) If necessary, in 	ss/fail shall be specified. the accepted products shall be sp ucts does not exceed the permitted the failure mode of the defect is ca it shall be stated that detail require cification.	ecified, when the I number of defec atastrophic. ments shall be de	number sts efined in
A.3.4.6.5	Post-Test Dispositi a) In the case of specified. b) Disposition of	on of Sample non-conformance, disposition of th the products subjected to destruct	ne products shall ive test shall be s	be specified.
A.3.4.6.6	Miscellaneous If necessary, it sha detail specification	III be stated that detail requirement	s shall be define	d in the
A.3.4.7	 Test Method a) Conditions of the parts/materials of parts/materials of applicable species A.3.3.13 of this and the species Design and the species Design and the species Design and the species Environment of the species The specification of the specific	e tests and inspections shall be specified to verify the conformation of the following requirements which fication in accordance with paragrama appendix. construction w, physical dimensions and marking of initial failures erformance performance that requirements shall be verified ad by tests. I that detail requirements shall be of the tests of the test of test of the test of test	ecified. rmance of the co a are defined in e aphs A.3.3.4 thro ng d by analysis whe defined in the det	mmon ach ugh en they ail
A.3.4.7.1	Materials a) Verification m specified. b) Verification re and review of	ethods for the requirements of the quirements for qualification such a quality assurance program shall b	materials shall b s certificates of n e specified.	e naterials

JAXA 15 I	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-20 –
A.3.4.7.2	Design and Constru	uction		
	 a) Verification methods for the requirements of design and construction such as DPA shall be specified. b) Verification requirements for qualification and shipment shall be specified. 			
A.3.4.7.3	 External View, Phy a) Verification medimensions ar b) Accuracy and be specified. 	sical Dimensions and Marking ethods for the requirements of extend ad marking shall be specified. magnification requirements of mea	ernal view, physic asuring equipme	cal nt shall
A.3.4.7.4	Workmanship Verification method	ds for the requirements of workma	nship shall be sp	ecified.
A.3.4.7.5	 4.7.5 Prevention of Initial Failures Verification methods for the requirements of prevention of initial failures shall be specified. 			
A.3.4.7.6	 Electrical Performation methods b) Verification methods b) Unless otherwork following stand necessary. 1) MIL-STD-Test Methods 2) MIL-STD-Test Methods 3) MIL-STD-Test Methods c) When no stands be specified. 	nce ethods for the requirements of electric rise specified, test methods shall b dards. Special conditions for tests -202 nod Standard, Electronic and Electro -750 nod Standard, Semiconductor Dev -883 nod Standard, Microcircuits dards of test methods are availabl	ctrical performance is in accordance shall be specifie trical Component ices e, the test metho	ce shall with the d, if Parts ds shall
A.3.4.7.7	 Mechanical Perform a) Verification mechanical be specified b) Unless otherwork standards spected tests shall be specified. 	nance ethods for the requirements of med ried. rise specified, test methods shall b cified in paragraph A.3.4.7.6, item specified, if necessary. dards of test methods are availabl	chanical performate in accordance b). Special cond e, the test metho	ance with the ditions for ds shall
A.3.4.7.8	Environmental Perf a) Verification me shall be specif	ormance ethods for the requirements of env fied.	ironmental perfo	rmance

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– A-21 –
	 b) Unless otherw standards spe tests shall be c) When no stan be specified. 	rise specified, test methods shall b cified in paragraph A.3.4.7.6, item specified, if necessary. dards of test methods are availabl	e in accordance b). Special conc e, the test metho	with the litions for ds shall
A.3.4.7.9	Durability			
	 a) Verification m b) Unless otherw standards spectrum tests shall be c) When no stand be specified. 	ethods for the requirements of dur- rise specified, test methods shall b cified in paragraph A.3.4.7.6, item specified, if necessary. dards of test methods are availabl	ability shall be sp ie in accordance b). Special cond e, the test metho	ecified. with the ditions for ds shall
A.3.4.8	Long-Term Storage			
A.3.4.8.1	 A.3.4.8.1 Disposition of Lots Stored for a Long-Term at the QML Manufacturer's Site Disposition of lots stored for long-term shall be specified in accordance with paragraph 4.3.4 of this specification as follows. a) Period of storage b) Test item c) Test date d) Identification of products 			
A.3.4.8.2	Storage by Users It shall be stated th specified in the det	at conditions and period of storag ail specification.	e by users shall t	e as
 A.3.4.9 Change and Optimization of Tests and Inspections The change and optimization of tests and inspections for the following items shall be specified. Test and inspection items applied as in-process inspection. Test and inspection items applied as qualification test. Test and inspection items applied as quality conformance inspection. 				ems shall
	Example: If the company wish in-process inspectio JAXA-QTS-2000 sha	es to change or optimize the test ans and quality conformance inspectall apply.	ind/or inspections ctions, paragraph	s of the s 4.3.5 of
A.3.5 P F th a b	reparation for Delivery for preparation for deliv ne following shall be sp) Packaging) Marking on packag	very, paragraph 5 of this specificat becified. Je	ion shall be refer	red, and

JA	XA-QTS-2000E	J A X A Parts Specification	Page	– A-22 –	
A.3.6	 .3.6 Notes Miscellaneous things that are not covered in the previous paragraphs shall be specified. Examples are shown below. a) Note for QML manufacturer b) Note for user (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 				
A.3.7	A.3.7 Appendix Appendixes shall be prepared, if necessary, to supplement or add details to the main body. Unless otherwise specified, appendixes shall be prepared separately for each item of the main body or for each type of JAXA qualified parts.				
A.4. D Tr a) b) c) d) e) f) g)	 A.4. Detail Specification The detail specification shall specify the following items. a) Revision history (reasons for revision shall be included) b) General c) Applicable documents d) Requirements e) Quality assurance provisions f) Preparation for delivery 				
A.4.1	General Unless otherwise specif a) Scope b) Part number c) Rating d) Miscellaneous Scope	fied, the following items shall be sp	becified.		
	The scope of the deta generic specification Example: This specification es Appendix A, the spa referred to as "resist	ail specification shall be specified, for each product type. tablishes the detailed requirement ace use, high reliability, film, fixed r ors") RNS50, 55, 60, 65 and 70 ty	indicating the ap s for JAXA-QTS- resistors (hereina pes.	plicable 2050 ıfter	
A.4.1.2	Part Number Part number shall be specification for each	specified in accordance with the a product type.	applicable generio	>	

JA	AXA- 15 M	QTS-2000E larch 2021	J A X A Parts Specification	Page	– A-23 –
A.4.1.3	F M c d	Rating Major characteristics haracteristics, mech urability shall be spe	of the parts such as operating tem anical characteristics, environmen ecified.	perature range, o tal characteristics	electrical s and
A.4.1.4	Ν	liscellaneous			
	Ν	liscellaneous shall b	e specified if necessary.		
A.4.2	Арр	licable Documents			
	 a) Applicable documents shall be specified. b) It shall be stated that the latest version of applicable documents shall be applied. When applicable version is specified, revision letter of the version shall be given. 				
A.4.3	Req	luirements			
	 a) Requirements shall be specified in accordance with the applicable generic specification for each product type. b) Unique requirements shall be specified if necessary. c) A detail specification shall specify items that are required in the generic specification for each product type to specify in a detail specification. d) Performance requirements, which are to be specified in detail specification, may be tabulated, indicating compliance with the requirements defined in the generic specification for each product type. 				
A.4.4	Qua	ality Assurance Prov	isions		
A.4.4.1	Ģ	General			
	 a) Quality assurat applicable gen b) Unique require c) Test items of s qualification test association wit type. d) When the prev 		ce provisions shall be specified in a ric specification for each product ty pents shall be specified. reening test (if applicable), in-proce and quality conformance inspection the requirements of the generic sp us version of applicable document revision, test conditions, test met	accordance with t /pe. ess inspection, on may be tabula pecification for ea ts are applied at hods, etc. shall b	:he ted in ich part be defined.
A.4.4.2	C	Change or Optimizati	on of Tests and Inspections		
A.4.4.2 Change or Optimization of Tests and Inspections If the company changes or optimizes the tests and insp inspections and quality conformance inspection specifi generic specifications for each product type at the esta specification or the revision, the company shall describ describe the rationale that the products have capable of assurance requirements after the implementation of the paragraphs 4.3.5 of this specification.				ections of the in- ed in the applicab blishment of a de e changed items if satisfying the qu e change as spec	process le tail and uality ified in

	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-24 –	
A.4.5	 A.4.5 Preparation for Delivery a) Requirements of preparation for delivery shall be specified in accordance with the applicable generic specification for each product type. b) If there are conditions and storage period that must be observed by users, those conditions and storage period shall be specified. c) Unique requirements shall be specified, if necessary. 				
A.4.6	Notes Notes shall provide items that are not specified above				
A.5.	Change Notice				
A.5.1	 Scope Change notice shall be prepared when minor changes occurred in generic specifications for each product type and detail specifications. "Minor changes" are as follows: a) Correction of misspelling in provisions b) Change of terms c) Change of figures and tables Furthermore, change notice may be prepared when control by change notice is easier. Number shall be assigned in numerical order for each change notice of applicable 				
A.5.2	 .2 General Requirements a) Change notices shall be issued for each generic specification for each product type and detail specification. b) Change notices shall remain effective until a revision is issued for the original specification 				
A.5.3	 Instructions for Preparata a) Each change shall appears in the orig and rationale for th b) To delete a paragra unchanged. Example: 3.4.2 (ti c) A paragraph shall I d) When numerous characteristic be rewritten. 	tion be described in the order of pages on which the paragraph inal specification. Description before and after the change is change shall be shown. aph, the subsequent paragraph numbers shall remain itle) Deleted be added without affecting existing paragraph numbers. hanges are made to a paragraph, the whole paragraph shall			
A.6.	 Formats of Applicable Spectrum a) An example of genering 1. b) An example of detail c) An example of change 	ecifications ic specifications for each product ty specifications is shown in Format <i>i</i> e notice is shown in Format A-3.	ype is shown in F A-2.	Format A-	

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-25 –		
Example: Format A-1 Generic sp	ecification				
(Cover sheet) ⁽¹⁾					
		Registration	on No. xx		
		JAXA-QT	S- xxxxG (date)		
		Sur JAXA -Q (berseding TS-xxxF Cancelled (date)		
RESISTORS, HIGH RELIABILITY, SPACE USE, GENERAL SPECIFICATION FOR					
JAXA JAPAN AEROSPACE EXPLORATION AGENCY					
Note: ⁽¹⁾ The purpose of Example Contents used here vary	Format A-1 is to show the format f for each part type. (The same app	or generic speci lies next few pag	fication. ges)		

	JAXA 15	A-QTS-200 March 202	00E 21	J A X A Parts Specification	J A X A s Specification Page		– A-26 –
E (F	Example: Format A-1 (Revision history)						
	JAXA	A-QTS-xxxx	(G	JAXA Ports Specification		Page	- i -
	Day			Fails Specification			
[Revision history						
	Rev.	Date		Descriptio	on		
'							
-							

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-27 –	
Example: Format A-1 (Table of contents)				
JAXA-QTS-xxxxG Day Month Year	J A X A Parts Specification	Page	- ii -	
1. GENERAL 1.1 Scope	Contents		1	
1.2 Terms and Defin 1.3 Classification 1.4 Part Number	tions		1 2 1	
	(continues)			
2. APPLICABLE DOCUI 2.1 Applicable Docu	/IENTS		2 2	
	(continues)			

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-28 –		
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 reli	blishes the general requirements and ability, resistors (continues)	quality assurance	provisions		
1.2 Terms and Definitions					
The definitions for term a) Derating curve: T	s used herein are as shown below. he curve(continues)				
1.3 Classification					
Products covered by th	is specification shall	es)			
		,			
1.4 Part Number					
The part number is def nominal resistance and	ned in the following format and identi resistance tolerance.	fies the style, char	acteristic,		
Example: JAXA ⁽¹⁾ <u>RNS</u> Styl	Example: JAXA ⁽¹⁾ <u>RNS55</u> - <u>J</u> - <u>1001</u> - <u>F</u> Style Characteristic Nominal Resistance Resistance tolerance				
Note: ⁽¹⁾ "JAXA" indicates the common part for space use and may be abbreviated to "J". (continues)					
2. APPLICABLE DOCUMEN	NTS				
2.1 Applicable Documents					
The documents listed b documents are	elow form a part of this specification (continues)	as specified hereir	n. These		
JAXA-QTS-2000 C MIL-STD-202 T	ommon Parts/Materials, Space Use, est Method Standard, Electronic and (continues)	General Specificat Electrical Compon	ion for ent Parts		

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-29 –				
Example: Format A-2 Detail Spec (Cover sheet) ⁽¹⁾	Example: Format A-2 Detail Specification (Cover sheet) ⁽¹⁾						
		Pogistrati	on No. xx				
		JAXA-QTS-×××	(date)				
		Sup JAXA -QTS-x> C	erseding <xx axxx<br="">Cancelled (date)</xx>				
DE	ESISTORS, FIXED, FILM, HIGH RELIABILITY, SPACE USE, TAIL SPECIFICATION FOR						
Prepared and	Established by: ABCD CORP	ORATION					
Issued by: JAPAN AEROSPACE EXPLORATION AGENCY							
Note: ⁽¹⁾ The purpose of Example Contents used here vary	Format A-2 is to show the format for each part type. (The same app	for detail specific lies next few pag	ation. jes)				

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-30 –			
Example: Format A-2 (Issuance history)						
JAXA-QTS-××××/A×××A Day Month Year	J A X A Parts Specification	Page	- i -			
Rev. Date	Descri	iption				

JAXA-QTS- 15 March	-2000E 2021	J A X A Parts Specificatior	ı	Page	-	- A-31 –
Example: Format (Table of contents	A-2)					
Document numb the compan	per by y	J A X A Parts Specification	Р	age	- ii -	
		Contents				
1. GENERAL 1.1 Scope 1.2 Part N 1.3 Rating	e lumber gs	(continues)				
2. APPLICAE		ITS (continues)				
3. REQUIRE 3.1 Perfor	MENTS	(continues)				
 4. QUALITY . 4.1 In-Pro 4.2 Qualif 4.3 Qualit 4.4 Long- 4.5 Chang 5. PREPARA 6. NOTES 	ASSURANCE I ocess Inspectio fication Test y Conformance Term Storage. ges of Tests an TION FOR DE	PROVISIONS				

JAXA-QTS-2000E 15 March 2021	Part	J A X A s Specification	Page	Page				
ample: Format A-2 ext)								
Document number by the company	e J Parts S	A X A Specification	Page	- 1 -				
RESISTORS, FIXED, FILM, HIGH RELIABILITY, SPACE USE, DETAIL SPECIFICATION FOR								
1. GENERAL								
1.1								
 Scope This specification establishes the detailed requirements for JAXA-QTS-2050 Appendix A, the space use, high reliability, film, fixed resistors (hereinafter referred to as "resistors") RNS50, 55, 60, 65 and 70 types. 								
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> - <u>J</u> - <u>1001</u> - <u>F</u> 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" inc	dicates the common	part for space use a	ind may be abbre	eviated	l to "J."			
	Table 1.	Part Number						
Item	Applicable paragraph of JAXA- QTS-×××	Specification						
Style	A.1.3.1	RNS55						
Characteristic	A.1.3.2	J (±25ppm/°C for -55°C to 175°C)						
Resistance	A.1.3.3	Example: 100R00=100Ω (Identified by a six-digit number.) ⁽¹⁾						
Resistance tolerance A.1.3.4 V (±0.005%), T (±0.01%), A (±0.05%), B (±0.1%), C (±0.25%), D (±0.5%), F (±1.0%)								
Note: ⁽¹⁾ For the resistance number.	e tolerance of C, D o	or F, the resistance s	hall be identified	by a f	our-digit			

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Pa	Page						
Example: Format A-2 (Text)									
Document number by the	JAXA	Page		- 2 -					
company	Parts Specification								
1.3 Ratings The ratings are shown in Table 2.									
	Requirement								
Item	paragraph of JAX/ QTS-×××	A- Spec	ification						
Operating temperature range (°C	c) A.3.5.2	-55	to +175						
Rated ambient temperature (°C)	A.3.5.3		125						
Derating curve	A.3.5.4	As specifie	As specified in Figure 1.						
Style	-	R	RNS55						
Nominal resistance range (Ω)	A.3.5.1	30.1	30.1 to 100k						
Power rating (W)	A.3.5.3		0.3						
Maximum operating voltage (V)	A.3.5.5		0.6						
Maximum operating voltage at 70			300						
2. APPLICABLE DOCUMEN Applicable documents are	(continues) TS as specified in paragraph 2.1 (continues)	l of JAXA-QTS-×	xxx.						
3. REQUIREMENTS Requirements shall be as specified in paragraph A.3 of JAXA-QTS-××××.									
3.1. Performance The performance shall comply with Table 3.									

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification		Page	– A-34	
Example: Format A-2 Text)						
Document number by company	the	J A X A Parts Specification		Page	- 3 -	
		Table 3. Pe	erformance			
Item	Test m of JA	ethod paragraph \XA-QTS-××××	Performance (Numerical values should be shown as much as possible)			
Materials		A.3.2	As specified in	cified in Appendix A of JAXA-QTS-××××. cified in Supplementary Figure X.		
External view, physical dimensions, marking		A.3.3	As specified in			
Thermal shock (I)		A.3.8.3	Allowable resis			
Thermal shock (II)		A.3.8.3	Allowable resistance change: ±0.5%			
Overload		A.3.6.1	Allowable resistance change: ±0.5%			
Resistance		A.3.6.2	Within the specified resistance tolerance			
Radiography		A.3.4.1	As specified in Appendix A of JAXA -QTS-××××			

(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- $\times\times\times\times$. [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	Sample size	
External view and physical dimensions	A.3.3	A.4.3.2	100%	
Plating thickness	-	-	100%	

(continues)

	JAXA-QTS-2000E 15 March 2021				J A X A Parts Specification		Page	– A-35 –		
Exa (Te	imple: xt)	Forma	at A-2							
	Docun	nent n com	umber by the pany		J A X A Parts Specification		Page	- 4 -		
	4.2. Qualification Test The qualification test shall comply with paragraph A.4.1 of JAXA-QTS-××××.									
			Test			Pass/fail Criteria				
	Group	Order	ltem		Require- Test ment method paragraph paragraph		Sample size		Quantity of allowable defects ⁽²⁾	
		1	External view, physion dimensions and matrices	sical arking ⁽¹⁾	A.3.3	A.4.3.2				
		2	Thermal shock (I)		A.3.8.3.1	A.4.3.6.3.1	565			
		3	Overload Resistance		A.3.6.1	A.4.3.4.1	(all samples except for I-6 and IA tests)		d ^U	
	I	4			A.3.6.2	A.4.3.4.2				
		5	Radiography		A.3.4.1	A.4.3.3.1				
		6	Destructive physica analysis (DPA)	al 	A.3.4.2	A.4.3.3.2	2 or 3 ⁽²	2)	0	
		1	Solderability ⁽³⁾		A.3.7.3	A.4.3.5.3	- 12 Any resistance		0	
	IA	2	Resistance to solve	ents ⁽³⁾	A.3.8.5	A.4.3.6.5			0	
		1	Resistance-temper characteristic	ature	A.3.6.3	A.4.3.4.3	$ \begin{array}{c} 10 \text{Maximum resistance} \\ 10 \text{Critical resistance or} \\ 30 \begin{array}{c} 30 \\ 10 \text{Minimum resistance} \end{array} \end{array} $		e	
	П	2	Low temperature s	torage	A.3.8.6	A.4.3.6.6			pr 1	
		3	Low temperature o	peration	A.3.8.7	A.4.3.6.7			e	
		4	Terminal strength		A.3.7.1	A.4.3.5.1				
					(con	tinues)				
	JAX. 15	A-QTS-2 March 2	2000E 2021	J A Parts Sp	X A pecification	Pa	age	– A-36 –		
------------	--	--------------------	----------------------------------	--------------------------------------	-------------------------------	-----------------------------	--------	-------------------------------------		
Exa (Te	ample: F ext)	Format A	A-2							
	Document number by the company			J A Parts Spe	X A ecification	P	age	- 5 -		
	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.)]									
								ail criteria		
	Sub- group Order			ltem	Requirement n paragraph pa	Test method paragraph	Sample	Quantity of allowable defects		
		1	Thermal shock	(I)	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.3.6.2	A.4.3.4.2				
	A2 1 External view dimensions a			physical d marking ⁽¹⁾	A.3.3	A.4.3.2	AQI	_ 4.0%		
	A3	1	Radiography ²⁾		A.3.4.1	A.4.3.3.1	100%	0		
	A4	1	DPA ⁽³⁾		A.3.4.2	A.4.3.3.2	2 or 3	0		
		1	Resistance-ten characteristic	nperature	A.3.6.3	A.4.3.4.3				
	A5	2	Dielectric withs (atmospheric p	standing voltage ressure)	A.3.6.4	A.4.3.4.4	AQI	_ 2.5%		
		3	Insulation resis	stance	A.3.6.6	A.4.3.4.5				

(continues)

15	A-QTS-2 March 2	000E 021	Part	J A X A Parts Specification			Page		– A-3
mple: Fo xt)	ormat A-	-2							
Document number by the JAXA Page - 6 -									
	company		Parts 5	pecilication					
Table 10. Quality Conformance Inspection (Group B)									
		Test				Test	Pas	ss/fail ci	iteria
Sub- group	Order	I	tem	Requirement paragraph	m par	ethod agraph	Sampl size	e G	uantity of allowable defects
	1	Resistance- characterist	temperature c	A.3.6.3	Α.	4.3.4.3			
	2	Dielectric wi voltage	thstanding	A.3.6.4	Α.	4.3.4.4	10		
B1	3	Insulation re	esistance	A.3.6.6	Α.	4.3.4.5	10		0
	4	Resistance to soldering heat		A.3.7.4	Α.	4.3.5.4			
5 Moisture resistant 1 Solderability		Moisture resistance		A.3.8.4	A.4.3.6.4				
		1	A.3.7.3	Α.	4.3.5.3	5		0	
	2	Resistance	to solvents	A.3.8.5	Α.	4.3.6.5	Ű		Ũ
1 Low tempera		ature storage	A.3.8.6	Α.	4.3.6.6				
B3	2	Low temperature operation		A.3.8.7 A.4.3.6		4.3.6.7	10		0
	3	Terminal str	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 insulation resistance test shall be performed. (continues) Table 11. Quality Conformance Inspection (Group C)									
		1651		Requirement	Т	est	Fas		
	1			paragraph	me para	ethod Igraph	Sample size	a	llowable defects
Sub- group	Order		Item	paragraph	<u> </u>	5 1			
Sub- group	Order 1	Shock	Item	A.3.8.2	' A.4	.3.6.2			
Sub- group C1	Order 1 2	Shock High frequencies	uency	A.3.8.2 A.3.8.1.1	A.4	.3.6.2 3.6.1.1	10		0
Sub- group C1 C2	Order 1 2 1	Shock High frequivibration Thermal s	Jency shock (II)	A.3.8.2 A.3.8.1.1 A.3.8.3.2	A.4.3	.3.6.2 3.6.1.1 3.6.3.2	10 10		0
Sub- group C1 C2 C3	Order 1 2 1 1 1	Shock High frequivibration Thermal s	uency shock (II) vibration	A.3.8.2 A.3.8.1.1 A.3.8.3.2 A.3.8.1.2	A.4.3 A.4.3 A.4.3 A.4.3	3.6.2 3.6.1.1 3.6.3.2 3.6.1.2	10 10 10		0 0 0
Sub- group C1 C2 C3 C4	Order 1 2 1 1 1 1 1	Shock High frequivibration Thermal s Random Voltage c	uency shock (II) vibration oefficient	A.3.8.2 A.3.8.1.1 A.3.8.3.2 A.3.8.1.2 A.3.6.5	A.4 A.4.3 A.4.3 A.4.3 A.4.3	3.6.2 3.6.1.1 3.6.3.2 3.6.1.2 3.4.6	10 10 10 10		0 0 0 0

JA 1	XA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– A-38 –				
Example: (Text)	Example: Format A-2 (Text)							
JAXA-	-QTS-×××/A×××A	JAXA	Page	- 7 -				
	ay Month Year	Parts Specification	- ugo	<u> </u>				
4.4.	Long-Term Storage							
	QTS-xxxx, Appendix A	If be as follows and in accordance with	paragraph A.4.4 of	JAXA-				
		(continues)						
4.5.	Changes and Optimiza Example 1 There is no change to specified in Appendix	tion of Tests and Inspections the test or inspection from the quality of A of JAXA-OTS-XXXX	onformance inspec	tion				
	specified in Appendix A of JAXA-QTS-xxxx. Example 2 The changes has been made to xxx test. a) Change description: xxx b) Rationale: xxx							
		(continues)						
5. P P	PREPARATION FOR DE Preparation for delivery sequirements.	ELIVERY shall comply with paragraph 5 of JAXA-	QTS-×××× and the	following				
		(continues)						
6. N	IOTES lotes shall comply with	paragraph 6 of JAXA -QTS-×××× and th	e following require	ments.				
	(continues)							

	JAXA-QTS-2000E 15 March 2021				J A X Parts Spec	A ification	Pa	ge	– A-39 –
E	xam	nple: Fo	ormat A-3 Cl	hange	Notice ⁽¹⁾				
	JAXA-QTS-xxxx J A X A Notice 1 Parts Specification Registration No. xx						n No. xx		
	CHANGE NOTICE								
	XXXXX HIGH RELIABILITY, SPACE USE, GENERAL SPECIFICATION FOR								
		Daga	Dorograph	Lino		Change deso	cription		
		гауе	Falaylapli	LINE	Before	After		Rationale	
Ν	Note: ⁽¹⁾ The purpose of Example Format A-3 is to show the format for Change Notice.								

JAXA-QTS-2000E	JAXA	Daga	Ci				
15 March 2021	Parts Specification	Faye	- 0-1-				
APPENDIX C							
REQUIREME	REQUIREMENTS FOR QUALITY ASSURANCE PROGRAM						
C.1. Scope			C-1				
C.2. Applicable Documents.			C-1				
C.2.1 Applicable Docume	ents		C-1				
C.2.2 Reference Docume	ents		C-1				
C.3. Definition of Terms							
C.4. Requirements			0-1 C 2				
C.4.1 Applicable Docume	-1115		0-2 C_2				
C 4 2 1 Quality Assura	ance Manager		0-2 C-2				
C 4 2 2 Registered Ins	spector		C-2				
C.4.2.3 TRB							
C.4.3 Quality Assurance	Program		C-2				
C.4.3.1 Establishment	and Maintenance of Quality Assu	rance Program	C-2				
C.4.3.2 Quality Assura	ance Program Plan		C-2				
C.4.3.3 Change Control of Quality Assurance Program							
C.4.3.4 Internal Audit.	C.4.3.4 Internal Audit						
C.4.3.5 Quality Assurance Progrma of Supplier							
C.4.3.6 Lot Definition							
C.4.3.7 Manufacturing	Process Control		C-5				
C.4.4 Procurement Mana	agement of Materials		C-6				
C.4.4.1 Materials			C-6				
C.4.4.2 Material Trace	ability		C-6				
C.4.5 Nonconformance of			C-6				
C.4.5.1 Disposition Sy	stem of Anomaly and Nonconform	nance					
			0-0				
C 4.6.2 Failure Mode	and Effect Analysis		0-0				
C.4.7 Packaging Storage	e and Shinment	••••••	0-7 C-7				
C 4 7 1 Shipment Jude	gement by Registered Inspector		О7 С-7				
C.5. Quality Assurance Proc	Iram Plan		C-7				
C.5.1 General Requireme	ents		C-7				
C.5.2 Preparation of Qua	lity Assurace Program Plan		C-7				
C.5.2.1 General Instru	ictions for Preparation of Quality A	ssurance Progra	m PlanC-7				
C.5.2.2 Overall Struct	ure of Quality Assurance Program	Plan	C-8				
C.5.2.3 Cover			C-8				
C.5.2.4 Revision Histo	ory		C-9				
C.5.2.5 Table of Conte	ents		C-9				
C.5.2.6 Instructions fo	r Preparation of Text		C-9				
C.5.3 Example			C-9				

JAXA-QTS-2000 15 March 2021	DE	J A X A Parts Specification	Page	– C-ii –
Example Format Format C-1 Flow Ch Format C-2 FMAT Format C-3 Change	nart Category	List		C-10 C-11 C-13

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.

			1						
	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– C-1 –					
	APPENDIX C								
	REQUIREMENTS FOR QUALITY ASSURANCE PROGRAM								
C.1.	Scope								
	This appendix covers the general requirements for the quality assurance program (hereinafter referred to as "QAP" in this appendix) that the company, which wishes to acquire certification and the QML manufacturer (herein after referred to as "the company" in this appendix), shall establish in accordance with paragraph 3.3 of this specification in order to acquire certification of JAXA. Although this appendix defines JAXA specific requirements, ISO9001 requirements are a part of JAXA requirements.								
C.2.	Applicable Documents								
C.2.1	 C.2.1 Applicable Documents a) ISO 9001 Quality Management Systems - Requirements (JIS Q 9001 Quality Management Systems - Requirements) b) ISO 9000 Quality Management Systems - Fundamentals and Vocabulary (JIS Q 9000 Quality Management Systems - Fundamentals and Vocabulary) 								
C.2.2	 Reference Documents a) IATF 16949 Automot system requirements organizations) b) JIS Q 9100 Quality m defense organizations 	ive Quality Management System S for automotive production and rele nanagement systems - Requireme	Standard (Quality evant service part ents for aviation, s	r management ts space and					
C.3.	 Definition of Terms a) Company "Company" correspondent b) Quality assurance provide the second seco	nds to "organization" used in ISO 9 ogram rogram" corresponds to "quality ma cludes the JAXA requirements. cludes "nonconformity" specified in " corresponds to "products and se	9001. anagement syste n ISO9001. rvices" specified	m" used in in ISO9001.					
C.4.	Requirements The company shall meet to The company may establic applied within the qualificat part of JAXA requirements If the company already act the applicable public certification	he following requirements for JAX sh quality assurance program by i ation coverage of ISO9001, since I s. equires public certification, the com fication in QAP plan.	A qualified parts. ncorporating doc ISO9001 requirer npany shall specil	uments nents are a fy the name of					

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– C-2 –				
 C.4.1 Applicable Documents The company shall specify applicable documents and reference documents for established quality assurance program and shall keep the documents available for use. Following documents shall be included: a) Generic specification b) Generic specifications for each product type. c) Detail specifications 							
C.4.2 Organization							
 C.4.2.1 Quality Assurance Manager The company shall assign the person, who is responsible for quality assurance and has qualities performing tasks defined in paragraph D.3 properly, as quality assurance manager. The name, responsibility and authority of the quality assurance manager shall be defined in QAP plan. When the company assigns assistant quality assurance manager, responsibility and authority of the assistant shall be specified. 							
C.4.2.2 Registered Inspector The company shall assign the person, who has qualities performing tasks d paragraph D.4 properly, as registered inspector. The name, responsibility a authority of the registered inspector shall be defined in QAP plan. When the company assigns assistant registered inspector, responsibility an of the assistant shall be specified							
C.4.2.3 TRB The company sh Relationship betw shown in organiz and registered in When the compa activities based of review based on response to com	all establish and manage TRB in acco veen TRB and in-house organization a ational chart. TRB member shall inclu- spector. ny has a standing committee equivale n change control provision may be co design and development provision, qu plaints from customers, etc. are corres	ordance with Appe and TRB member ude quality assura ent to a TRB, the onsidered as the T uality meeting and sponding to TRB.	endix K. shall be ance manager committee or RB. Design provision of				
C.4.3 Quality Assurance I	Program						
C.4.3.1 Establishment ar The company sh JAXA specific red shall be judged a	d Maintenance of Quality Assurance all establish and maintain QAP to mee juirements. Suitability of establishme t TRB in accordance with Appendix K	Program et ISO9001 requir nt and maintenan	ements and ce of QAP				
C.4.3.2 Quality Assurance The company sh	e Program Plan all document and maintain QAP in acc	cordance with par	agraph C.5.				
C.4.3.3 Change Control o The company sh	f Quality Assurance Program all establish and maintain change con	trol of QAP.					

JAXA-QTS-2000E	JAXA					
15 March 2021	Parts Specification	Page	– C-3 –			
Change control of qu	ality assurance program for JAXA	qualified parts sh	hall be			
conducted as follows			,			
Change category list	shall be prepared or revised in acc	cordance with fol	lowing items			
a), b) and c) and shall	I be approved by JAXA.					
a) Grade I: Requalition	cation is required. Requalification	application is rec	luirea.			
D) Grade II: Prelimina	ary coordination with JAXA is requ	irea. Principie sr	nall de			
aeterminea on th	e basis of coordination with JAXA	ony moy chongo	indonondonthy			
c) Grade III. Requalit	Proviow	any may change	independentiy			
	D feview. D for IAXA qualified parts are as	follows TPB sh	all be			
conducted in accorda	nce with Appendix K					
1) For change of OA	P the company shall prepare chai	nge plan and sha	ll iudae			
corresponding ca	tegory in change category list at 1	RB	ladgo			
2) When the change	occurs, the company shall prepare	e change plan in	accordance			
with in-house cha	ange control provision and shall ju	dge correspondir	ng category in			
change category	list at TRB.	0	0 0 7			
3) When the change	is considered to be Grade III, the	company shall co	onduct in-			
house change pr	ocedure and shall judge propriety	of the change at	TRB. The			
company shall re	port the results to JAXA by TRB s	tatus report.				
When the change	is considered to be Grade II, the c	company shall su	bmit change			
plan to JAXA and	I shall determine change category	on the basis of c	coordination			
with JAXA. Whe	n the change is determined to be	Grade I by the co	ordination			
with JAXA, the company shall acquire requalification in accordance with						
paragraph E.5.4. When the change is determined to be Grade III, the company						
shall dispose the change in accordance with paragraph C.4.3.3, item c) above.						
When the change is determined to be Grade III, the company may reflect the						
change in change	e category list and revise the list.	The company sh	an apply the			
	ange calegory list as Grade II to J	AAA.	ith IAXA tha			
	Even though TRB results are reported at preliminary coordination with JAXA, the					

Change control flow is shown in Figure C-1.

TRB results shall be included in TRB status report.



15 March 2021 Parts Specification Page Page C.4.3.4 Internal Audit The company shall include JAXA specific requirements in the scope of internal audit by existing QMS. C.4.3.5 Quality Assurance Program of Supplier When the company outsources a part of manufacturing, tests and inspections to supplier, the supplier shall be controlled by management program equivalent to quality assurance program defined in this specification or shall be controlled by quality assurance program of the QML manufacturer. C.4.3.6 Lot Definition Lot Definition is provided in applicable specification, the definition shall be provided and specified in quality assurance program. C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Shall be chart or factors shall be shown in flow charts of manufacturing processes ontrol points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing proceses chart or placeble generic specification shall be incl	JAXA-QTS-2000E	JAXA	Paga	C F
 C.4.3.4 Internal Audit The company shall include JAXA specific requirements in the scope of internal audit by existing QMS. C.4.3.5 Quality Assurance Program of Supplier When the company outsources a part of manufacturing, tests and inspections to supplier, the supplier shall be controlled by management program equivalent to qualit assurance program of fine of the QML manufacturer. C.4.3.6 Lot Definition Lot identification methods for JAXA qualified parts shall be defined such as material lot, manufacturing lot and inspection lot, and the definition shall be provided in QAP plan. If the definition is provided in applicable specification, the definition shall be provided and specified in quality assurance program. C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be kept to be available as needed. Either paper or electrical data may be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specifications shall be included in flow charts. The company shall include at least following items in flow charts: a) Process name b) Process name c) Purposes of work e) Materials f) Facilities and / or ijgs and tools g) Control items (including items related to group of factors an	15 March 2021	Parts Specification	Faye	- 0-3 -
 C.4.3.5 Quality Assurance Program of Supplier When the company outsources a part of manufacturing, tests and inspections to supplier, the supplier shall be controlled by management program equivalent to quality assurance program defined in this specification or shall be controlled by quality assurance program of the QML manufacturer. C.4.3.6 Lot Definition Lot identification methods for JAXA qualified parts shall be defined such as material lot, manufacturing lot and inspection lot, and the definition shall be provided in QAP plan. If the definition is provided in applicable specification, the definition shall be provided and specified in quality assurance program. C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be kept to be available as needed. Either paper or electrical data may be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be isolwin if low charts of manufacturing processes inspection specification for each product type and in-process inspection specified in detail specification for schero type and in-process inspection aspecified in detail specification shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process number b) Process number c) Process number d)	C.4.3.4 Internal Audit The company shall in by existing QMS.	clude JAXA specific requirements	in the scope of i	nternal audit
 When the company outsources a part of manufacturing, tests and inspections to supplier, the supplier shall be controlled by management program equivalent to quality assurance program of the QML manufacturer. C.4.3.6 Lot Definition Lot identification methods for JAXA qualified parts shall be defined such as material lot, manufacturing tot and inspection lot, and the definition shall be provided in QAP plan. If the definition is provided in applicable specification, the definition shall be provided and specified in quality assurance program. C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be included in flow charts. The company shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process number b) Process name d) Purpose of work e) Materials f) Facilities and / or jigs and tools g) Control items (including items related to group of factors and group of results) h) Control criteria 	C.4.3.5 Quality Assurance Pr	rogram of Supplier		
 C.4.3.6 Lot Definition Lot identification methods for JAXA qualified parts shall be defined such as material lot, manufacturing lot and inspection lot, and the definition shall be provided in QAP plan. If the definition is provided in applicable specification, the definition shall be provided and specified in quality assurance program. C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be kept to be available as needed. Either paper or electrical data may be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specification for each product type and in-process inspection specified in detail specifications shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process number c) Process number d) Purpose of work e) Materials f Facilities and / or jigs and tools g) Control items (including items related to group of factors and group of results) h) Control criteria i) Frequency j) Records 	When the company of supplier, the supplier assurance program of assurance program of	outsources a part of manufacturing shall be controlled by management defined in this specification or shall of the QML manufacturer.	, tests and inspe nt program equiv be controlled by	ctions to alent to quality quality
 C.4.3.7 Manufacturing Process Control C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be kept to be available as needed. Either paper or electrical data may be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specification for each product type and in-process inspection specified in detail specifications shall bicluded in flow charts. The company shall include at least following items in flow charts: a) Process name b) Process name c) Process name d) Purpose of work e) Materials f) Facilities and / or jigs and tools g) Control criteria i) Frequency j) Records 	C.4.3.6 Lot Definition Lot identification method lot, manufacturing lot plan. If the definition provided and specifie	hods for JAXA qualified parts shall and inspection lot, and the definiti is provided in applicable specifica ed in quality assurance program.	be defined such on shall be provi tion, the definitio	as material ded in QAP n shall be
 C.4.3.7.1 Retention of Quality Records The company shall establish quality records and the quality records shall be retained for 15 years from the date of shipment of JAXA qualified parts. Production records (such as lot sheets, travelers and work sheet) and results of quality conformance inspection shall be included in quality records. The quality records shall be kept to be available as needed. Either paper or electrical data may be used for storage. C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specification for each product type and in-process inspection specified in detail specifications shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process chart c) Process name d) Purpose of work e) Materials f) Facilities and / or jigs and tools g) Control items (including items related to group of factors and group of results) h) Control criteria i) Frequency j) Records 	C.4.3.7 Manufacturing Proce	ss Control		
 C.4.3.7.2 Flow Chart The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specification for each product type and in-process inspection specified in detail specifications shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process chart c) Process name d) Purpose of work e) Materials f) Facilities and / or jigs and tools g) Control items (including items related to group of factors and group of results) h) Control criteria i) Frequency j) Records 	C.4.3.7.1 Retention of Quality The company shall retained for 15 year records (such as lo conformance inspe- shall be kept to be used for storage.	y Records I establish quality records and the ars from the date of shipment of JA ot sheets, travelers and work sheet ection shall be included in quality re available as needed. Either pape	quality records sl XA qualified part and results of q ecords. The qua r or electrical dat	nall be s. Production uality lity records a may be
 The company shall prepare and maintain flow charts presenting manufacturing processes, screening (if applied), qualification test and quality conformance inspection. Materials, procedures, process control points, control methods and environmental conditions and the document number of relating standards shall be shown in flow charts of manufacturing processes for JAXA qualified parts. Flow charts represents control plan, QC process chart, etc. and applicable generic specification for each product type and in-process inspection specified in detail specifications shall be included in flow charts. The company shall include at least following items in flow charts: a) Process number b) Process chart c) Process name d) Purpose of work e) Materials f) Facilities and / or jigs and tools g) Control items (including items related to group of factors and group of results) h) Control criteria i) Frequency j) Records 	C.4.3.7.2 Flow Chart			
j) Records	The company shall processes, screeni inspection. Materia environmental con- shown in flow char Flow charts repres specification for ea specifications shall The company shal a) Process numb b) Process numb b) Process name d) Purpose of wo e) Materials f) Facilities and / g) Control items (h) Control criteria i) Frequency	I prepare and maintain flow charts ing (if applied), qualification test ar als, procedures, process control po- ditions and the document number ts of manufacturing processes for ents control plan, QC process cha- ach product type and in-process ins I be included in flow charts. I include at least following items in her wrk f or jigs and tools (including items related to group of a	presenting manu ad quality conform oints, control met of relating standa JAXA qualified pa rt, etc. and applic spection specified flow charts:	ifacturing hance hods and ards shall be arts. cable generic d in detail
k) Department	j) Records k) Department			

	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	- C-6 -
C.4.3.7.	 Relating stand Control of Critical F If any production p JAXA qualified parts shall establish and a) Establishment and control cat b) Education and Critical process 	ards Processes rocess might have significant impa ts (hereinafter referred to as "critic maintain standards to identify and of the selection criteria and contro tegories (Including trend analysis i training for critical processes ses shall be shown in flow charts.	acts on reliability a al process"), the I control specifica ol items of critical tems)	and quality of company ılly. processes,
C.4.4	Procurement Managem	ent of Materials		
C.4.4.1	Materials The company shall a a) Following material JAXA qualified pa shall be specified Pure tin and tin a lithium, magnesid that may cause s b) Materials designat	pply following items as requirements shall not be used for manufacture arts. If usage of the materials are in detail specification. Illoy with lead content of 3% or les um, mercury, zinc, radioactive mat afety hazards. ted in generic specification for eac	nts by law and req ring, tests and ins not avoidable, th s, beryllium oxide rerials and all othe h product type.	gulation: spections of e materials s, cadmium, er materials
C.4.4.2	Material Traceability			
	The company shall se shall enable to trace t	ecure the lot traceability of JAXA q to material lot used.	ualified parts. Lo	ot traceability
C.4.5	Nonconformance dispos	sition		
C.4.5.1	Disposition System o The company shall es This process shall inc a) Anomaly or nonco b) Nonconformance c) Disposition of faile d) Failure analysis as e) Corrective action a f) Final nonconforma	f Anomaly and Nonconformance stablish disposition process for an clude following items: informance information (paragraph reporting (paragraph 3.6.2) ed parts (paragraph 3.6.2) nd cause investigation (paragraph and prevention of recurrence (para ance reporting (paragraph 3.6.2)	omaly and nonco n 3.6.1) 3.6.2) agraph 3.6.2)	nformance.
C.4.6	Failure analysis and cor	rective action		
C.4.6.1	Failure analysis When nonconforman specified in quality as	ce occurs on parts, the company s surance program.	shall conduct failu	ire analysis

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– C-7 –				
 C.4.6.2 Failure Mode and Effect Analysis The company shall conduct analysis of nonconformance expected at design phase by FMAT and FMEA (design FMEA and process FMEA) and shall develop and maintain countermeasures against the potential nonconformance. At analysis, the company shall summarize in which process (material, design, manufacturing process, test and inspection) potential defects of each element (such as materials and relating manufacturing process) composing JAXA qualified parts shall be detected and outflow of failed parts shall be prevented. FMAT example is shown in Example-2. 							
C.4.7 Packaging, Storage The company shal shipment of JAXA This packaging spe applicable specifica	 C.4.7 Packaging, Storage and Shipment The company shall establish packaging specifications applicable to transportation and shipment of JAXA qualified parts in accordance with paragraph 5. This packaging specifications shall meet requirements of this specification and applicable specification. 						
C.4.7.1 Shipment Judge At the shipment judge shipment	nent by Registered Inspector f JAXA qualified parts, registered insp ropriety by tasks specified in Appendix	ector of the com	pany shall				
C.5. Quality Assurance Pr This section provides guidelines to prepare general operation and Format of QAP plan i with the company's in	C.5. Quality Assurance Program Plan This section provides the company, which wishes to acquire certification, with the guidelines to prepare and maintain a QAP plan in accordance with paragraph C.4 and general operation and maintenance procedures. Format of QAP plan is not provided. The company may prepare QAP plan in accordance with the company's internal document proparation provision						
C.5.1 General Requirement The company, white consideration of ur supplied in accordate certification mainter	nts h wishes to acquire certification, shall queness for space-use, identification o nce with this specification and applical nance.	prepare QAP pla of JAXA qualified ble specification,	n in parts and post-				
C.5.2 Preparation of Qua	ty Assurace Program Plan						
 C.5.2.1 General Instruction a) Terms shall b) A4-size or Aused. c) QAP plan sid d) If there are prepared for may be prepered for may be prepered for provisions of figures and 	ons for Preparation of Quality Assurance be those generally used. 3-size paper shall be used. Document all be prepared for each company who ertification of multiple production lines provisions common to all production lines ared for provisions unique to individua n specified in paragraph C.5.2.6, the of referring to titles and document number documents, and also provide detailed or tables.	ce Program Plan t creating softwar o wishes to acqu , a general QAP nes, and a detail I production line. company may pro ers of applicable I descriptions of s	re shall be ire certification. plan may be QAP plan ovide an or related systems using				

JA 1	XA-QTS-2000E 5 March 2021	J A X A Parts Specification	Page	– C-8 –
	f) When affiliated QAP of the com the document sl	entities are involved, QAP of those pany. When documentation applie nall be outlined in QAP of the comp	entities shall be ed in public certifi pany.	outlined in cation is used,
C.5.2.2	Overall Structure of (Quality Assurance Program Plan		
	 Unless otherwise spea a) Cover b) Revision history c) Table of content d) Text, figures and e) Blank formats of f) Supplementary Note: Unless otherw prepared, they 	ecified, the QAP plan shall be orga ts d tables f documents and examples to fill th documents (when specified in appl rise specified, when both general a y shall have the same document str	nized as follows. e formats icable specification nd detail QAP pla ructure.	ons) ans are to be
C.5.2.3	Cover			
	 The cover shall inclua a) Document numbridentification) b) Title c) Name of quality d) Name of registe e) Name of the QM 	de at least the following items. per of the QAP plan and date of iss assurance manager red inspector IL manufacturer	ue (including rev	ision
C.5.2.3.1	Document Number	r of Quality Assurance Program Pla	an and Date of Is	sue
	The document nur provision such as	nber and control methods shall be document control provision of the (in accordance wi QML manufacture	th in-house er.
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 an for	oplicable specific e, Quality Assura	ations. nce Program
	b) Product identi c) When both ge in the followin Example 1: R A Example 2: R Q	ification such as part number may l eneral and detail QAP plans are to g formats, respectively. esistors, High Reliability, Space Us ssurance Program for esistors, Fixed, Film, High Reliabili uality Assurance Program for	be provided if neo be prepared, the se, General Plan ty, Space Use, D	cessary. titles shall be of Quality etail Plan of
C.5.2.3.3	Approval of Quality	/ Assurance Program Plan		
	QAP plan shall be assurance manage	reviewed by registered inspector a er.	and approved by	quality

	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– C-9 –				
C.5.2.4	 C.5.2.4 Revision History Revision history shall include the following items. When the QML manufacturer has their own document management provisions, the forms and guidelines of the provisions may be used. a) Revision letter b) Revision date c) Reason for revision d) Records of review by registered inspector and approval by quality assurance manager (such as signature or seal) C.5.2.5 Table of Contents 							
C.5.2.5	 Table of Contents a) A table of contents shall be provided. b) A separate list of figures and tables shall follow the table of contents. 							
C.5.2.6	 Instructions for Preparative The text of the quality items. a) Scope b) Organizational substruction of the department) c) Quality assurance d) Quality assurance d) Quality assurance e) Control of product control is required f) Management of QMS management g) Procurement matrix required for JAX h) Nonconformance i) Failure analyses which is needed j) Packaging, storative k) Change control of parative 	aration of Text y assurance program plan shall inc tructure (including relationship bet ce system ce program ction processes (processes and co ed for JAXA qualified parts) production facilities (if the facilities ent may be used) anagement of materials (supply iter A qualified parts) e disposition system and corrective actions (failure ana specifically for JAXA qualified part age and delivery of quality assurance program struction	clude at least the ween TRB and in ontrol items which are managed by ms which specific alysis and correct ts)	following aternal a specific a QMS, the c control is ive action				
C.5.3	Example Examples of tables and Example: Format C-1 F Example: Format C-2 F Example: Format C-3 C	l figures to be attached to QAP pla low Chart MAT Change Category List	in are shown in fo	ormat example.				

Example: Format C-1 Flow Chart										JAV 1:			
No.	Process Drawing	Process Name	Purpose of Work	Material	Facilities / tool	Contro Group of Factors	ol Item Group of Results	Control Criteria	Frequency	Records	Person in Charge	Related Standards	(A-QTS-2 5 March 2
													2000E 2021
													J A X A Parts Specification
													Page
													- C-10 -

		SDA RNR XX				Dispos	sition ⁽⁵⁾	-		≦
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⁾	
Lead wires	Breakages	Breakages	Open circuit	1. Core materials (frequency/anneal) (material spec. no.)	1. Handling methods (prevention of breakage)	1. Materials 2. Dimensions (lead wire diameter)	1. Visual 2. Dimensions (inspection spec. no.)	1. Terminal strength 2. Vibration resistance 3. Visual	Paragraph number of JAXA-QTS-2*** 1. 4.7.15 2. 4.7.21 3. 4.7.3	
					no.)	(000.110.)		4. Dimensions 5. Shock	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	Faits oper
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	 Voltage coefficient Life Thermal shock 	1. 4.7.25 2. 4.7.22 3. 4.7.4	
		conforming			processing	construction	3. Load			
		and/or dimensions			no.)		samples) (inspection			
		Surface oxidation			1. Handling and storage methods (process spec.		spec. no.)			

Ex	ample: Forma	at C-2 (contir	ued)								
3	Connection between head	Resistance value drift	Incomplete connection	Resistance value drift	1. Material Carbon:	1. Mixture 2. Mixing conditions	1. Material (doc. no.)	1. Current noise (all samples)	1. Voltage coefficient	1. 4.7.25 2. 4.7.15	JAXA- 15 M
	and body	(rise) Excessive current noise		(rise) Excessive current noise	specific resistance, volumetric density Silica: grain size, purity Resin: resin content, viscosity	(temperature, time) 3. Molding conditions (temperature, time) (process spec. no.)		 Voltage coefficient Resistance stability Fluidity Material use test Load selection (all samples) External selection (all samples) 	 2. Terminal strength 3. Life 4. Thermal shock 	3. 4.7.22 4. 4.7.4	QTS-2000E larch 2021
					(material spec. no.)			(Inspection spec. no.)			
					(The rest of the ta	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, incoming 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			
 (1) Design philosophy shall be listed in column ⁽⁰⁾. 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 ⁽⁹⁾. For example, the control items and document numbers specified in inspection specifications shall be listed in column ⁽⁹⁾. 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 ⁽¹⁰⁾. For example, the test and inspection items specified in applicable specifications shall be listed in column ⁽¹⁰⁾. For example, the test and inspection items specified in applicable 							Page				
(ייי) S	tructural drawir	ngs shall be a	ttached and	the tests and	I Inspections shall cor	respond to individual	elements of	the parts.			- C-12 -

		Grade \rightarrow	Grade 1	Grade 2	Grade 3	-	;
		Definition →	Changes exceeding qualification coverage Changes regarding to basic quality design of manufacturing and production Critical changes with possibility of affecting characteristics and reliablity.	Changes within qualification coverage Changes regarding to manufacturing condition, facilities, material specification Changes needed for review of evaluation data and have little possibility of affecting chacteristis and reliability.	Change within qualification coverage Changes to be considered not to affect quality of products directly Changes to be considered not to affect characteristics and reliability.		5 March 20
		Procedure →	Requalification	Prior to change, coordination with JAXA is	Changeabls by TRB review and approval	1	Ñ
Change Category	Changes	Items and points to be considered		required after TRB review →Change after JAXA approval	\rightarrow To be reported to JAXA at TRB status report all at once.		- C
ΛΑΝ	Manufacturing Worker	 Process that worker is qualified? 		Except for Grade 1 and 3	When the company is able to explain that the changes do not affect.		
	Inspection Worker				When the company is able to explain that the changes do not affect		
	Organization	 Only change of organization name? 			Change of department name		
/ACHINE Pr (fr In (fr M In In	Production Line (factory) Inspection Line (factory)	• Within one site / another site / outhouse in one site?	Line transfer to another base and new factory (new line)	Except for Grade 1 and 3		-	Pa
	Manufacturing Facility	Facility / control program?	Introduction of new facility (new specification) with different principle		Additional introduction of facilities of identical part number and specification When the company is able to explain that the changes of control program do not affect.		rts Spec
	Inspection Facility				When the company is able to explain that the facility improvement does not affect.		ific 2
	Layout Change	• Within one bulding / another building / accompanied with room transfer?	Accompanied with floor transfer and with potential effcts.		Transfer of inspection facility due to layout change.		ation
	Jigs and Tools	New / Renewal / Addition?	When new design have potential effects		Jigs and Tools renewal (identical design)		
	Molds				 Molds renewal (identical design) 		
MATERIAL	Basic Material	 Only supplier change / manufacturer change / substance and constitution change? Specification change? 	When the specified materials and constitution is changed. When the manufacturer change has nottential effects	Except for Grade 1 and 3	When only suppliers are changed and the company is able to explain that the changes do not affect.		
	Indirect Material / Secondary Material		When specifications, substances and constitution are changed.	-			P
	Packaging Material		Packaging specification change affecting quality.				lge
	Storage Area / Condition	Material or semifinished goods?	When storage condition varies greatly.		When the company is able to explain that the changes do not affect.		
IETHOD	Manufacturing Process Addition	Structure and appearance change?	 Addition of processes changing structure and appearance of products. 	Except for Grade 1 and 3			
	Inspection Process Addition	Specification change? Manufacturing condition	Addition of processes changing products specification.		Addition of inspection items and frequency.		
	Manufacturing Process Removal	change?Critical process change?	 Removal of processes changing structure and apperance of products. 				-1-3 -1-3
	Inspection Process		 Addition of processes changing products 				I

	Removal	specification.		
	Manufacturing Process Change	 Changes regarding to critical processes Changer affecting specification 		
	Inspection Process Change			
	Marking Change			
liscellneous	Manufacturing specification change	 Items regarding to product design and specification 	Except for Grade 1 and 3	
	Design Change	'		
	Circuit Change			
	Parts Structure			
	Change of Change Control Documents		★(This specification)	 Without change of contents (change of document number due to change of document architecture, and correction of erratum)
	Change of Storage of Records		0	 When storage retention is extended and storage form is changed (such as digitization).

Note 1) This list is prepared for reference. Change category list shall be prepared based on experiences and data.

Note 2) The expression "identical" in this list presents "exactly the same".

Example: identical facility: Same model number and not including later model

- C-14

APPENDIX D

QUALITY ASSURANCE MANGAER AND REGISTERED INSPECTOR

D.1	Scope	D-1
D.2	General Requirments	D-1
D.3	Tasks of the Quality Assurance Manager	D-1
D.4	Tasks of the Registered Inspector	D-1
D.5	Qualification and Selection Criteria for Registered Inspector	D-2
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-2000E 15 March 2021	J A X A Parts Specification	Page	– D-1 –			
		APPENDIX D					
	QUALITY ASSURA	NCE MANAGER AND REGISTER		ł			
D.1	Scope This appendix establishes manager and registered in	s the tasks and registration procedunspector.	ures of the quality	/ assurance			
D.2	D.2 General Requirments This appendix defines the tasks of a quality assurance manager and a registered inspector. Company shall define specific tasks of the quality assurance manager and the registered inspector in the quality assurance program plan.						
D.3	 D.3 Tasks of the Quality Assurance Manager The quality assurance manager shall be a director, who is ultimately responsible for quality assurance of the JAXA qualified parts, representing the company and shall have the responsibilities and authorities of following tasks: The company may assign assistant as necessary. a) To establish, implement, operate and manage the quality assurance program b) Responsibility for quality assurance of products c) To support and assure the performance of the registered inspector in the QML manufacturer d) TRB decision 						
D.4	 Tasks of the Registered In The registered inspector s a) To confirm the operating improvement b) To verify the maintent and application data c) To verify if the manufaction data c) To verify if the manufaction data d) To verify the manufaction data d) To verify the manufaction data e) To verify the manufaction data f) To attend and monitor g) To verify implementa h) To provide comments and directions from J i) To attend the training (held once a year) ar j) To attend all of the property implements 	spector shall be responsible for the followin tion of quality assurance program ance of quality assurance program sheets facturing history and inspection resp program and applicable specification cturing and test procedures of test alification test and quality conformation of and confirm the current status of or TRB and report to JAXA tion of the tasks involving the main s, requests, and suggestions to JA AXA to staff in the company g program for the registered inspect and educate the staff in the company processes throughout designing to s	ig tasks: and promote the n plan, detail spec sults of the produc ons, and judge pa vehicles and san ance inspection the analytical pro- ntenance of qualif XA and convey re- stor of JAXA quali y services of the JA	cifications, cts conform ass/fail of nples, and ocess fication equirements ified parts			

JA 1	XA-QTS-2000E 5 March 2021	J A X A Parts Specification	Page	– D-2 –
D.5 Qu Th a) b) c) d) e)	 alification and Selection e QML manufacturer sh Unless otherwise spect has been assigned to department involved v registered inspector sh capacities and capabe 1) The person who h structure, materia 2) The person who h objectively. When the registered assistant is desired to registered inspector. One registered inspector. One registered inspector. One registered inspector. One registered inspector. When a registered inspector. When a registered inspector. When a part of manu assistants may be en shall be clearly specir 	A Criteria for Registered Inspector nall select a registered inspector shall be cified, a registered inspector shall be an inspection and/or quality control with JAXA qualified parts for at least hall not belong to any production de ilities of registered inspector are a understands QMS and has a comp al, process, test and inspection of has authority or transferred author tructions to the relevant department as capability of judging quality of t inspector is replaced, the success to have had participated in the train ctor shall be selected for one quality s are qualified, one registered insp spector performs his/her tasks in fa facturer may designate assistants facturing, tests and inspections are ployees of the suppliers. In this of fied in quality assurance program	ased on the follow e a manager or ec department/techr 2 years. However partment. Prefer s follows: rehension of des JAXA qualified pa ity to develop JAX nt and to promote he JAXA qualifier or to be selected ing program for t ity assurance pro pector may serve abrication facilitier for the registered e outsourced to s case, tasks of eac plan.	wing criteria. Juivalent who nical r, the able ign, arts. XA's a activities d parts or the he gram. When concurrently. s or other l inspector suppliers, ch assistant
D.6 Re a) b)	egistration Procedures for A notice shall be sub 1) Initial registration 2) Change in the qu registered inform The format and prepa shall be in accordance reference between the	or the Quality Assurance Manager a mitted on any of the following occa n of application for the qualification uality assurance manager, register nation aration guidelines for the initial reg with Appendix F. Changes shal he previous contents and the curre	and the Resitetere asions: red inspector or the istration and chan I be reported usin nt contents.	ed Inspector ne nge notice ng cross-

15 March 2021		Parts Specification	Page	– E-i
		APPENDIX E		
	CERTIF	ICATION PROCEDURE	S	
		Contents		
E.1 Scope				E-1
E.2 Preparation		<u>م</u>		E-1
E.3 Establishmen	t of Quality Ass	surance Program	 De giotere d'Inone etc	E-1
E.4 Designation o	a Quality Ass	surance manager and a r	Registered inspector	ا-⊐۱ ⊿ ⊐
E.5 Certification F	Requirements			ا-⊐ 1_1
E.5.1 General I	alification			ا-∟ 1_F
E.5.2 Initial Qu	al Requirement	<u>`</u> c		
E 5 2 2 Applica	ation for Qualifi	cation Test		ا ∟ F-2
E.5.2.3 Review	of Qualification	on Test Application		E-2
E.5.2.4 Produc	tion of Test Ve	hicle and Sample		E-2
E.5.2.5 Design	ation of Witnes	\$S		E-3
E.5.2.6 Implem	nentation of Qu	alification Test		E-3
E.5.2.7 Chang	es of Qualificat	ion Test		E-3
E.5.2.8 Withdra	awal of Qualific	ation Test Application a	nd Termination of Q	ualificatio
Test	S			E-3
E.5.2.9 Applica	ation for Certific	cation		E-3
E.5.2.10 Notice	of Certification			E-3
E.5.3 Retentior	n of Qualification	ท		E-4
E.5.3.1 Genera	al Requirement	S		E-4
E.5.3.2 Implem	nentation of the	Quality Conformance Ir	nspection	E-4
E.5.3.3 Applica	ation for Qualifi	cation Retention		E-4
E.5.3.4 Review	of the Applica	tion for Qualification Ret	tention	E-4
E.5.3.5 Notice	of Approval for	Qualification Retention		E-5
E.5.4 Requalitie	cation			E-5
E.5.4.1 Genera	al Requirement	S		E-5
E.5.4.2 Applica	ation for Requa	lification lests		E-5
E.5.4.3 Applica	ation for Requa	an		E-C
E.5.5 Decimalit	nco Poport	011		
E.0 Noncomorma	псе кероп			E-0
Figure E-1. Qualific	ation Flow Cha	art		E-6
Figure E-2. Initial Q	ualification Pro	ocedures		E-7
Figure E-3. Qualific	ation Retention	n Procedures		E-8
Figure E-4. Certifica	ation Cancellat	ion Flow		E-9
Figure E-5. Noncon	formance Disp	oosition Flow (identified a	at the QML manufac	turer)E-1
Figure E-6. Noncon	formance Disp	osition Flow (identified a	at user)	E-1

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	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– E-1 –			
		APPENDIX E					
	С	ERTIFICATION PROCEDURES					
E.1	Scope This appendix defines pro with the requirements spe	cedures for certification of JAXA q cified in paragraph 3.4 of this spec	ualified parts in c	compliance			
E.2	 E.2 Preparation To acquire certification, the company shall perform the following steps prior to the submission of the Application for Qualification Test: a) Prepare the detail specification in compliance with Appendix A. b) Develop a plan to acquire certification in accordance with generic specification and applicable specifications. c) Generic specifications and generic specifications for each product type are available on the JAXA Qualified EEE Parts and Materials Database website. 						
E.3	 E.3 Establishment of Quality Assurance Program To acquire certification, the company shall establish a quality assurance program in accordance with paragraph 3.3 and Appendix C of this specification. The quality assurance program shall be documented as a Quality Assurance Program Plan (hereinafter referred as "QAP Plan"). The QAP Plan shall be prepared in accordance with the quidelines specified in paragraph C.5. 						
E.4	Designation of a Quality As To acquire certification, th registered inspector and re manager and the registere	ssurance Manager and a Registere e company shall designate a quali egister them with JAXA. The task ed inspector shall be in accordance	ed Inspector ity assurance ma s of the quality as e with paragraph	nager and ssurance s D.3 and D.4.			
E.5	Certification Procedures						
E.5.1	 E.5.1 General Requirements Certification procedures shall be in compliance with the requirements specified in generic specifications and applicable specifications. Certification is classified into the following three types. Figure E-1 depicts the qualification flow. a) Initial qualification b) Retention of qualification c) Requalification 						
E.5.2	Initial Qualification						
E.5.2.	.1 General Requirement a) Initial qualificatio paragraph 3.4.1.	ts n shall be in accordance with the	procedures speci	fied in			

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– E-2 –		
b) Deservations of initial must litigation and allowing in Figures F. 0.						
	b) Procedures of initial qualification are shown in Figure E-2.					
E.5.2.2	Application for Qualification Test					
	I o acquire certification	on, the company shall submit Appli a of samples for qualification test	cation for Qualifi	cation lest		
	prior to manufacturing of samples for qualification test. Following documents attached to qualification test application shall be submitted to					
	JAXA. Formats of the	ese documents shall be as specifi	ed in Appendix F	•		
	When omission of qu	alification tests is applicable, quali	fication test appli	cation may		
	be submitted togethe	r with certification application.				
	a) Implementation I	Plan for Qualification Test	۸)			
	c) QAP Plan (in ac	cordance with Appendix C) and Q	n) uality Manual (if c	ted and can		
	be submitted)					
	d) Registration Not	ice of Quality Assurance Manager	and Registered I	nspector		
	e) Application Data Data (if available	Sheet (preliminary) (in accordanc	e with Appendix	G) and Field		
	f) TRB operation p	rovision (at only initial qualification	and if can be su	bmitted) (in		
	accordance with	Appendix K)				
	 g) DPA manual (at only initial qualification and if can be submitted) (in accordance with Appendix C) 					
	Unless otherwise specified, qualification test application shall be submitted to JAXA					
	no later than 90 days prior to the planned starting date of sample manufacturing for					
	qualification tests.					
	when the company withdraws qualification test application prior to the starting of qualification tests and after the application submittal, the company shall submit police					
	of gualification test termination / application withdrawal in accordance with paragraph					
	F.3.4.					
E.5.2.3	Review of Qualification	on Test Application				
	JAXA shall review the	e application for qualification test a	Ind supporting do	cuments and		
	This audit includes or	uality assurance program in accol	rdance with parag	graph 3.3.6.		
	application is determi	ned acceptable. JAXA shall appro	ve the application	n and notify		
	the manufacturer of the	he approval.	· · · · · · · · · · · · · · · · · · ·	,		
	In the review of quality assurance program, JAXA shall evaluate the content and					
	implementation statu	s of the quality assurance program	based on a com	prehensive		
	examination through system review and process review. JAXA may waive a review of any part of the entire quality assurance program that is covered by ISO 9001 certification.					
E.5.2.4	Production of Test Ve	hicle and Sample				
	The company, which	wishes to acquire certification, sha	all start manufact	uring of the		
	test vehicle or the sample for the qualification test upon receiving the approved					
qualification test application from JAXA.						

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– E-3 –		
E.5.2.5	 E.5.2.5 Designation of Witness After receipt of the Qualification Test Application, JAXA shall designate a witness for the qualification test prior to on-site audit and shall notify the company of the affiliated post, title and name of the witness. 					
E.5.2.6	 Implementation of Qualification Test To acquire certification, the company shall perform the qualification test in compliance with an approved implementation plan for the qualification test. a) The JAXA witness shall verify that the qualification test is performed in compliance with the implementation plan for qualification test. b) If the JAXA witness will be able to review test results after the completion of the qualification test, the test may be performed without the JAXA witness. 					
E.5.2.7	5.2.7 Changes of Qualification Test To make a change of the qualification test, the company, which wishes to acquire certification, shall submit Change Request for Qualification Test Application (paragraph F.3.3) accompanied with a description of and reasons for the changes to JAXA.					
 E.5.2.8 Withdrawal of Qualification Test Application and Termination of Qualification Tests When the company, which wished to acquire certification, withdraws qualification test application or terminates qualification test, the company shall submit a Notice of Qualification Test Termination/ Application Withdrawal (paragraph F.3.4). In the event of nonconformance, erroneous test, or an excess of the allowable failure occurrences during qualification test, the manufacturer shall report the event to the JAXA witness. 						
E.5.2.9	Application for Certific To acquire certification submit Application for JAXA. Formats of the a) Report of Qualifi b) QAP Plan c) Detail specification d) Application Data e) Test data and re f) TRB status repo	cation on, when the qualification test is co r Certification accompanied with th ese documents shall be as specifie cation Test on Sheet cords rt (only for requalification)	ompleted, the con the following docut ad in Appendix F.	npany shall ments to		
E.5.2.10	 Notice of Certification a) JAXA shall approximate supporting documents of the specifications. b) When an Application of the specificature of the specification of the speci	n ove an Application for Certification ments meet the requirements spec ation for Certification is approved, with the approval with a Certificate. plication for Certification shall be r th the certificate.	if the application cified in the applic JAXA shall notify returned by JAXA	and cable the QML to the QML		

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– E-4 –		
	 d) JAXA lists the information on the certified manufacturing line to JAXA QML and releases the information on the Database of JAXA Qualified EEE Parts and Materials website. e) The company, which wishes to acquire certification, shall not produce the JAXA qualified parts prior to receipt of the Certificate. 					
E.5.3	Retention of Qualification	on				
E.5.3.1	 General Requirement a) The retention of a paragraph 3.4.2. b) The QML manufand change state period. c) The procedure for a paragraph 3.4.2. 	ts qualification shall be in accordance v acturer shall confirm the delivery s us of the quality assurance program or retention of qualification is show	with the procedure status of JAXA qu m within the certi n in Figure E-3.	es specified in Ialified parts fication		
E.5.3.2	 E.5.3.2 Implementation of the Quality Conformance Inspection The QML manufacturer shall report the results of the quality conformance inspection conducted within the certification period to JAXA at the TRB status report or retention of qualification application. If no JAXA qualified parts were manufactured during the certification period, although the QML manufacturer may apply the retention of qualification without conducting the quality conformance inspection, retention of qualification shall be processed in accordance with the procedures specified in paragraph 4.3.3.2 					
E.5.3.3	 Application for Qualification Retention The QML manufacturer shall submit an Application for Qualification retention accompanied with the following documents to JAXA no later than 90 days prior to the expiration date of the certification period in accordance with paragraph 3.4.2. Formats of these documents shall be in accordance with Appendix F. Submission of the Report of Quality Conformance Inspection Status is not required when already included in the TRB Status Report. a) Report of Quality Conformance Inspection Status b) QAP Plan c) TRB Status Report 1) Report of Qualification and Delivery Status 2) Report of Change Status of Quality Assurance Program (optional if the report may be substituted by revision history of QAP plan) 					
E.5.3.4	 Review of the Applica a) JAXA shall revie JAXA shall verify manufacturer's s b) The review may to ISO 9001 if th 	ation for Qualification Retention w the application and supporting c whether the results of on-site auc sites is properly reflected in accord be waived for part of the quality as e following cases apply:	locuments. In thi dit conducted at th ance with paragr ssurance progran	is review, he QML aph 3.3.6. n that refers		

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– E-5 –	
 Quality assurance structure (organization, quality assurance manager and registered inspector) is not changed. Quality assurance program is not changed. No nonconformance or imperfect procedures occur. Other matters of concern are not identified. 					
 E.5.3.5 Notice of Approval for Qualification Retention a) When the Application for Qualification retention and supporting documents are determined to meet the requirements specified in generic specification and the applicable specifications, JAXA shall approve the qualification retention and renew expiration date of certification. b) JAXA shall notify the QML manufacturer of the approval with certificate. c) A copy of the Application for Qualification Retention shall be returned by JAXA to the QML manufacturer with the certificate. d) JAXA shall update the JAXA QML. 					
E.5.4 F	Requalification				
 E.5.4.1 General Requirements Requalification shall be performed to change the qualification coverage. Requalification shall also be performed to decline parts which are included in qualification coverage. a) Requalification shall be conducted in accordance with paragraph 3.4.1 (Initial Qualification). For the purpose of requalification, "qualification" shall be interpreted as "requalification" and "certification" shall be interpreted as "recertification" 					
E.5.4.2	 Application for Requa a) The documents/ application for que descriptions unrest Test items of reconstruction Test items of reconstruction Test items of reconstruction Test items of reconstruction Test items of reconstruction Submission procession 	alification Tests forms necessary to apply for required ualification test (paragraph E.5.2.2 elated to the requalification are not qualification shall be identical to the qualification may be optimized by r When test items of quality conform a effective period of certification are l not be renewed.	alification test shi). Documents an t required. ose of qualificatio eviewing coverag nance inspection e omitted, expirat	all apply nd n. ge of change to be tion date of e the same	
E.5.4.3	 Application for Requa a) The documents/ application for ce unrelated to the b) If JAXA has already process, the QM accompanied with 	alification (paragraph E5.2). alification forms necessary to apply for requ ertification (paragraph E.5.2.9). Do requalification are not required. ady reviewed or approved data red L manufacturer may submit an ap th these data without conducting th	alification shall a ocuments and de quired for the req plication for requance he requalification	pply scriptions ualification alification tests.	

JAXA-QTS-2000E 15 March 2021		-QTS-2000E March 2021	J A X A Parts Specification	Page	– E-6 –	
c) Submission procedures for the application for recertification shall be the same as the initial qualification (paragraph E.5.2).						
E.5.5	De	clination of Certificat	ion			
	a) To decline the certification, the QML manufacturer shall submit to JAXA a request for declination in the form of a technical notice which includes items specified in paragraph E 3.8					
	b)	JAXA will notify the	QML manufacturer of the declina	tion approval in v	vriting and	
	c)	The procedure for o	Ing information from JAXA QML. declination of certification is showr	n in Figure E-4.		
E.6	Nonc	onformance Report				
	Wher manu	n anomaly and nonco Ifacturer shall dispos	onformance of JAXA qualified parts e on the basis of flow charts, Figu	s are identified, th res E-5 or E-6.	ne QML	





JAXA-QTS-2000E	JAXA		Page	_ F-9 _		
15 March 2021	Parts Specification		i dge	23		
OML manufactu	rer		ΙΔΥΔ			
			JAAA			
QML certification Maintenance of quality assurance program Manufacturing of JAXA qualified parts Quality conformance inspection TRB status report (annual) Attachment documents: • Report of qualification and delivery status • Change status report of quality assurance program						
Application for qualification reten Attachment documents: • Status report of quality conf • Quality assurance program • TRB status report	tion F ormance inspection plan	Receipt of application Qualification re Review of	etention review application for qualifica			
**No later than 90 days prior to the expiration date of certificate • Status report of quality conformance inspection • Status report of quality conformance inspection • TRB status report				nce inspection		
On-site audit *No later than 60 days prior to t	he expiration date of certif	icate	of quality assurance pro audit)	ogram		
Receipt of certificate	+ / /	Approval of qualificati	on retention			
Figure E-3. Qualification Retention Procedures						






JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-i –			
APPLICATION FORMS AND PROCEDURES						
	Contonto					
F.1 Scope			F-1			
F.2 Purposes and Applica	ation Forms		F-1			
F.3 Instructions for Prepa	rations and Submission		F-3			
F.3.1 General Require	ments		F-3			
F.3.2 Application for Q	ualification Tests		F-3			
F.3.2.1 Qualification T	est Application (Format F-1)		F-3			
F.3.2.2 Notice of Appro	oval for Qualification Test Applicat	ion (Format F-2)	F-3			
F.3.2.3 Implementation	n Plan for Qualification Test (Form	at F-3)	F-3			
F.3.2.4 Rationale for S	ample Selection and Supplementa	ary Information (F	Format F-4)			
			F-4			
F.3.2.5 Order of Tests	and Sample Size (Format F-5)		F-4			
F.3.2.6 Test Items and	I Methods (Format F-6)		F-4			
F.3.2.7 Names and Ma	ajor Specifications of Test Equipme	ent (Format F-7).	F-5			
F.3.2.8 Test Site and S	Schedule of Qualification Test (For	mat 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-5			
F.3.2.11 Application Da	ta Sheet		F-6			
F.3.2.12 Field Data			F-6			
F.3.2.13 Detail Specific	ations	Linonactor (Form	F-0			
F.3.2.14 Notice of Qual		i inspector (Form	E-7			
F 3 2 16 TRB Status Re			F-7 F-7			
F 3.3 Change Request	for Qualification Test Application	(Format F-12)	F-7			
F.3.4 Notice of Qualific	ation Test Termination / Application	on Withdrawal (Fo	ormat F-13)			
			F-7			
F.3.5 Certification App	lication		F-8			
F.3.5.1 Application for	Certification (Format F-14)		F-8			
F.3.5.2 Review Comm	ents and Judgment (Formats F-15	i, F-20)	F-9			
F.3.5.3 Correlation Ta	ble between Qualification Test Iten	ns and Developm	ent Test			
Items (Format	F-16)		F-9			
F.3.5.4 Supplementary	/ Information (Formats F-18, F-22)		F-9			
F.3.5.5 Report of Qual	ification lest (Development lest)	(Formats F-17, F	-21)F-9			
F.3.5.6 Results of Qua	alification Test (Development Test)	(Formats F-19, F	23)F-10			
F.3.5.7 Test Data and	Records		F-10			
F.3.5.8 Application Da	ta Sneet		F-10			
F.3.5.9 Detail Specific	nco Program Plan and Quality Ma	 nuol	F-10 F-10			
F.3.5.10 Quality Assurance Program Plan and Quality Manual						
F 3.6 Application for C	ertification Retention		F-11			
F.3.6.1 Application for	Certification Retention (Format F-		F-11			
F.3.6.2 Report of Qual	ity Conformance Inspection Status	(Format F-26)	F-11			
F.3.6.3 Quality Assura	nce Program Plan		F-12			

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	— F-ii —
			•
F.3.6.4 Report of Qual	ification and Delivery Status (Form	nat F-25)	F-12
F.3.6.5 Report of Qual	ity Assurance Program Update (Fo	ormat F-27)	F-13
F.3.7 TRB Status Repo	ort (Format F-28)	, ,	F-13
F.3.8 Certification Can	cellation		F-13
F.3.8.1 Advance Notic	е		F-13
F.3.8.2 Notice of Certif	ication Cancellation		F-14
F.3.8.3 Cancellation of	a Part of Certification		F-14
F.3.9 Nonconformance	information (Format F-29)		F-14
F.3.10 Certificate (Form	at F-30)		F-14
F.3.11 Available supplie	s parts list (Format F-31)		F-14
F.3.12 Postponement R	equest of Certification Retention R	eview	F-15
F.3.13 Techincal Notice	(Format F-32)		F-15
Format F-1 to Format F-32		F-16 to	F-46

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-2000E 15 March 2021	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 shall be submitted to JAXA by the companies which wish to acquire 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 company must submit to acquire certification. Either the Christian era or Japanese Calendar may be used for the date of submittal. Formats except for following documents may be arbitrarily: Formats F-1, F-10, F-12, F-13, F-14, F-24 and F-28

No.	Purpose	Form and document required for application	Format No.	No. of copies required
		a) Qualification Test Application	F-1	2
		1) Notice of Approval for Qualification Test Application	F-2	-
		b) Implementation Plan for Qualification Test	F-3 ⁽³⁾	2
		1) Rationale for sample selection and supplementary information	F-4 ⁽³⁾	2
		2) Order of tests and sample size	F-5 ⁽³⁾	2
		3) Test items and methods	F-6 ⁽³⁾	2
		4) Names and major specifications of test equipment	F-7 ⁽³⁾	2
		5) Test site and schedule	F-8 ⁽³⁾	2
		6) Test site and guide map	F-9 ⁽³⁾	2
	Application for	c) Quality Assurance Program Plan and Quality Manual ⁽⁴⁾	_	2
1	qualification test/	 Application Data Sheet (preliminary) and Field Data 	—	2
		e) Detail Specification	-	2
		 f) Registration Notice of Quality Assurance Manager/Registered Inspector 	F-10	1
		 g) TRB Operation Provision (only for initial qualification) 	—	1
		h) TRB Status Report (only for requalification)	F-28 ⁽³⁾	1
		1) Status Report of Certification and Delivery	F-25 ⁽³⁾	1
		2) Status Report of Quality Conformance Inspection	F-26 ⁽³⁾	1
	3) Change Status Report of Quality Assurance Program	F-27 ⁽³⁾	1	
		4) Nonconformance Information	F-29 ⁽³⁾	1
		5) Available supplies parts list (if changed)	F-31 ⁽³⁾	1
2	Change of Qualification Test Application	Change Request for Qualification Test Application	F-12	2
3	Application withdrawal or Termination of qualification tests	Notice of Qualification Test Termination / Application Withdrawal	F-13	2

JAXA-QTS-2000E	JAXA	Dama	ГО
15 March 2021	Parts Specification	Page	— F-2 —

No.	Purpose	Form and document required for application	Format	No. of copies
		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
		3) Supplementary information	F-18 ⁽¹⁾ F-22 ⁽²⁾	2
		b) Report of Qualification Test (Development Test)	F-17 ⁽¹⁾ F-21 ⁽³⁾	2
		1) Results of Qualification Test (Development Test)	F-19 ⁽¹⁾ F-23 ⁽²⁾	2
	Application for	2) Test Data and Records	-	1
4	certification (recertification)	c) Quality Assurance Program Plan and Quality Manual ⁽⁴⁾	-	2
		d) Detail Specification	-	2
		e) Application Data Sheet	_	2
		f) TRB Status Report (only for requalification)	F-28	1
		1) Status Report of Certification and Delivery	F-25 ⁽³⁾	1
	2) Status R Inspection	2) Status Report of Quality Conformance Inspection	F-26 ⁽³⁾	1
		3) Change Status Report of Quality Assurance Program	F-27 ⁽³⁾	1
		4) Nonconformance Information	F-29 ⁽³⁾	1
		g) Available supplies parts list (if changed)	F-31 ⁽³⁾	2
		a) Application for Qualification Retention	F-24	2
		b) Quality Assurance Program Plan and Quality Manual ⁽⁴⁾	-	2
		c) TRB Status Report	F-28	1
	Application for	1) Status Report of Certification and Delivery	F-25 ⁽³⁾	1
5	qualification retention	2) Status Report of Quality Conformance Inspection	F-26 ⁽³⁾	1
		 Change Status Report of Quality Assurance Program 	F-27 ⁽³⁾	1
		4) Nonconformance information	F-29 ⁽³⁾	1
		5) Available supplies parts list (if changed)	F-31 ⁽³⁾	1
		a) TRB Status Report	F-28	1
		1) Status Report of Certification and Delivery	F-25 ⁽³⁾	1
		2) Status Report of Quality Conformance Inspection	F-26 ⁽³⁾	1
6	TRB Status Report	3) Change Status Report of Quality Assurance Program	F-27 ⁽³⁾	1
		4) Nonconformance Information	F-29 ⁽³⁾	1
		5) Available supplies parts list (if changed)	F-31 ⁽³⁾	1
		b) Quality Assurance Program Plan and Quality Manual ⁽⁴⁾		1
7	Declination of certification	Declination Notice of Certification	_	1

Table F-1. 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.
 ⁽³⁾ Arbitrarily format may be used.

⁽⁴⁾ As for quality manual, when the quality manual is cited and can be submitted.

	JAXA 15 N	-QTS-2000E /arch 2021	J A X A Parts Specification	Page	– F-3 –	
F.3	F.3 Instructions for Preparations and Submission					
F.3.1	Ge a) b) c) d) Ap a) b) c)	neral Requirements Unless otherwise s processing softwar Application forms s properly. If multiple copies at accordingly. The original shall be olication for Qualifica Due date for subm accordance with pr Two copies (1 for o documents listed ir When the applicatio application form as When the qualifica duplicate of the app	pecified, application forms shall be e. hall be printed on A4 or A3 size pa re submitted, original and duplicate ear a corporate seal and the duplicat ation Test ission of the Application for Qualifi rovision of certification application original, 1 for duplicate) shall be su in Table F-1 shall be submitted with on is approved, JAXA will return to signing the Qualification Test Appro- tion test application is denied, JAX plication form.	e prepared using aper, filed and inc e shall be identifie te is a photocopy cation Test shall (paragraph E.5.2 ibmitted for each the application. the company a di oval Number (JA) (A will return to th	word- dexed ed of the original. be in .2). form. The uplicate of the (A-QTR-xxx). ie company a	
F.3.2.1	1 () 7 2 2 2 2 2 2 2 2 2 2 2 2 1 1 2 2 1 1 2 2 1 2 1 2 2 1 2 2 2 2 1 2	Qualification Test App This document shall I contain the following a) Document numb b) Date: Date (dd/n c) Applicant: Unles company name, d) Name of parts (p the applicable de company name, d) Name of parts (p the applicable de company name, d) Name of parts (p the applicable de company name, d) Number of all ap production sites d) Number and title program plan for Note: For requalificati	blication (Format F-1) be a cover page for the Qualification information. ber: Document number assigned by nm/yyyy) the application is submitt s otherwise specified, the represent address and telephone number). broducts): Description of the comme etail specifications ent number of applicable specifications ent number of applicable specifications contest, and addresses of all factor of quality assurance program plant the JAXA qualified parts. on test, "qualification test" shall be iter, other relating formats shall be in	on Test Application y the company ed ntative's name (in non parts/material tion: Titles and de ries involved in th n: Whole of qualition replaced with "read	on and shall ncluding the ls specified in ocument e production. ty assurance qualification me way.	
F.3.2.2	2 N S	Notice of Approval fo Since this document	r Qualification Test Application (Fo will be attached by JAXA, the com	rmat F-2) pany does not ha	ave to submit.	
F.3.2.3	 Implementation Plan for Qualification Test (Format F-3) This document shall contain the following information: a) Name of parts (products): Description of the common parts/materials specified in the applicable detail specifications 					

JAX	(A-QTS-2000E	JAXA			
15	5 March 2021	Parts Specification	Page	– F-4 –	
	 b) Part number: A The individual i omitted. 	Il part numbers specified in the app dentification and description that fol	licable detail spe lows the part typ	cifications. e may be	
	 c) Qualification coverage: Qualification coverage specified in the applicable detail specifications (If the space is insufficient, the company may use a separate speets and provide the qualification coverage in a tabular format.) 				
	d) Production site	s: Name and address of all factories	s involved in the	oroduction	
	e) Specification n	umber: Identification of all applicable	e specifications		
	f) Specification tit specification nu	le: Title of all applicable specificatio Imber	ns associated wi	th	
	g) Deviations from "None" if there	the requirements of specifications a is no deviation.	and standards, an	nong others:	
F.3.2.4	Rationale for Sampl	e Selection and Supplementary Info	ormation (Format	F-4)	
	a) Purpose (and for regularity of the second	contain the following information: ocus points / background): For requ shall be described.	alification, purpo	se of	
	b) Rationale for sa specified in the	ample selection: Refer to sample re applicable specifications.	quirements for qu	ualification	
	c) Rationale for waiver of tests: Provide on the basis of the technical rationale if a tests is waived. "None" if no test is waived.				
	 Manufacturing conditions: Title of documents which define the manufacturing conditions 				
	 Example: QMLP-001 Quality Assurance Program Plan (12 June, 1998) e) Others: Other supplementary information (including operational methods of quality assurance program, when the JAXA qualified parts with the existing 				
	 f) Attachments: T documents to b 	itle of attached documents, if any documents if any documents if any documents if no documents if no documents and the submitted is a submitted in the submitte	ocuments (excep	ot for	
	g) Contact information of the generation of the	ation: Contact information including le of the applicable common parts/r	the registered in naterials	spector or the	
F.3.2.5	Order of Tests and S	Sample Size (Format F-5)			
	 This document shall items specified in th a) Order of tests: b) Test group: As c) Paragraph num d) Test item: As d e) Samples size: A f) Allowable num 	contain the following information re e applicable specifications: Order of tests specified in numbers defined in the applicable specification ber: As defined in the applicable specification As defined in the applicable specification oper of defectives: As defined in the applicable specification	egarding qualifica ons pecifications ns eations applicable specifi	ition test	
				-	
F.3.2.6	This document shall	ioas (Format F-6) contain the following information in	associated with	paragraph	
	F.3.2.5:			paragraph	
	a) Order of tests:b) Test items: As	Order of tests specified in numbers defined in the applicable specification	ons		

				-
JAX 15	(A-QTS-2000E 5 March 2021	J A X A Parts Specification	Page	– F-5 –
	 c) Conditions and r (Corresponding) d) Specified test me (Corresponding) e) Actual test methors ame as that definition 	equirements: As defined in the ap item number of the applicable spe ethod: As defined in the applicable item number of the applicable spe od: Describe "Same as the left" if t fined in the applicable specification	plicable specifica cifications may be specifications cifications may be he actual test me ns.	tions e shown) e shown) ethod is the
F.3.2.7	Names and Major Sp	ecifications of Test Equipment (Fo	rmat F-7)	
	 This document shall of a) Name of test equiparts b) Relevant test iter c) Major specification performances and d) Calibration statu period of calibration This document may be 	contain the following information u uipment: Name of test equipment t m: Test items to be conducted utili on: Equipment manufacturer's nar ad accuracy at a minimum s: Organization that conducted the tion be omitted when quality assurance	tilized during qua to be utilized ized to the test ed ne, specifications e calibration and t program plan ca	lification test: quipment s, the effective in be used.
F.3.2.8	Test Site and Schedu	le of Qualification Test (Format F-	8)	
	 This document shall of manufacturing of sam a) Order of tests: C b) Test item: Name c) Year and months accompanied wind d) Test site: Organie e) Planned start da manufacturing of f) Planned test componete 	contain the information of test site pples and qualification test as follo 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- izational name of internal and/or each te of sample manufacturing: Date f the samples will start npletion date: Date (dd/mm/yyyy) t	and schedule of ws: he applicable spe nd completion dat onth xternal test sites (dd/mm/yyyy) the the test is schedu	ecification tes by arrow e
F.3.2.9	Test Site and Guide N	Map (Format F-9)		
E 3 2 10	 This document shall a multiple test sites, fol document. a) Name of test site b) Address of the test c) Telephone numb d) Contact person 	contain the following information fo lowing information for each test sit est site per of the test site	or test site. Wher	n there are ed in this
F.3.2.10	Quality Assurance Pr Quality Assurance Pr When quality manual shall be attached. When quality manual shall disclose the qua	ogram Plan and Quality Manual ogram Plan shall be prepared in a is referred in quality assurance pr is not to be attached due to secur ality manual at quality assurance p	ccordance with A ogram plan, qual ity reasons, the c rogram review.	Appendix C. lity manual company

JAX 15	(A-QTS-2000E 5 March 2021	J A X A Parts Specification	Page	– F-6 –	
F.3.2.11	Application Data She Application Data She	et et shall be prepared in accordance	e with Appendix (6.	
F.3.2.12	 Field Data Field data shall be prand in an identical or system as the production of a minimal various test results b) Actual field failur c) Nonconformance d) Data such as implication 	Il be prepared for a product manufactured on the same production lines tical or similar design, production process and quality assurance products to be certified. The field data shall include the following a minimum and shall be documented in any appropriate format. est results d failure rate rmance information of shipped products a simprovement history			
F.3.2.13	Detail Specifications Detail specifications shall be prepared in accordance with Appendix A. The document number of detail specifications are assigned by JAXA in accordance with paragraph A.2.2.2. However, the company shall establish the detail specifications and shall assign the document number when detail specifications are attached to qualification test application.				
F.3.2.14	 Notice of Quality Assisted Notice of Quality Assisted register or change the notice shall contain the notice of the notice shall contain the notice shall contain the notice of the notice shall contain the notice of the notice shall contain the notice shall conta	urance Manager/Registered Inspe- urance Manager/Registered Inspe- e quality assurance manager and/one following information: her: Document number assigned by nm/yyyy) the notice is submit of representative of the company the quality assurance manager or liation of the quality assurance manager or fibe quality assurance manager of the quality assurance manager assigned: JAXA qualified parts as ager or registered inspector (gener mpany: Career of the quality assurance mpany: Date to change the quality assurance manage: Rationale to change the quality assurance manage: Rationale to change the quality assurance manage: Rationale to change the quality assurance manager of the quality assuranc	ctor (Format F-10 ector shall be sub- or registered insp y the manufacture or quality assura registered inspec- inager or register r or registered ins quality assurance nce manager or r assurance manager al assignment ma rance manager or lity assurance ma nce manager or r	D) mitted to bector. The er ince manager ctor ed inspector, spector e manager or egistered ger or ality ay be r registered anager or registered	

JAک ۱؛	(A-QTS-2000E 5 March 2021	J A X A Parts Specification	Page	– F-7 –
 n) Predecessor: Name of the previous quality assurance manager or registered inspector One of the irrelevant job titles in parentheses (quality assurance manager or registered inspector) shall be struck out. Whenever changes are made in the affiliation, job title or contact information, the manufacturer shall submit a technical notice documenting the changes to JAXA. 				
F.3.2.15	TRB Operation Provis TRB operation provis attached to qualificati	sion ion shall be prepared in accordanc on test application.	ce with Appendix	K and
F.3.2.16	 F.3.2.16 TRB Status Report TRB status report, of which reporting period shall be from the previous TRB status report to requalification test application, shall be prepared in accordance with Appendix K and shall be submitted. When the submission due date of TRB status report, which is to be submitted annually after the date of certification, is within requalification period, the company does not have to submit the TRB status report, since the TRB status report is already submitted at requalification application. 			
F.3.3 C If o d a b c c f f f f f f f f f f f	 Change Request for Qualificant change(s) of the Qualification Test locument (1 original and a) Document number Date: Date (dd/mm Date: Date (dd/mm Applicant: Unless of name, address and a) Name of parts (prothe detail specificate) Production site: Namanufacturing. Document number of assurance program Approval number of XXX). Changes and ration (Separate sheets name this request is approver 	alification Test Application (Formal f test schedule or test methods are Application, the company shall sub d 1 duplicate). Document number assigned by th /yyyy) this document is submitted otherwise specified, the represent d telephone number ducts): Description of the common tion and title of quality assurance prog n plan for the concerned parts. If qualification test application: App nale for change: Changes and ration hay be used for the details, if nece ed, JAXA will return the duplicate of	t F-12) e necessary follow omit two copies of the manufacturer ative's name with n parts/materials e ories involved in gram plan: Whole proval number (J <i>A</i> onale to change to ssary).	ving approval this the company specified in of quality AXA-QTR- the test the company.
F.3.4 N S A fo a	Notice of Qualification T Jpon withdrawing the ap hall submit to JAXA two opplication Withdrawal (plowing information: a) Document number	Test Termination / Application With oplication or termination of the qual o copies of the Notice of Qualification 1 for original, 1 for duplicate). This to Document number assigned by the	drawal (Format F ification test, the o on Test Terminati document shall o he company	-13) company on/ contain the

r				
JA	XA-QTS-2000E	JAXA Desta Orașificațian	Page	– F-8 –
	15 March 2021	Parts Specification	5	
	b) Date: Date (dd/mmc) Applicant: Unless of a contract of the contract of the	/yyyy) this document is submitted otherwise specified, the representa	ative's name with	the company
	 d) Name of parts (pro the detail specifica) 	ducts): Description of the commor tion	n parts/materials	specified in
	e) Production site: Na shown.	me of all companies involved in th	e manufacturing	shall be
	f) Document number assurance program	Document number and title of quality assurance program plan: Whole of quality assurance program plan for the concerned parts.		
	 g) Approval number of number shall be sh (JAXA-QTR-XXX). 	Approval number of Qualification Test Application (if already approved): Approval number shall be shown, only if the qualification test application is already approved (JAXA-QTR-XXX).		
	h) Date of approval: Date of approved. (if alread	Date of approval: Date (dd/mm/yyyy) the application for qualification test was approved.(if already approved)		
	i) Reason for Termin the test. (Separate	Reason for Termination / Application Withdrawal: Reason to cancel or terminate the test. (Separate sheets may be used for the details, if required).		
	 j) Test report (if the test is terminated): Report of test results conducted until the termination of the tests (Separate sheets may be used for the details, if required). 			
	If this notice is accepted	, JAXA will return the duplicate of the	his document to the	ne company.
	When qualification test a (1 original and 1 duplication	application is cancelled, two copies	of qualification te	st application
			npany.	
F.3.5	Certification Application			
	1 he company shall subn 1 duplicate) to JAXA	nit two copies of the documents giv	ren in Table F-1 (*	1 original and
	When the certification ap company accompanied	oplication is approved, JAXA shall s with the duplicate of the application	send Certificate to 1.	o the
F.3.5.1	Application for Certifi	cation (Format F-14)		
	This document shall	contain the following information:		
	a) Document numb	er: Document number assigned by	y the manufacture	ər
	c) Applicant: Unles	s otherwise specified, the represer	ed ntative's name wi	th the
	company name, d) Name of parts (r	address and telephone number products): Description of the comm	ion parts/material	s specified in
	the detail specifi	cation	tion: Titles and d	
	numbers of the a	applicable specifications		beament
	f) Production site:	Names and addresses of all faciliti	es involving the p	
	g) I itle and docume assurance progr	ent number of quality assurance pl am plan for parts concerned	rogram pian: All c	quality
	Note: For requalificati Hereinafter, "re	on, "qualification" shall be replaced qualification" shall be used for othe	l with "requalificat r related forms.	ion".

JA> 15	JAXA-QTS-2000EJAXA15 March 2021Parts Specification			
F.3.5.2	Review Comments an Since this document this document.	nd Judgment (Formats F-15, F-20) will be attached by JAXA, the com) pany does not ha	ave to submit
F.3.5.3	Correlation Table bett (Format F-16) This document represented test and shall contain a) Qualification test for requirement a b) Development test c) Review commented	ween Qualification Test Items and sents that development test meets the following information: titems: Group, order and items of and test method st items: Group, order of tests and pa ts and judgment on qualification te	Development Tes requirements of the tests, paragra aragraph number est results: Left bl	st Items qualification aph number of test method lank.
F.3.5.4	 Supplementary Inform This document shall of a) Supplementary of F-18): This docu JAXA-developed b) Manufacturing conditions of tes Example: QMLP c) Failure rate level parts or if applicated d) Others: Other supplements e) Attachment: Title submitted) ("Normative of the quality assumption of the supplement of the quality assumption of the quality assu	nation (Formats F-18, F-22) contain the following information: explanations to development test (ment shall supplement the informat parts. onditions: Title of documents which t samples. -001 Quality Assurance Program (applicable only to Format F-22): able within the company. upplementary information pertaining es of attached documents (except ne" if no documents are attached). ion (pertaining to this application): ance manager or registered inspect	applicable only to ation that the prod h define the manu- n Plan (12 June, 7 For established r g to the application for documents to Contact information ctor of the applica	 Format ducts are ufacturing 1998) reliability on be tion including able common
F.3.5.5	 Report of Qualification Test (Development Test) (Formats F-17, F-21) This document shall be a cover page for the Results of Qualification Test (Development Test) and shall contain the following information. If whole of the qualification test are omitted, the company does not have to prepare this document. a) Name of parts (products): Description of the common parts/materials 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) Production sites: Name and address of all factories involved in the production. d) Contact information (pertaining to the applicable product): Contact information including address and department name of engineering, assurance and sales departments e) Title and document number of applicable specifications and standard: Titles and document number of the applicable specifications and standards of the common parts/materials f) Qualification coverage: Qualification coverage specified in the applicable specification which reflects the qualification test results 			

JA> 15	JAXA-QTS-2000EJAXA15 March 2021Parts Specification			
	 g) Approval numbe the Developmen h) Test site i) Test period j) Witness of qualif 	r of the Qualification Test Applicat t Test) ication test (Development officer):	ion (Implementat Left blank.	ion Plan for
F.3.5.6	 Results of Qualification This document integrin information: a) Order of tests: T b) Test item: Test it item number of a c) Conditions and r applicable specifications matched by the specifications matched by the specification of the spec	on Test (Development Test) (Forma ates results of qualification test an he order of tests in numbers tems specified in the applicable sp applicable specifications may be sh equirements: Conditions and requ fications (Corresponding item num ay be shown) nmary of test results. Use a separ witness of qualification test (develop	ats F-19, F-23) od shall contain th becifications (Corr hown) irements specifie ber of applicable rate sheet(s), if n oment test supervi	ne following responding ed in the ecessary isor): Left
F.3.5.7	Test Data and Records This document consists of organized data and records from the qualification test prepared to verify the test results specified in paragraph F.3.5.6. The company shall also submit records to show that test conditions satisfied requirements of applicable specifications.			
F.3.5.8	Application Data She The Application Data	et Sheet shall be prepared in accord	lance with Appen	ıdix G.
F.3.5.9	Detail Specification Latest detail specification, which was established by the company, shall be attached.			
F.3.5.10	Quality Assurance Program Plan and Quality Manual Latest quality assurance program plan shall be attached. When the plan is not changed, attachment may be omitted. When quality manual is referred in quality assurance program plan, the quality manual shall be attached. If quality manual cannot be attached due to security reasons, the company shall disclose the quality manual at quality assurance program review.			
F.3.5.11	TRB Status Report TRB status report, of certification application Appendix K.	which reporting period is from qua	alification test app d in accordance	blication to with

J	JAXA-QTS-2000E JAXA 15 March 2021 Parts Specification Page - F-11 -				– F-11 –
F.3.6	Appli	ication for Certificat	tion Retention		
	a)	This application sh this specification.	all be submitted by the due date s	pecified in paragi	raph 3.4.2 of
	b)	Two copies of docu 1 for duplicate).	iments mentioned in Table F-1 sh	all be submitted (1 for original,
	c)	If the application is accompanied with	approved, JAXA shall send Certif the duplicate of the application.	icate to the comp	any
F.3.6.1	Ар	plication for Certifie	cation Retention (Format F-24)		
	Th	is document shall I	be a cover page for the Application	n for Certification	Retention
	an a)	d shall contain the	following information.	withe OML manuf	acturor
	a) b)	Document ridino Date: Date (dd/n	m/vvvv) the application is submitt	ed	acturer
	c)	Applicant: Unles	s otherwise specified, the represe	ntative's name wi	th the
		company name,	address and telephone number		
	d)	Name of parts (p	products): Name of the JAXA quali	fied parts specifie	ed in the
	 aetail specifications e) Title and document number of the applicable specifications: Title and document number of the applicable specifications 				
	f)	Production site:	Name and address of all factories	involved in the p	roduction
	g)	Title and docume assurance program	ent number of quality assurance p am plan for the JAXA qualified pa	rogram plan: Who	ole of quality
	h)	Effective period certificate.	of current certification: Expiration of	date specified in t	he current
	i)	Current certificat	ion number (date)		
	j)	Qualification rete	ention number: Left blank		
	к) I)	Approval seal of	ION retention: Left blank		
	., D.				
F.3.6.2	КЕ	port of Quality Cor	formance inspection Status (Form	at F-26)	oformanaa
	ins	spection conducted	within the effective period of certi	fication or quality co	conformance
	ins	spection at restartin	g production and contain the follo	wing information.	This
	do	cument shall inclue	le following information. This doc	ument shall inclue	de results of
	qu	ality conformance i	nspection at manufacturing and re	esults of initial fail	ure
	pre	evention (screening	J).		
	le o)	est reports prepared	by the company may be used as	this document.	posified in the
	a)	detail specificatio	ons	quaimed parts sp	
	b)	Part number: Pa identification and	rt numbers specified in the detail s I description that follows the part t	specifications. Thy pe may be omitted and the second second second second second second second second second se	ne individual ed.
	c)	Document numb	er of detail specification	han af 1	
	d)	Manufacturing co define the manuf Plan)	acturing conditions of test sample	iber of document s (Quality Assura	s which ance Program
		Example: QMLP	-001 Quality Assurance Program	n Plan (12 June, 1	1998)
L					

JAXA	JAXA-QTS-2000E JAXA				
15	March 2021	Parts Specification	Page	– F-12 –	
	e) Name of quality	assurance manager			
	f) Name of register	red inspector			
	a) Inspection items				
	h) Criteria of pass/f	ail			
	i) Sample size (all	an awable number of defectives)			
	i) Inspection result	s: Number of defectives, the maxim	mum minimum a	nd average	
	values of measu	rements shall be reported. Non-n	umerical test res	ults shall he	
	briefly described	riefly described.			
	k) Inspection period	nspection period			
) Judament on ins	Judgment on inspection			
	m) Lot number (pro	Lot number (production date)			
F.3.6.3	Quality Assurance Pr	ogram Plan			
-	The Quality Assurance	ce Program Plan shall be attached	if the plan has be	een changed.	
				-	
F.3.6.4	Report of Qualificatio	n and Delivery Status (Format F-2	5)		
-	This document shall	provide production status of the JA	XA qualified part	ts and shall	
	contain the following	information.			
	When items a), b), n)	, o) and p) are shown, the formats	controlled by the	e company	
	may be used.				
	a) Name of parts (p	products): Name of parts (products) specified in the	detail	
	specifications				
	b) Part number: Pa	rt numbers specified in the detail s	specifications. Th	ne individual	
	identification and	d description that follows the part t	ype may be omitt	ed.	
	c) QML manufactu	rer: Name of the QML manufacture	er		
	d) Detail specificati	on number: Document number and	d established dat	e of the detail	
	specification				
	e) Qualification cov	verage: Qualification coverage defi	ned in the applica	able	
	specifications				
1	f) Production sites	: Name and address of all factories	s involved in the p	production	
	g) Manufacturing c	onditions: Title and document num	ber of document	(s) which	
	define the manu	facturing conditions (Quality Assur	ance Program Pl	lan) shall be	
	reported.				
	All conditions of	all shipped products applied durin	g the production	period shall	
	be described. I	raceability between delivered prod	lucts and the app	lied	
	manufacturing c	onditions is not required.			
	Example: QIVILP	-001 Quality Assurance Program	n Plan (12 June, 7	1998)	
	n) Current certificat				
) Effective period	of current certification: Expiration of	ate specified in t	ine current	
		al for Certification Retention			
) Name of quality	assurance manager			
	k) Name of register	red inspector			
) Name of parts: N	vame or parts, if the parts are deliv	rerea	a in dividue d	
	in) Part number: Pa	In numbers specified in the detail s	specifications. If		
		a description that follows the part ty	ype may be omitt	ea.	
1					

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-13 –
	 o) Customer: Name delivery only) p) Shipment date: I q) Note: If any remainded 	e of the company to which product Date of shipment arks.	s are delivered (r	primary
F.3.6.5	 q) Protect in differential of the contain the following quality assurance program for the TRB contain the following quality assurance program Plan may be communicated via a fassurance Program for the cond of the part number: Part	rt of Quality Assurance Program (F provide control and maintenance s status report or application for cer information. The documents, whic ogram, such as revision history of t e used in place of this report. Whe revision history alone, a copy of up Plan shall be attached. products): Name of parts (products rt numbers specified in the detail s d description that follows the part ty npany ent number of detail specification s): Name and address of the produ- ber and established date of Quality f ent and seal of quality assurance n nange(s): The following information all be provided. number change date ntents and reason	Format F-27) status of the quali tification retention ch represents cha the Quality Assur en changes are n odated pages in t odated pages in t specifications. The ype may be omitt action site(s) Assurance Prog nanager n on change withi	ty assurance n and shall ange of ance ot sufficiently he Quality ail ne individual red ram Plan n report
F.3.7	 TRB Status Report (For This document is used to document shall be a cow documents to JAXA anni information. a) Subject of report: N subjected common b) Reporting period Example: 5 March, c) Report item: Check any. 	rmat F-28) o report TRB status annually after a rer sheet for a TRB activity report s nually from the certification date and lame, detail specification number, parts/materials. 2019 to 4 March, 2020 the box of applicable item(s). Add at	acquiring certifica ubmitted with rela d shall contain the and certification ttached document	tion. This ated following number of number, if
F.3.8	Certification Declination	1		
F.3.8.1	 F.3.8 Certification Declination F.3.8.1 Advance Notice The QML manufacturer shall provide the following information no later than 120 days prior to the last date of final order in the form of technical notice and notify JAXA of certification declination. 		nan 120 days fy JAXA of	

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-14 –
	 a) Products for decl 1) Name of the 2) Detail specif 3) Current certi 4) Name of the b) Reason for declin c) Last date of the f d) Alternative produ e) Contact informat f) Quality assurance declination 	ination JAXA qualified parts ication number fication number and date QML manufacturer nation inal order icts ion e system for already shipped prod	lucts after certific	ation
F.3.8.2	Notice of Certification After the last date of the information in the form a) Results of final ord b) Planned declination After the final shipme possible.	n Declination final order, the QML manufacturer m of technical notice and submit to der on date of certification ent, TRB final report shall be submi	shall provide folle) JAXA. itted to JAXA as s	owing soon as
F.3.8.3	Declination of a Part When the QML manu shall be in accordance accordance with para Effective period of ce application is approve	of Certification facturer declines a part of certifica we with paragraph 3.4.6 and requal agraph 3.4.3. rtification is not changed even thoused.	ition coverage, th ification shall be ugh the requalific	e certification in ation
F.3.9	 Nonconformance inform This document shall contain a) Date: Date of noncomb b) Part number: Part r c) Brief description of d) Title and number or technical notice or 	nation (Format F-29) tain the following information. onformance occurrence of JAXA q number of nonconforming parts nonconformance f related document(s): Title and do nonconformance report submitted	jualified parts or s ocument identifica to JAXA.	similar parts ation of a
F.3.10	Certificate (Format F-30 Since this document will retention or requalification)) be prepared by JAXA when initial on is completed, the company does	qualification, qual not have to subr	ification nit.
F.3.11	Available supplies parts This document is prepar supplied by the QML ma This document shall con the available supplies pa When any parts are rem indicated by strike-throug a) Document number:	e list (Format F-31) ed for JAXA to recognize JAXA quanufacturer at the time of initial qualutain following information. When the arts list separately, the list may be u oved from the available supplies parts gh. Designated by the QML manufactor	alified parts, whic lification or TRB s ne QML manufact used. arts list, the parts turer	h can be tatus report. turer controls shall be

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-15 –
	 b) Date: Submittal dat c) Name of parts (production sites: N d) Name of the QML r e) Production sites: N f) Document number g) Effective period of a h) Part number: Parts i) Drawing number / i only by part number j) Specification outlin 	 Date: Submittal date of list Name of parts (products): Name of parts (products) specified in detail specification Name of the QML manufacturer Production sites: Name of manufacturer Document number and title of detail specification Effective period of certification Part number: Parts number specified in detail specification Drawing number / identification number: If individual product cannot be identified only by part number Specification outline: If specification is not identified by part number 		
F.3.12	 3.12 Postponement Request of Qualification Retention Review When qualification retention review is postponed, the QML manufacturer shall notify JAXA of following items in the form of technical notice. a) Concerned JAXA qualified parts Name of JAXA qualified parts Document number of detail specification Document number and date of quality assurance program plan Current certification number and effective period of current certification The QML manufacturer b) Reason for postponement of qualification retention review 			all notify ion
F.3.13	Techincal Notice (Forma This format is an examp	at F-32) le used for submittal of technical no	otice to JAXA.	

QL	JALIFICATION TEST APPLICATION	l	
	Do Da	cument No. te:	
(President's name) President Japan Aerospace Explorat	ion Agency		
	App	olicant	
	Address: Company: Representative:		seal
	Representative.		Sear
Per paragraph 3.4.1.1 of qualification tests as specif	JAXA QTS-2000, I hereby reques	t approval to	conduct
Per paragraph 3.4.1.1 of qualification tests as specif Name of parts (products)	JAXA QTS-2000, I hereby reques fied in the Implementation Plan for Qu	at approval to alification Test	conduct
Per paragraph 3.4.1.1 of qualification tests as specif Name of parts (products)	Telephone number: JAXA QTS-2000, I hereby reques fied in the Implementation Plan for Qu Title and document number applicable specification	of	conduct
Per paragraph 3.4.1.1 of qualification tests as specif Name of parts (products) Production sites	Telephone number: JAXA QTS-2000, I hereby request fied in the Implementation Plan for Que Title and document number applicable specification Document number and title of quality assurance program plan	of	conduct
Per paragraph 3.4.1.1 of qualification tests as specif Name of parts (products) Production sites	Telephone number: JAXA QTS-2000, I hereby request fied in the Implementation Plan for Que Title and document number applicable specification Document number and title of quality assurance program plan	of	

JAXA-QTS-2000E 15 March 2021	J Parts S	A X A Specification	Page	– F-17 –
		(Tally impres	sion of original a	nd duplicate)
Review comments a	nd judgment			
The application is hereb	y approved / disap	proved ⁽¹⁾ .		
Approval number	Date of approval (dd/mm/yyyy)	JAXA presid	lent's seal for appro	oval
(1): Unnecessary word shal	be erased with do	ouble lines.		
Format F-2				

IMPLEMENTATION PLAN FOR QUALIFICATION TESTS

Name of parts (products)	Part number	Qualification coverage	Production site(s)

1. Applicable specifications and standards

1.1 Titles and document numbers

Specification number	Specification title

Format F-3

JAXA-QTS-2000E 15 March 2021	J Parts S	A X A pecification	Page	– F-19
2. Purpose (and focus	points / background)		
3 Rationale for sample	e selection and supr	plementary informat	ion	
3.1 Rationale for sa	ample selection			
3.2 Rationale for w	aiver of test(s)			
3.3. Manufacturing	conditions			
0.0 Manufacturing				
2.4 Others				
3.4 Others				
3.5 Attachment(s)				
Contact information				
Company	Department	Name	Telephone	number
rmat F-4			I	

JAXA-QTS-2000E	JAXA	Dama	Г 00
15 March 2021	Parts Specification	Page	– F-20 –

Test	Test	Qualificatio	on test	Somala aiza	Allowable
order	group	Paragraph number	Test item	Sample Size	defective

JAXA-QTS-2000E	JAXA	Dege	E 04
15 March 2021	Parts Specification	Page	– F-21 –

Test order	Test item	Conditions and requirements	Specified test method	Actual test method

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-22 –
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Test equipment	Relevant test item	Major specification	Calibration statu

	JAXA-QTS 15 March	-2000E 2021	J A Parts Spe	X A ecifica	tion		Page	<u>)</u>	– F-23 –
7.	Test site an	d schedule	of qualification test						
	Test order	Test item	Year Month						Test site
	Planned start o sample manufa	late of cturing	(dd/mm/yyyy)	P	lanned te	est date		(dd/mn	ח/уууу)
Forma	at F-8								

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-24 –
JAXA-QTS-2000E 15 March 2021 8. Test site and guide ma (Provide a detailed de (1) Name of test site (2) Address (3) Telephone numb (4) Contact informati	p cription of the test site and guide map	Page	– F-24 –
Format F-9			

15	March 2021	J A X A Parts Specification	Page	– F-25
10				
		NOTICE OF		
	QUALITY ASSU	RANCE MANAGER / REGISTER	ED INSPECTOR	
			Document No. Date:	
(Dir	ector's name)			
Dire	ector ts Program Group			
Saf	ety and Mission Assu	rance Department(1)		
Jap	an Aerospace Explor	ation Agency		
		٨	oplicant	
		Address:	ρριισατι	
		Company:		
		Representative:		seal
		Tolophono numbor:		
In c JAX insp	compliance with paragets (A that the following bector) for our compa	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration ny and is responsible for the quality	QTS-2000, I herek nce manager/ re ity assurance of p	by notify gistered products
In c JA> insp sub	compliance with paraget A that the following pector) for our compa ject to certification.	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration o	QTS-2000, I herek nce manager/ rep ity assurance of p	by notify gistered products
In c JAX insp sub 1.	compliance with parage (A that the following pector) for our compa ject to certification. Name	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration o	QTS-2000, I herek nce manager/ re- ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2.	compliance with parage (A that the following pector) for our compa ject to certification. Name Department	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration of the quality assuration of the quality and is responsible for the quality as a second structure of	QTS-2000, I herek nce manager/ re- ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3.	compliance with paraget (A that the following pector) for our compa- ject to certification. Name Department Job title	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration of the quality assuration of the quality and is responsible for the quality as the quality	QTS-2000, I herek nce manager/ re ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5	compliance with paraget (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration of the quality assuration of the quality and is responsible for the quality as a second structure of	QTS-2000, I herek nce manager/ re ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6.	compliance with paraget (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address	graphs 3.3.3 and 3.3.4 of JAXA-0 g person is the (quality assuration of the quality assuration of the quality assuration of the quality and is responsible for the quality as a second structure of	QTS-2000, I herek nce manager/ rep ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass	graphs 3.3.3 and 3.3.4 of JAXA-O g person is the (quality assuration ny and is responsible for the qual	QTS-2000, I herek nce manager/ rea ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa	graphs 3.3.3 and 3.3.4 of JAXA-C g person is the (quality assuration ny and is responsible for the qual signed	QTS-2000, I herek nce manager/ re ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8. 9.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa- Rationale for change	signed any e (if applicable)	QTS-2000, I herek nce manager/ re ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11	compliance with paraget (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa- Rationale for change Date of change (if a Predecessor (if appli)	graphs 3.3.3 and 3.3.4 of JAXA-C g person is the (quality assuration ny and is responsible for the qual signed any e (if applicable) pplicable)	QTS-2000, I herek nce manager/ rea ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa Rationale for change Date of change (if a Predecessor (if appl	signed any e (if applicable) licable)	QTS-2000, I herek nce manager/ rea ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa- Rationale for change Date of change (if a Predecessor (if appli-	graphs 3.3.3 and 3.3.4 of JAXA-O g person is the (quality assuration ny and is responsible for the qual signed any e (if applicable) pplicable) licable) ther Quality Assurance Manager of	QTS-2000, I herek nce manager/ rea ity assurance of p	by notify gistered products
In c JAX insp sub 1. 2. 3. 4. 5. 6. 7. 8. 9. 10. 11.	compliance with parage (A that the following bector) for our compa- ject to certification. Name Department Job title Telephone number Fax number E-mail address Parts (products) ass Career in the compa Rationale for change Date of change (if a Predecessor (if appl Note: Designate ei striking out the irre	signed any e (if applicable) pplicable) licable) ther Quality Assurance Manager levant title.	QTS-2000, I herek nce manager/ rep ity assurance of p	by notify gistered products

	JAAA	Page	
15 March 2021	Parts Specification	T age	-1-2
CHANGE REQU	EST FOR QUALIFICATION TES	T APPLICATION	
		Document No.	
		Date:	
(President's name)			
President			
Japan Aerospace Explo	ration Agency		
	Addresse	olicant	
	Company:		seal
	Representative:		seal
	Telephone number:		
to the Qualification (dd/mm/yyyy) for the fol	Test Application (document lowing reason.	number) submitte	ed on
 to the Qualification (dd/mm/yyyy) for the fol 1. Name of parts (production site 2. Production site 3. Document number 4. Approval number of JAXA-QTR- 	Test Application (document lowing reason. ducts) and title of quality assurance pro- f qualification test application (Approved date: dd/mm/yyyy)	number) submitte gram plan	ed on
 to the Qualification (dd/mm/yyyy) for the fol 1. Name of parts (production site 2. Production site 3. Document number 4. Approval number of JAXA-QTR- 5. Rationale and reas 	Test Application (document lowing reason. ducts) and title of quality assurance pro- f qualification test application (Approved date: dd/mm/yyyy) on for change (may be attached s	number) submitte gram plan separately)	ed on
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			Document No. Date:	
(Pr	esident's name)			
Pre	esident	ation Agonov		
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	APPL		ON			
		Document No. Date:				
(Drasidant's no	mo)					
President	me)					
Japan Aerospa	ce Explorat	ion Agency				
		Apr	olicant			
		Address:		1		
		Company:		seal		
		Representative:		sear		
In compliance certification of t	with parag he following	representative: Telephone number: Jraph 3.4 of JAXA-QTS-2000, product (s).	, I hereby reques	t QMI		
In compliance certification of t By submitting paragraph 1.4 of Name of parts (products)	with parag he following this applica of JAXA-QT	Representative: Telephone number: graph 3.4 of JAXA-QTS-2000, g product (s). ation, I agree to be bound by S-2000. Title and document no. of applicable specification Title and document no. of applicable specification	, I hereby reques	t QM		

Format F-14

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– F-29 –	
Review comments	and judgme	ent:			
Review comments by chief witness	Example As a res assuranc at a minin Chief wit	: ult of a review of items such as dev e program, the quality assurance program, the application is considered to mum, the application is considered to a	velopment tests, th gram plan and orga satisfy all requireme	e quality nization, ents.	
Judgment	Example Applicatio	: on No (issued on dd/mm. oy:	/yyyy) is judged ap	propriate.	
The application is a	approved / c	lisapproved ⁽¹⁾ .			
Certification nu	mber	Approval date (dd/mm/yyyy)	resident's seal for a	approval	
(1): Unr	necessary v	vord shall be erased with double li	ne.		
Format F-15					

		CO QU.	RRELATION T	ABLE BETW FEST ITEMS T TEST ITEM	EEN AND				
Qualification test item						Development test item			
Group	Test order	Test item	Requirement paragraph	Test method paragraph	Group	Test order	Test metho paragraph		
А	1								
	2								
	3								
Revie comm judgm qualifi	w ients and ient on cation test	Example: All the qua they have	alification tests ha	ave been perfc that all the req	ormed as uiremen	s develop its were f	oment te ulfilled.	ests and	
		By:							

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JAXA-QTS-2000E
	RE	PORT OF DEV	ELOPMENT T	EST		
Summary of develop	ment te	est				
Name of Products (Product Group)	Pa	art number	Production s	site(s)	Contact in	formation
Title and document number of applicable specification and standard Qualification covera				Apj Appli	cation for Qua	r of the alification
					1651	
				Deve	lopment office	er
Test site						
Test period						

JAXA-QTS-2000E 15 March 2021	J A Parts Sp	A X A becification	Page	– F-32
1. Supplementary information	on			
1.1 Supplementary expla	anations to deve	lopment tests		
This section provides JAXA-developed par	s supplementary t.	information indica	ting that the part	is a
Example:				
The qualification tes tests performed und xxxx (year). The Qualification Tes for Development Tes	t for this applica er a contract "C st Application is st, Approval No.	tion is substituted Development of XX substituted by the xxxxxx.	by the developn (XX" implemente Implementation I	nent d in Plan
1.2 Manufacturing condi	tions			
1.3 Others				
1.4 Attachment(s)				
Contact information				
Company E	Department	Name	Telephone	e number
rmat F-18				

JAXA- 15 N	QTS-2000E larch 2021	J A X / Parts Specif	J A X A Parts Specification		– F-33 –
Γ					
2. Results	s of development t	est			
Test order	Test item	Conditions and requirements	Test res	ults dev test s	gment of elopment supervisor
ormat F-19					

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-34 –
[
Review comments and judgme	ent:		
Review comments by witness qualification test results	on		
	This application is co	nsidered appropriat	e.
Overall review comments by the witr	ness Chief witness:		
	Assistant witness:		
	Example:		
Judgment	Application No(dd/	mm/yyyy) is judged a	appropriate.
	Judged by:		
The application is approved	/ disapproved ⁽¹⁾ .		
Certification number	Approval date (dd/mm/yyyy)	President's seal for	approval
Certification number of the last certification	Date of the last certification (dd/mm/yyyy)		
(1) Unnecessary word shall be	erased with double lines.		
Format F-20			

JAXA-QTS-2000E 15 March 2021		J / Parts Sp	A X A pecification		Page	– F-3
	RE	PORT OF QUA	LIFICATION TI	EST		
. Summary of qualified	cation te	st				
Name of parts (products)	Pa	art number	Production s	ite(s)	Contact inf	formation
Title and document num applicable specification and	ber of standard	Qualificatio	n coverage	Apr Qualif	roval number ication Test A	r on the
Test site				Wi	itness	
			_			
Test period						

Format F-21

JAXA-QTS-2000E 15 March 2021	J A Parts Spe	X A ecification	Page	– F-3	
1. Supplementary info	rmation				
1.1 Manufacturing	conditions				
1.2 Failure rate lev	<i>r</i> el				
1.3 Others					
1.4 Attachment(s)					
Contact information					
Company	Department	Name	Telephone	e number	

JAXA-QTS-2000E	JAXA	Davia	F 07
15 March 2021	Parts Specification	Page	– F-37 –

2. Results of qualification test

Test order	Test item	Conditions and requirements	Test results	Judgment by witness
				1
	<u> </u>			

JAXA-QTS-2000E 15 March 2021	J A Parts Sp	A X A pecification		Page	– F-38
APPLICA	TION FOR QUA	LIFICATION R	ETENTIC	ON	
(President's name) President	ation Agonov		Docu Date:	ment No.	
Japan Aerospace Exploi	ation Agency				
		A	pplicant		
	Addres Compa Repres Teleph	ss: any: sentative: one number:			seal seal
In compliance with paragr retention of the following pr By submitting this applic paragraph 1.4 of JAXA-Q	aph 3.4 of JAXA roduct(s) with sup ation, I agree t TS-2000.	A-QTS-2000, I h pporting docume to be bound b	nereby re ents. y the ob	equest quali	fication ated in
Name of Parts (Products)		Title and document no. of applicable specification			
Production Site		Title and docun of quality assu program p	nent no. urance Ian		
Effective period of current certification		Current certification no. (date) (QTR-)
This application is approved /	disapproved ⁽¹⁾ .				
Number of qualification retention	Date of qualific (dd/mn	Date of qualification retention (dd/mm/yyyy)		Approval seal of JAXA preside	
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ormat F-24					

JAXA-QTS-2000E
15 March 2021

Name of parts			Part number			QML manufacturer			
(P	roducts)								
Detail spe (date	cification numb e of issue)	er	Qualification coverage				Produ	uction site(s)	
Manufact (for all pr within cer	uring conditior oducts shippe tification perio	ns d d)							
Current certification no. (dd/mm/yyyy)			Name of qua assurance mar		llity nager				
Effective current of	e period of certification		Name of regis inspector		tered				
Part	Part numb	er	Quantity of delivered products	с	Customer Shij		oment c	late	Remarks

Page

– F-40 –

					number		
Part nur	nber		Mai	nufacturing co	nditions		
Lot nun (productio	nber n date)			nspection pe	eriod		
Name of assurance r	quality nanager		Nan	e of registered i	nspector		
		Sample size		Inspectior	n results		
item	pass/fail	or (allowable no. of defectives)	Quantity o defectives	f Max.	Min.	Avg.	Judgmen

JAXA-QTS-2000E 15 March 2021		J / Parts Sp	A X A pecification	Page	– F-
					4
CHANGE S	TATUS	REPORT OF Q		RANCE PROGRAM	1
Name of parts (prod	lucts)	Part n	umber	Company	,
				Production site(s)	
			'		
Document number and established date of Quality Assurance Progra	m Plan				
Reporting period					
Name and department quality assurance mana	of ager				
		Description	of change(s)		
Document number	Last u	ipdate / change date	l	Jpdated contents and reasons	
			1		

Format F-27

	TRB STATUS REPORT	Deeu	una a un t. N.I.	-	
		Docu Date:	mentin	0.	
(Director's name)					
Director					
Parts Program Group,					
Safety and Mission Assurance De	epartment(1)				
Japan Aerospace Exploration Age	ency				
	Re	eporter			
	Company:				
	Department Registered inspector:				seal
	Telephone number:				3001
	E-mail address				
 Subject of report Product: Detail specification numb Certification number: Period covered 	er:				
3. Report item		r		r	
Re	port item	Yes	No	Docu	ment no.
1) TRB meeting minutes					
,					
 Report of Qualification at Report of Qualification at 	nd Delivery Status (Format F-25)				
 <u>2)</u> Report of Qualification at <u>3)</u> Report of Quality Conform <u>4)</u> Change Status Report of 	nd Delivery Status (Format F-25) ance Inspection Status (Format F-26) Quality Assurance Program				
 Report of Qualification at Report of Quality Conform Change Status Report of Nonconformance, failure a customers and corrective 	nd Delivery Status (Format F-25) ance Inspection Status (Format F-26) Quality Assurance Program analysis results of parts returned from actions (Format F-29)				
 <u>Report of Qualification at</u> <u>Report of Quality Conform</u> <u>Change Status Report of</u> <u>Nonconformance, failure a</u> customers and corrective <u>Available supplies parts</u> 	nd Delivery Status (Format F-25) ance Inspection Status (Format F-26) Quality Assurance Program analysis results of parts returned from actions (Format F-29) list (Format F-31)				
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 <u>Report of Qualification at</u> <u>Report of Quality Conform</u> <u>Change Status Report of</u> <u>Change Status Report of</u> <u>Nonconformance, failure a</u> customers and corrective <u>Available supplies parts</u> <u>Available supplies parts</u> <u>Critical changes, addition</u> in design and structure (i process, test and inspect <u>Addition of new product(a</u> qualification coverage <u>Changes to qualification c</u> <u>New certification plan</u> <u>Others:</u> <u>Note (1): The name of the depa</u> 	nd Delivery Status (Format F-25) ance Inspection Status (Format F-26) Quality Assurance Program analysis results of parts returned from actions (Format F-29) list (Format F-31) ns, improvements or trend control incl. materials), production tion s) and/or package(s) within overage and recertification planning rtment/group at the time of submission of Ap	of this nc	ptice sha	all be sta	ated.
 <u>Report of Qualification an</u> <u>Report of Quality Conform</u> <u>Change Status Report of</u> <u>Change Status Report of</u> <u>Nonconformance, failure a</u> customers and corrective <u>Available supplies parts</u> <u>Available supplies parts</u> <u>Critical changes, addition</u> in design and structure (i process, test and inspect <u>Addition of new product(a</u> qualification coverage <u>Changes to qualification c</u> <u>New certification plan</u> <u>Others:</u> <u>Note (1): The name of the depa</u> 	nd Delivery Status (Format F-25) ance Inspection Status (Format F-26) Quality Assurance Program analysis results of parts returned from actions (Format F-29) list (Format F-31) ns, improvements or trend control incl. materials), production tion s) and/or package(s) within overage and recertification planning rtment/group at the time of submission of Ap	of this no	btice sha	all be sta	ated.

JAXA-QTS-2000E 15 March 2021		Pa	J A X A arts Specification	Pag	е	– F-43 –	
			Noncon	formance Information			
	Date	Part number		Description	Ti rel	tle and r lated do	number of cument(s)
 F	ormat F-2	29					

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– F-44 –				
Company	Docume Date:	nt number					
Representative	(President's nam President Japan Aerospace	e) e Exploration Ag	jency				
Certificate							
On the basis of certification provision for JAXA qualified parts (No. 15-42), following company is certified as the QML manufacturer.							
The QML manufacturer							
Production site	Name: Address:						
Applicable specification	General specification JAXA-QTS-xxx (Established of Detail specification JAXA-QTS-xx/xx (Established da	date:) te:)					
Quality assurance progran program plan	n plan manufacturing in accorda	nce with quality as	surance				
(Manufacturing condition)	(Document number: (F	Rev.) (revised da	ate:))				
Certification number:							
Certification Date							
Expiration date of certifi	ication						
Format F-30							

JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification		Page	– F-45 –	
			Available Supp	olies Parts List	t	_
					Document nu Date:	mber:
N	Name of parts (products) QML m		QML man	ufacturer	Production	site
Numb	er and title of	detail s	specification	Effectiv	ve period of certifica	ation
Nam assura	e of quality nce manager					
			Available sup	plies parts (1)		
Part number Drawing number / Identification number(²)			(²)	Specification outline	(3)	
Notes (¹) Av (²) W (³) W Format F-31	railable supplie hen individual hen product sp	ecifica	s list may be atta ts cannot be ide ation cannot be s	iched separatel entified only with specified by par	ly. h part number. t number.	

Image: Technical Notice Reference No.: To: Date: Director Approved Reviewed Parts Program Group (1) Safety and Mission Assurance Department Japan Aerospace Exploration Agency Subject: Please reply by: Quantity of Attachment Message: Message:
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TO: Date: Director Parts Program Group (1) Safety and Mission Assurance Pepartment Japan Aerospace Exploration Agency Please reply by: Quantity of Subject: Please reply by: Attachment
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Parts Program Group (¹) Safety and Mission Assurance Department Japan Aerospace Exploration Agency Subject: Please reply by: Quantity of Attachment Message:
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Remarks(¹) Organization name shall be shown at submittal of technical notice.
Format F-32

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-i –		
	APPENDIX G				
GUIDELINE FOR	R PREPARATION OF APPLICATI	ON DATA SHEE	T		
G.1 Scope			G-1		
G.2 General Requiremen	ts		G-1		
G.2.1 Management			G-1		
G.3 General Standards for	or Preparation		G-2		
G.4 Guidelines for Prepa	ration		G-2		
G.4.1 Cover Page			G-2		
G.4.2 Revision History	·		G-3		
G.4.3 General			G-3		
G.4.3.1 Purpose			G-3		
G.4.3.2 Applicable Do	cuments		G-3		
G.4.3.3 Referecne Do	cuments		G-3		
G.4.4 Summary of Par	ts		G-3		
G.4.4.1 External View	G.4.4.1 External View and Dimensions				
G.4.4.2 Mass	G.4.4.2 Mass				
G.4.4.3 Element Cons	G.4.4.3 Element Construction				
G.4.5 Usage	G.4.5 Usage				
G.4.5.1 Absolute Maxi	mum Ratings		G-3		
G.4.5.2 Remcommend	ded Operating Conditions		G-4		
G.4.5.3 Special Instruc	ctions on Cirucuit Design		G-4		
G.4.5.4 Recommende	d Mounting Method		G-4		
G.4.6 Performance Ch	aracteristics in Normal Operation.		G-4		
G.4.6.1 Electrical Cha	racteristics		G-4		
G.4.6.2 Mechanical ar	nd Thermal Characteristics		G-4		
G.4.7 Performance Ch	aracteristics in Various Operating	Environments	G-4		
G.4.8 Enviornmental L	imits		G-5		
G.4.9 Reliability Data.			G-5		
G.4.9.1 Faiure Rate			G-5		
G.4.9.2 Failure Mode.			G-5		
G.4.10 Storage Condition	ons		G-5		
G.4.11 Handling Instruc	tions		G-5		
G.4.12 Others			G-5		
Example: Format G-1			G-6		
Example: Format G-2			G-8		
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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 15 N	-QTS-2000E /arch 2021	J A X A Parts Specification	Page	– G-1 –	
			I			
			APPENDIX G			
		GUIDELINE FOR P	REPARATION OF APPLICATIO	N DATA SHEET		
G.1	Scope	e				
	This a parag	appendix provides in graph 3.4 in this spec	structions to prepare the Application ification.	on Data Sheet as	required in	
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 guideline to prepare the Application Data Sheet. Prepared application data sheet shall be released on JAXA qualified EEE parts and materials database. 					
G.2.1	Ma	nagement				
	a)	Application data sh	eet shall be maintained. Applicati	on data sheet sha	all be	
		revised in the follow 1) When the text	ong cases: of change application data sheet is	s equal to or more	e than 10	
		pages, or wher 2) When correction	n 10th change application data she n of application data sheet is equa	eet is issued. al to or more thar	n 50% of	
		Whole.When applicab documents	le documents were cancelled or tr	ransferred to alter	rnative	
	 b) Application data sheet and change application data sheet shall be prepared and established by the QML manufacturer or the company which wishes to acquire certification. After reviewing the application data sheet, the QML manufacturer or the company which wishes to acquire certification shall request JAXA to register the data sheet. 					
	c)	Application data sh	eet shall be issued by JAXA and r	eleased on JAXA	qualified	
	d)	When application d sheet (including ch establishment of th	ata sheet is revised, previous vers ange application data sheet) shall e revised version.	sion of the applica be cancelled on the	ation data the date of	

If previous version of the application data sheet is not cancelled on the date of establishment of the revised version, cancellation date shall be shown on cover page. If application data sheet is cancelled without revision, cancellation date shall be shown on change application data sheet.

- e) JAXA shall cancel application data sheet or suspend issuance in the following cases:
 - 1) When application is difficult due to obsolescence of requirements for technology or management.
 - 2) When alternative application data sheet is established.
 - 3) When the application data sheet is considered to achieve its intended objectives.
 - 4) Other when JAXA accepts cancellation.

	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-2 –	
G.3	 General Rules for Pr a) Terms defined b) Unless otherwis part to be certif c) In addition to da be included in t clearly identified d) If applicable spa application data revision history. e) Error correction sheet. The forr G-2. f) Application data established by 	eparation n JIS shall be used. e specified, an Application Data Sheet ed, or for each detail specification. ta about the JAXA qualified parts, data he data sheet. In this case, the data ab l. cification are revised and application da sheets shall be revised. The revised ite s or minor changes may be notified via hat of the change application data sheet sheet and change application data sheet he QML manufacturer. The QML manufacturer.	shall be prepared about similar pro pout similar produc ta sheets are cha ems shall be provi change applicatio t is shown in Forr eet shall be prepa	I for each oducts may cts shall be nged, the ded in a on data nat example ared and juest JAXA	
G.4	 to register the application data sheet. 4 Guidelines for Preparation The Application Data Sheet shall include the following items as a minimum: a) Cover page b) Revision history (Reasons for change shall be included) c) General d) Summary of parts 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 				
G.4.1	 Cover Page Cover page shall a) Part descripting their part group b) Part number of the applicable c) Applicable sport product type d) QML Manufation e) Year and motion shall be desc 	nclude the following items: on: Part description shall be described in p. or part type: Part numbers or types sha specifications. ecification: Document numbers of the g and detail specifications shall be descri cturer: Name of the QML manufacturer oth: Year and month when the Applicati ibed.	identifying the pro Il be described as eneric specification bed. shall be describer on Data Sheet wa	oducts from specified in ons for each d. as prepared	

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-3 –		
G.4.2	Revision History The revision history sha	all be as specified in paragraph G.3	3, item d).			
G.4.3	General This section shall be pro	epared as follows:				
G.4.3.1	Purpose The purpose of the de Example: This App for part u	Purpose The purpose of the document shall be stated as shown in the example below. Example: This Application Data Sheet provides detailed information necessary for part users to select, desig or use JAXA qualified parts.				
	Users are	e not discharged from the responsi	ibility.			
G.4.3.2	.2 Applicable Documents This section shall provide a list of the document number and the title of applicable specifications that define requirements for the JAXA qualified parts and other applicable documents such as MIL specifications.					
G.4.3.3	Referecne Documents This section shall provide a list of the document number and the title of reference documents such as technical documents and catalogues that are used to prepare application data sheet.					
G.4.4	Summary of Parts This section shall provid functions, applications a	de a summary of the JAXA qualifie and quality levels.	d parts such as f	eatures,		
G.4.4.1	External View and Dimensions The case outlines, dimensions and markings (inspection lot identification code, serial number, trademark and other identifications) shall be shown by photographs and/or figures.					
G.4.4.2	Mass Product mass (typica	l value) shall be provided.				
G.4.4.3	Element Constructior The outline of elemer with information such	n nt construction shall be provided in as names of major parts, materia	l figures and/or p ls used and finish	hotographs ı.		
G.4.5	Usage This section shall provid mounting designs. Han shall be provided in a se	de recommended usage and speci Idling instructions for processes su eparate section.	al instructions fo uch as storage ar	r circuit and nd assembly		
G.4.5.1	Absolute Maximum R The ratings or absolu shall be provided.	atings te maximum ratings specified in th	ne applicable spe	cifications		

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-4 –	
G.4.5.2	Remcommended Op The recommended o shall be provided.	erating Conditions perating conditions specified in the	e applicable spec	fication	
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 JAXA 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 JAXA 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	.6.1 Electrical Characteristics Measured values or distributions, which are concerned with electrical characteristics specified in the applicable specifications, shall be provided.				
G.4.6.2	Mechanical and Ther Measured values or of specifications regardi a) Temperature cyc b) Thermal shock c) Resistance to so d) Moisture resistan e) Vibration f) Shock g) Constant accele h) Terminal strengt i) Others	mal Characteristics distributions mentioned below and ing to mechanical and thermal cha cling oldering heat nce ration h	specified in the a racteristics shall	pplicable be provided.	
G.4.7	 Performance Character The electrical character be provided. a) Temperature character b) Input-output character c) Drifts at various en d) Drifts at life tests e) Other necessary character 	istics in Various Operating Enviror istics in various operating environ acteristics cteristics vironmental tests naracteristics	nments ments specified b	elow shall	

J	AXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-5 –
G.4.8	Enviornmental Limits Evaluation data of vario tests or other tests shal the applicable specifica The main environmental shock, constant accelera necessary). Test condit The existing data about	us environmental tests conducted I be provided in addition to the envitions. I parameters shall include tempera ation, ESD sensitive (if necessary) ions, sample size and test results products with similar structure ma	as part of the de vironmental limits ture, vibration, me and radiation har shall be provided ay be used if avai	velopment defined in echanical dness (if for each test. lable.
G.4.9	Reliability Data The following informatic If the JAXA qualified pa about equivalent comm this case, the data shall	on shall be provided in this section rt data relating to the following iss ercial products or products of simi be identified.	ues is not availab lar structure may	le, the data be used. In
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	le recommended storage condition backage.	ns including temp	perature,
G.4.11	Handling Instructions This section shall provic to soldering heat and el	le special instructions on terminal ectrostatic discharge protection, e	bending, thermal tc.	stress due
G.4.12	Others Address and inquiry info section.	ormation about the QML manufact	urer shall be prov	<i>v</i> ided in this

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– G-6 –						
Example: Format G-1 (Cover pag	Example: Format G-1 (Cover page) ⁽¹⁾								
JAXA-ADS-2050/Axxx COMMON PARTS/MATERIALS, SPACE USE, APPLICATION DATA SHEET FOR									
Part Description	Resistors, Fixed, High Reliat	bility, Space Use	e						
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									

	JAXA 15	A-QTS-2000E March 2021		J A X A Parts Specification	Page	– G-7 –			
Ex	Example: Format G-1 (revision history) ⁽¹⁾								
JAXA-ADS-2050/Axxx JAXA Application Data Sheet Page - x -									
				Revision History					
	Rev.	Date		Revised Conte	nts				
No	ote: ⁽¹⁾ Thi	is record is an exa	nple.						

15 ample: l	5 March 202 Format G-2	1 (Change	Parts Speci	fication		je	– G-8	
JAXA-ADS-2050/Axxx JAXA Notice 1 Application Data Sheet Day Month Year								
		A xxxx HIG APP	CHANGE NOT PPLICATION DA XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	ICE FOR ATA SHEE XXXXXXXXX SPACE U A SHEET F	T xxx, ISE, FOR			
Change description Rationale for change								
	-		Before	Afte	r			

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	.1 Failure Counts, Failure Rate and Pass/Fail Criteria	H-1
H.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	.3 Disposition of Inspection Lots	H-3

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	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– H-1 –				
	SUPPLEMENTARY F	REQUIREMENTS FOR TESTS AN	ND INSPECTION	S				
H.1	Scope	oundementer, requiremente for t	acta and inanacti	000				
	specified in paragraph 4.3	of this specification.		UIS				
H.2	General Requirments							
	JAXA qualified parts to be qualified and supplied in compliance with the applicable specifications shall meet the supplementary requirements for the test and inspection specified in the following paragraphs:							
H.3	Requiremnts							
H.3.1	Failure Counts, Failure I	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, if number of test and judgement items for one sample is equal to or more than one and if the sample does not pass all tests, the sample shall fail.							
H.3.2	Sampling Plan							
	The sampling plan for ir inspection shall be in ac specifications.	n-process inspection, qualification ccordance with the method specifi	test and quality c ed in the applicat	conformance				
H.3.2.	1 Lot Tolerance Percent	t Defective						
	The lot tolerance per of defective lots. This quantity c and rejection	cent defective (LTPD) method is a s plan is characterized with sample on quantity r = c+1.	sampling plan to e quantity n, acce	reject 90% ptance				
	Table H-1 is applicable for the lot size of 100 or more. If the required sample size exceeds the lot size, 100% inspection shall be conducted.							
	Table H-2 is applicab and no greater than 1 Table H-1. The samp c = 0 using the minim	le when the lot size is smaller than 100. Table H-2 is applicable for sa bling plan in Table H-2 is to judge num sample size.	n 10 times the sa ample sizes small with the acceptar	mple size er than าce quantity				

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)							Minim	um sampl	e size							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	201
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	σ
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 >
			ſ	Table H	1-2. Mi	nimum	Sample	Size for	LTPD V	alues				ſ		(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	 M
	Minimum	sample s	ize													
LOUSIZE	(Accepta	nce numb	er, c = 0)													
10 or less	7	9	9	All												
11 to 20	9	11	14	18	18	All										ag
21 to 40	21 to 40 10 12 17 23 27 36 All								P							
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						<u></u> ±
Note: If the minimum	n sample si	ize is more	e than the	lot size, 10	0 percent	inspection	n shall be	conducted								-2-

JAXA-QTS-2000D 7 July 2016	J A X A Parts Specification	Page	– H-3 –
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H.3.2.2 Inspection Lot

If lots for delivery consist of multiple production lots, each production lot shall be treated as a separate lot.

H.3.2.3 In-Process Inspection

If JAXA confirms that in-process inspection data are equivalent to quality conformance inspection data, results of in-process inspection may be substituted for the results of qualification quality conformance inspection.

When results of in-process inspection are substituted for results of quality conformance inspection, detail specification shall specify that test conditions, pass/fail criteria or number of samples, etc. exceed or are equivalent to those of quality conformance inspection.

H.3.3 Disposition of Inspection Lots

Lots for delivery shall be limited to those that have passed the inspection for delivery of the JAXA qualified parts. For the failed lots, taking action against failure shall be conducted in accordance with paragraph 3.6. Disposition of the failed lots shall be as specified in generic specifications for each product type.

APPENDIX KTRB GUIDELINESK.1ObjectiveK.2General GuidelinesK.3Detailed GuidelinesK.3Detailed GuidelinesK.3.1AuthorityK.3.2ResponsibilityK.3.3Organization and StructureK.3.4TasksK.3.5Review and JudgmentK.3.5.1GeneralK.3.5.2Preparation for ReviewK.3.5.3Implementation of ReviewK.3.5.4JudgmentK.3.5.5Action after ReviewK.3.6Status ReportsK.3.6.1Status Reports	JAXA-QTS-2000E 15 march 2021	J A X A Parts Specification	Page	– K-i –
TRB GUIDELINESK.1ObjectiveK-1K.2General GuidelinesK-1K.3Detailed GuidelinesK-1K.3.1AuthorityK-1K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6		APPENDIX K		
K.1ObjectiveK-1K.2General GuidelinesK-1K.3Detailed GuidelinesK-1K.3.1AuthorityK-1K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6		TRB GUIDELINES		
K.2General GuidelinesK-1K.3Detailed GuidelinesK-1K.3.1AuthorityK-1K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.1 Objective			K-1
K.3Detailed GuidelinesK-1K.3.1AuthorityK-1K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.2 General Guidelines			K-1
K.3.1AuthorityK-1K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3 Detailed Guidelines		K-1	
K.3.2ResponsibilityK-1K.3.3Organization and StructureK-2K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.1 Authority		K-1	
K.3.3Organization and Structure.K-2K.3.4TasksK-2K.3.5Review and Judgment.K-3K.3.5.1General.K-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4Judgment.K-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.2 Responsibility		K-1	
K.3.4TasksK-2K.3.5Review and JudgmentK-3K.3.5.1GeneralK-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.3 Organization and		K-2	
K.3.5Review and Judgment.K-3K.3.5.1General.K-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of Review.K-4K.3.5.4Judgment.K-5K.3.5.5Action after Review.K-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.4 Tasks			K-2
K.3.5.1General.K-3K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4Judgment.K-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.5 Review and Judg	gment		K-3
K.3.5.2Preparation for ReviewK-4K.3.5.3Implementation of ReviewK-4K.3.5.4JudgmentK-5K.3.5.5Action after ReviewK-6K.3.6Status ReportsK-6K.3.6.1Status ReportsK-6	K.3.5.1 General			K-3
K.3.5.3 Implementation of Review.K-4K.3.5.4 Judgment.K-5K.3.5.5 Action after Review.K-6K.3.6 Status ReportsK-6K.3.6.1 Status ReportsK-6	K.3.5.2 Preparation fo	r Review		K-4
K.3.5.4Judgment	K.3.5.3 Implementatio	n of Review		K-4
K.3.5.5 Action after ReviewK-6 K.3.6 Status ReportsK-6 K.3.6.1 Status ReportsK-6	K.3.5.4 Judgment			K-5
K.3.6 Status ReportsK-6 K.3.6.1 Status ReportsK-6	K.3.5.5 Action after Re	eview		K-6
K.3.6.1 Status ReportsK-6	K.3.6 Status Reports			K-6
	K.3.6.1 Status Reports	5		K-6
K.3.6.2 Omission of TRB Status ReportK-7	K.3.6.2 Omission of T	RB Status Report		K-7

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	JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	– K-1 –					
	APPENDIX K								
		TRB GUIDELINES							
K.1	Objective								
	This appendix provides the guidelines for the TRB that is established and operated by the QML manufacturer or the company which wishes to acquire certification 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 specify the following items regarding to TRB and shall document TRB operation provision: 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 authority exercised by the TRB shall not exceed the scope of authority. 								
K.3.2	Responsibility								
	 The TRB shall be respondent of the TRB shall be respondent of the Planning product of the Distribution of the Distrib	Insible for the following items: Inality of JAXA qualified parts e quality assurance program and a reliability data analyses ment and approval of the failure ana ment and approval of the corrective ment and approval of changes to the meric specifications for each produ shment, revisions and cancellation	alyses actions e tests and inspe ct type and detail n of and changes	e control ections l to the detail					

JAXA-QTS-2000E		-QTS-2000E	JAXA	Page	– K-2 –			
15 March 2021			Parts Specification	l ago				
	h) i)	Approval of establis Application Data S Documentation of t	shment, revisions and cancellatior heet he TRB organization, structure an	n of and changes Id operating proce	to the edures			
	J)		tasks (paragraph K.3.4)					
	k)	Review and judgme	ent (paragraph K.3.5)					
	I)	Status report (para	graph K.3.6)					
K.3.3	Org	anization and Struct	ure					
	 k.3.3 Organization and Structure a) The QML manufacturer shall clearly define the TRB members and conditions for TRB establishment. The members of the TRB shall be representatives, i.e. responsible officers such as a chief of a department or section who has influence over the quality of the JAXA qualified parts including design, engineering, production engineering, manufacturing, test (or inspection), quality assurance, production control and others. The quality assurance manager and registered inspector shall be included in the TRB. The TRB may include internal and external experts depending on review topics. In addition, JAXA officials may join the TRB as observers at the TRB's request. b) The QML manufacturer shall assign the quality assurance manager as the decision authority (chairperson) of the TRB. When several decision authorities are designated for different review items, the scope of authority and responsibility for each person shall be clearly defined. c) The relationship between the TRB and the internal organization shall be defined in organization chart of the Quality Assurance Program Plan. d) When the QML manufacturer already has a standing committee equivalent to the TRB provided in QMS, the committee shall be included in the Quality Assurance Program Plan. 							
K.3.4	Tas	defined. ks						
	a)	Maintenance of the quality and reliabilit program	e technology based on the quality at of JAXA qualified parts manufac	assurance progra ctured in accorda	am and the nce with the			
	b)	Assessment and m parts	onitoring of the quality and reliabi	lity of the JAXA q	ualified			
	c)	Maintenance of the	qualification coverage defined in t	he quality assurar	nce program			
	d)	Maintenance and c chart and FMAT/FM	ontrol of the design, materials, ma MEA of JAXA qualified parts	anufacturing proc	ess flow			
	e) Approval of control plan for manufacturing process flow charts, failure modes, EMAT and each individual process of JAXA qualified parts							
	 Assessment of education and training plans defined in the quality assurance program 							
	a)	Retention of TRB n	eview records and report of the re	cords to JAXA				
	9) h)	Assessment and a	pproval of the failure analysis resu	llts and emergend	cy reports of			
	i)	Assessment and m	nonitoring of the effectiveness of c	orrective actions				

JAX 15	A-QTS-2000E March 2021	J A X A Parts Specification	Page	– K-3 –					
j)	j) Confirmation on revision status of standards applied in applicable specifications and judgement on application propriety of the latest version								
K.3.5 F	Review and Judgment								
 K.3.5.1 General The QML manufacturer shall have the authority and responsibility to review the following items, as a minimum to maintain the quality of the JAXA qualified parts. Records of the TRB reviews and decisions shall be organized and retained in a manner that any record can be readily available to JAXA upon request. a) Establishment, implementation assessment and change control of the quality assurance program (paragraph K.3.5.1.1) b) Establishment, maintenance and revisions of the Quality Assurance Program Plan (paragraph K.3.5.1.2) c) Establishment, revisions and cancellation of, and changes to the detail specifications (paragraph K.3.5.1.3) d) Establishment, revisions, and cancellation of, and changes to the Application 									
	Data Sheet (para e) Conformance wi	agraph K.3.5.1.4) th the qualification coverage (para	graph K.3.5.1.5)						
 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 by the QML manufacturer shall review a minimum of the following items of the JAXA qualified parts, determine changes and dispositions 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) Criteria 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 l) Omission of test(s) at requalification 									
1.0.0.1.2	When the QML ma program plan, the (items a) to l) in par	nufacturer establishes or revises t QML manufacturer shall assess ar agraph K.3.5.1.1 as a minimum.	the quality assurated From	nce alidity of the					
JAXA-QTS-2000E 15 March 2021		J A X A Parts Specification	Page	– K-4 –					
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K.3.5.1.3	 K.3.5.1.3 Establishment, Revisions and Cancellation of and Changes to Detail Specifications The QML manufacturer shall review the validity of the establishment, revisions and cancellation of and changes to the detail specifications. Effects of revision or cancellation of applicable documents shall be included in the review of validity. 								
K.3.5.1.4	Establishment, Revisions and Cancellation of and Changes to Application Data Sheet The QML manufacturer shall review the validity of the establishment, revisions and cancellation of and changes to the Application Data Sheet.								
K.3.5.1.5	Comformance with Qualification Coverage The QML manufacturer shall judge 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 Review The QML manufacturer shall define requirements on preparing materials required for TRB reviews. The materials shall include the followings as a minimum: a) Document numbers of the generic specification for each product type and the detail specifications b) Part number c) Document number of the Quality Assurance Program Plan d) Scope of review (title of documents which constitute the quality assurance program, tests and inspections) e) Materials supporting review items to be accepted (e.g., assessment items and the results, manifest theories, determination of similar items conducted in the past) f) Area to be affected (functions, quality and reliability of JAXA qualified parts) g) Effective date h) Conformance with the qualification coverage (When revision and cancellation of applicable documents are related, validity of the applicable documents before / after revision and cancellation shall be included) 								
К.3.5.3	 Implementation of Refail a) The QML manufast a minimum: 1) At the time of (including the 2) At the time of based on not 3) At the time of the quality a complaints, 4) Before the model of TRB state 	eview acturer shall conduct TRB reviews of establishing and changing the q be Quality Assurance Program Pla of planning the measures and eval onconformance investigation result of management review (based on assurance program, results of inter at a minimum) estart of production in the case of us report (to check whether any ch	at the following of uality assurance n) luating the correct the implementation mal audit and cus exemption of the manges were mad	occasions program tive actions on status of stomer submission le)					

JAXA-Q 15 Mar	TS-2000E rch 2021	J A X A Parts Specification	Page	– K-5 –
In addition to the above occasions, the QML manufacturer shall conduct TRB review periodically (once a year as a minimum) in order to check whether there are any changes made to the quality assurance program.			nduct TRB nether there	
b) The review shall be conducted in accordance with the TRB operational provisions that specify methods, procedures and checklists. The checklist shall include an item, "impact on customers" specifically performance, quality, price and delivery date, etc.			nal necklist shall nality, price	
c)	Operational prov are conducted or paragraph K.3.5.	ision by the QML manufacturer sh n the basis of the materials prepar 2.	all provide that the the that the second ance	າe reviews ອ with
d) e)	At the review, the manufacturer: 1) Information 2) Implementation 3) Trend and at failure mode 4) Nonconform qualified part 5) Past product 6) Information Special caution st items during a ret 1) Validity of rat 1.1) Have the confirm reliability 1.2) Has the Has the 1.3) Has the 1.4) Have the 2) Conformance 3) Conformance	e followings shall be taken into the and results of process improvement tion and analysis results of the qua- e inspection analysis on yields during the manu- es ance information and failure analy- ts and similar products in the past tion records of the JAXA qualified on complaints from JAXA and other shall be exercised by the QML manu- eview: ationale to accept review items the changes been reviewed thorough ed that the equivalent level of per- ty are maintained after the change e root cause of the nonconformance e preventive measure been proper the review results been deployed the ce with the generic specification for ication the with the qualification coverage	e consideration by ent alification test and ufacturing proces ysis results of the parts or similar p er customers nufacturer on the ghly? (Has it been formance, quality e(s)?) ce been identified poducts been prop ly implemented? nroughout the cor r each product ty	 / the QML d quality is and JAXA oroducts following n objectively and i? perly taken? mpany? pe and
K.3.5.4 Jud a) b)	Igment The judge shall a a review conduct Judgment shall b shall be made qu including evaluat established theo	approve or disapprove requested of ted in compliance with paragraph be made objectively and reasonab uantitatively and qualitatively base tion test data, control methods of r ries.	changes based o K.3.5.3. ly. Specifically ju d on the various nanufacturing co	n results of Idgment evidences nditions and

٦	AXA-Q	TS-2000E	JAXA	_	
	15 Mai	rch 2021	Page – K-6 –		– K-6 –
K.3.5.5	15 March 2021 Parts Specification Page Proof 3.5.5 Action after Review a) Meeting minutes of TRB by the QML manufacturer shall include the following at a minimum. Change items and contents of the TRB shall be capable of being comprehended by meeting minutes of the TRB. 1) Date of TRB meeting 2) Details of review 3) Results of review (List of items resolved and changed by TRB and judgement on change category shall be included) 4) Action items 5) Relevant detail specification number 6) Relevant part number b) The QML manufacturer shall retain review materials and minutes of meeting as quality records. The records shall be retained for 15 years from the shipping date of the JAXA qualified parts for which the review results were applied, and shall be available to JAXA upon request. c) If the TRB decides to change the qualification coverage, the QML manufacturer shall apply for requalification to JAXA in accordance with paragraph 3.4.3. d) If the TRB decides to modify the detail specifications and/or Application Data Sheet, the QML manufacturer shall take the necessary action in accordance with Section 6. e) Decision authority shall input TRB judgement results into management review			following at le of being and meeting as shipping pplied, and nanufacturer of 3.4.3. tion Data cordance ent review	
K.3.6	.6 Status Reports				
K.3.6.1	Status Reports The QML manufacturer shall submit a TRB Status Report to JAXA around the date which is one year from the certified date and every year after that. When the QML manufacture has multiple certificates of JAXA qualified parts, the QML manufacturer may report all at once. However, the QML manufacturer shall report within one year from the previous reporting date. JAXA makes an entry of review result in the column of JAXA review result of format F-28 and shall return TRB status report to the QML manufacturer. This review shall compose retention of qualification review as specified in paragraph 3.4.2. When the QML manufacturer already notified JAXA of omission of preparation and submittal of TRB status report in accordance with paragraph K.3.6.2, JAXA may omit the review.				

information as a minimum. Supplement (such as review materials) shall be attached as necessary.

- a) TRB meeting minutes
- b) Report of Qualification and Delivery Status (paragraph F.3.6.4)
- c) Status Report of Quality Conformance Inspection (paragraph F.3.6.2)
- d) Change Status Report of Quality Assurance Program (paragraph F.3.6.5)
- e) Failure analysis results and corrective actions of nonconforming products and customer returns

JAXA 15 M	-QTS-2000E March 2021	J A X A Parts Specification	Page	– K-7 –
15 M f G H i i K.3.6.2 E F r V i r V i r	 Major changes, a structure (includi Addition of a new Addition of a new Changes to qual Changes to qual Newly proposed Reports may be in an summary of major ac Status Report of Qua within the valid certified Exemption of TRB State Preparation and subremanufacturer shall not sum anufacturer shall not sum anufacturer shall not accordance with para When the production accordance with para When the production date from one year from the sum anufacturer shall not accordance with para 	additions, improvements and trending materials), manufacturing proceed of product(s) and/or package(s) witification coverage and requalification coverage and requalification coverage and requalification of the second of the terms of the terms of the term of term	d control in design ess, tests and ins thin the qualification ion plan eting minutes and t required if alread t required if alread t required or shipped s within reporting his case, the QMI al notice. ualification. ted, TRB shall be ort shall be subm	n and spections on coverage d the dy submitted o status d, if there period, and -

JAXA-QTS-2000E 15 March 2021	J A X A Parts Specification	Page	- i -		
APPENDIX Z					
PROCEDURE AFTER REVISION OF JAXA-QTS-2000					

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APPENDIX Z

PROCEDURE AFTER REVISION OF JAXA-QTS-2000

The QML manufacturer shall reflect the items specified in JAXA-QTS-2000E into the quality assurance program plan, within six months from the established date of JAXA-QTS-2000E, which shall then be reviewed by JAXA at the time of TRB status report. If the reflection into quality assurance program plan cannot be completed within above specified period, the QML manufacturer shall coordinate with JAXA.