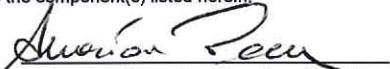


		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL			Page 1
		Component Title: MICROWAVE, SILICON, PIN AND VARACTORS			Appl. No.
		Executive Member: ESA			Date: 12/05/2017 200H
Components (including series and families) submitted for Extension of Qualification Approval:					1
ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
5513/007	SEE QPL	SEE QPL	ML4207 TO 4209		
5513/009/010/014/015	SEE QPL	SEE QPL	ML46XX	ML4619-186	ML4619-186 (5513/009)
5512/001/003/004/005/006/007	SEE QPL	SEE QPL	ML43XX		
Component Manufacturer API Microwave Limited		Location of Manufacturing Plant(s) Featherstone Road, Wolverton Mill Milton Keynes, Buckinghamshire MK12 5EW, United Kingdom		Date of original qualification approval: Date: 15/12/1993 Certificate Ref No. 200	
ESCC Specifications used for Maintenance of qualification testing: Generic: <i>Solo</i> Issue: <i>1</i> Detail(s): Issue:		Deviations to LVT testing and Detail Specification used: No ☐ Yes ☒ (supply details in Box 15) Deviation from current Specifications: No ☐ Yes ☒ (Supply details) Test vehicle conforms to ML4L401-132 specification. ESCC5010 iss1 applies.		Qualification Extension Report reference and date: LAT1 ML4619-186, 05/04/2017	
Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)					8
Project Name	Testing Level	LAT	Date code	Quantity Delivered	
PID changes since start of qualification None ☐ Minor* ☒ Major* ☐ *Provide details in box:		Current PID Verified by: <u>ESA</u> Name of Executive Representative Ref No: ESA-PFC3-PID [N-EPI] + ESA-PKG-PID [PACKG] Issue: 12 AND 12 Date: 15/01/2015 Rev Date: 12/05/2017			
Current Manufacturing facilities surveyed by: <u>ESA</u> on <u>16/06/2015</u> (Name of Executive Representative) (Date)					11
Satisfactory: Yes ☒ No ☐ Explain					
Report Reference: <u>ESA-TECQES-MIN-1159</u>					

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12 Failure Analysis, DPA, NCCS available: Yes ☐ No ☒ (Supply data) Ref. No's and purposes:		
13 The undersigned hereby certifies on behalf of the ESCC Executive - that the above information is correct; - that the appropriate documentation has been evaluated; - that full compliance to all ESCC requirements is evidence (except as stated in box 15;) - that the reports and data are available at the ESCC Executive and therefore applies on behalf of _____ as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein. Date: 12/05/2017  (Signature of the Executive Coordinator)		
14 Continuation of Boxes above:		

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	Component title: MICROWAVE, SILICON, PIN AND VARACTORS	Appl. No.
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Non compliance to ESCC requirements:				15
No.:	Specification	Paragraph	Non compliance	
1	ESCC 5010 ISS2	ALL	Adoption of ESCC5010 iss2 is not completed at the time of this maintenance of qualification.	

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:				16
The qualification is to be re-scoped and this exercise will include the adoption of the latest version of the Generic specification and the amendment of all related Detail specifications (11 specs). There have been no technical changes to the approved PID baseline since several years ago. The confidence on this established baseline is regularly verified by customers with LAT testing				

Executive Manager Disposition				17
Application Approval: Yes ☒ No ☐				
Action / Remarks:				
Adoption of ESCC 5010 iss2 and associated requirements is to be implemented together with any possible exercise of re-scope of this qualification before May 2018.				
Date:				 Signature, ESA Representative



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: MICROWAVE, SILICON, PIN AND VARACTORS

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ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION

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Tests conducted in compliance with:

- ESCC 5000 generic specification; Chart F4 (for ESCC/QPL parts);
- or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

ML4619-186, 1644 to ML4I401-132 issB spec	

Detail Specification reference:

Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroup	Mechanical shock	☒	MIL-STD-750 TM2016	1644	6	0	
	Vibration	☒	MIL-STD-750 TM2056	1644	6	0	
	Constant acceleration	☒	MIL-STD-750 TM2006	1644	6	0	
	Seal Fine leak Gross leak	☒	MIL-STD-750 TM1071	1644	6	0	
	Electrical Measurement	☒	Intermediate and End-Point Electrical Measurements	1644	6	0	
	External Visual	☒	ESCC Basic Spec 20500	1644	6	0	
	Thermal shock	☒	MIL-STD-750 TM1056	1644	6	0	
	Temperature Cycling	☒	MIL-STD-750 TM1051	1644	6	0	
	Moisture Resistance	☒	MIL-STD-750 TM1021	1644	6	0	
	Seal Fine leak Gross leak	☒	MIL-STD-750 TM1071	1644	6	0	
	Electrical Measurement	☒	Intermediate and End-Point Electrical Measurements	1644	6	0	
	External Visual	☒	ESCC Basic Spec 20500	1644	6	0	
Endurance Subgroup	Operating Life	☒	MIL-STD-750/1026, 1000h	1644	8	0	
	Electrical Measurement	☒	Intermediate and End-Point Electrical Measurements	1644	8	0	
	Seal Fine leak Gross leak	☒	MIL-STD-750 TM1071	1644	8	0	
	External Visual Inspection	☒	ESCC Basic Spec 20500	1644	8	0	
Assembly Capability Subgroup	Permanence of Marking	☒	ESCC Basic Spec 24800	1644	2	0	
	Terminal Strength	☒	ESCC 5000 Para. 8.18	1644	2	0	
	Internal Visual	☒	ESCC Basic Spec 20400	1644	6	0	
	Bond Strength	☒	MIL-STD-750 TM 2037	1644	6	0	
	Die Shear	☒	MIL-STD-750 TM 2017	1644	6	0	

**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component title: MICROWAVE, SILICON, PIN AND VARACTORS

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Chart F4	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
Additional Tests	Seal test after endurance	☒	750/1071, H1 and C	1644	8	0	
	Solderability	☒	750/2026	1644	2	0	
		☐					

	APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Component title: MICROWAVE, SILICON, PIN AND VARACTORS Executive Member: ESA Date: 12/05/2017	Page 7 Appl. No. 200H
NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL		
ENTRIES		
Form heading	shall indicate: - the title of the component as given in its detail specification or the name of the series, family; - the Executive Member; - the entering date; - the certificate number and its sequential suffix.	
Box 1	shall provide details given in the table; in particular there shall be listed: - the variants or range of variants; - the range of components (the ESCC code is recommended to indicate the values or values range, the tolerance, the voltage, etc); the designation given in the detail specification as 'base on'; - under Test Vehicle enter either an ESCC code or the specific characteristic capable of identifying the component tested (e.g., voltage of coil for a relay); - under component similar enter a cross if relevant.	
Box 2; 3 and 4	As per QPL entry; otherwise, an explanation of the changes must be supplied.	
Box 5	Will show the ESCC Generic and Detail specifications, including issue number and revision letter, current at the time the tests reported were performed. If the specifications are different from those current on the date of the application, see Box 6.	
Box 6	Will show the deviations from the Generic and Detail Specifications listed in Box 5, in particular deviations from testing. In case of deviations this must be listed in Box 15. In case the referenced specification in Box 5 have currently a different issue and/or revision indicate also whether the test data deviates or not from such current documents.	
Box 7	Must reference the report(s) supplied in support of the application.	
Box 8	Should provide the details of procurement to the full ESCC System, documentation of all of which should already have been delivered to the ESCC Executive under the terms of the relevant Generic Specification. An appropriate table has been drawn in this box.	
Box 9	If the PID evolved after the Original Qualification or after the last Extension of Qualification, adequate details of such evolution shall be provided together with the reasons for the changes. Major changes shall be clearly marked.	
Box 10	Identify the current PID issue status, date and actual date of verification. The date of verification of the current PID should be arranged as close as possible to the required date of extension.	
Box 11	This box can be completed only after a physical visit to the plant to confirm that no unexplained changes occurred and that the practices, procedures, material, etc. used in manufacturing the components are as described in the PID. This survey shall be carried out in accordance with the requirements of ESCC Basic Specification No. 20200 and its findings shall be recorded.	
Box 12	Provide details of, or reference to, any Destructive Physical Analysis (DPA) and Failure Analysis reports as well as any Nonconformance(s) (NCCS) occurred during the qualification validity period, stating if established corrective action have produced satisfactory results.	
Box 13	Enter only the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature of the responsible Executive Coordinator.	
Box 14	To be used when there is a need to expand any of the boxes from 1 through 12. Identify box affected and reference the Box 14 in the relevant Box. Box 14 can be broken into 14a, 14b, etc. if several boxes have to be expanded.	
Box 15	Fill in Table as requested.	
Box 16	Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.	
Box 17	All Executive Manager recommendations on the application itself, special conditions or restrictions, modifications of the QPL or QML entry, letters to the manufacturer, etc. shall be entered clearly in Box 19, signed by the representative for ESA, and dated.	
Box 18	Fill in Table as requested.	
Box 19	Confidential Details of PID changes including those of a confidential nature, shall be provided.	
Box 20	State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 16 each nonconformance shall be sequentially numbered. If relevant state 'None'.	
Box 21	Any additional action deemed necessary by the Executive Member to bring the submitted data to a standard likely to be accepted by the ESCC Executive should be listed herein or the reason(s) to accept the noncompliance.	
Box 22	Additional Comments.	