APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: DIODES, MICROWAVE, SILICON, MULTIPLIER AND PIN, BASED ON TYPES DH 2XX AND DH 50XXX

Executive Member: CNES Date: 01/10/2014

Appl. No. 225 F

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
5512/016	10-56	CT = 0.4 to 7.2 pF	DH267 to DH294	5512/016-11	All other variants

2 Component Manufacturer
COBHAM MICROWAVE

3 Location of Manufacturing Plant(s)
31, avenue de la Baltique
91978 Villebon Sur Yvette
France

4 Date of original qualification approval:
Date: 01/06/1995

Certificate Ref No. 225

5 ESCC Specifications used for Maintenance of qualification testing:
Generic: 5010 Issue: 1
Detail(s): 5512-016 Issue: 4

6 Deviations to LVT testing and Detail Specification used:
No ☒ Yes ☐ (supply details in Box 15)
Deviation from current Specifications:
No ☒ Yes ☐ (Supply details)

7 Qualification Extension Report reference and date:
2014101589-223 dated 23.09.2014

8 Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)

Project Name	Testing Level	LAT	Date code	Quantity Delivered
Various		LAT2	Various	440

9 **PID** changes since start of qualification
None ☐
Minor* ☒
Major* ☐
*Provide details in box:

10 Current **PID** Verified by: J.L. Roux
Name of Excutive Representative
Ref No: 350
Issue: D
Rev Date: 19/09/2014
Date: 27/09/2014

11 Current Manufacturing facilities surveyed by: ESA and CNES on Click here to enter a date
(Name of Executive Representative) (Date)

Satisfactory: Yes ☒ No ☐ Explain

Report Reference: See Box 14

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Failure Analysis, DPA, NCCS available: Yes ☐ No ☒ (Supply data)

Ref. No's and purposes:

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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 CNES as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.

Date: 10/10/2014

P.I. Philippe LAY (Head of Components and Qualification Section) for JP.BUSSENOT

(Signature of the Executive Coordinator)

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Continuation of Boxes above:

Box 9 : Editorial Changes (merge of PIDs on DH2XX and DH5xx), back end moved to ground floor.

Box 11 : Audit report QCS/LB/08010 (28.01.2008) and Audit Close-out report QCS/LB/090302 (31.03.2009). Additional survey conducted on 08.03.2010 in the frame of a NRB on DH76xxx diodes.

ESCC AUDIT (CNES AND ESA) OF COBHAM AT THE SAME ADDRESS TOOK PLACE IN SEPTEMBER 2014 IN RELATION TO THE QUALIFICATION OF ISOLATORS AND CIRCULATORS (THE QMS IS THE SAME AND THE BACK-END AND TEST AREAS ARE ALSO COMMON).

REF: ESA-TECQES-RP-0508

Non compliance to ESCC requirements: 15

No.:	Specification	Paragraph	Non compliance

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance: 16

Executive Manager Disposition 17

Application Approval: Yes ☐ No ☐

Action / Remarks:

Date:

Signature, ESA Representative

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

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Tests conducted in compliance with:

- ESCC 5010 generic specification; Chart V (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

DH267-511 (5512016-11)	

Detail Specification reference:

Chart V	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroups	Thermal Shock Test	☒	ESCC 5010 Para. 9.5.2	DC1351-13J011A	6	0	
	Shock Test	☐	MIL-STD-750 Test Method 2016				Not applicable (agreed deviation) (*)
	Vibration Test	☐	MIL-STD-750 Test Method 2056				Not applicable (agreed deviation) (*)
	Constant Acceleration	☐	MIL-STD-750 Test Method 2006				Not applicable (agreed deviation) (*)
	Seal Test	☒	MIL-STD-750 Test Method 1071	DC1351-13J011A	6	0	
	Moisture Resistance	☒	MIL-STD-750 Test Method 1021	DC1418-05P004	6	0	Done on a different type with the same package (M208)
	Seal Test	☒	MIL-STD-750 Test Method 1071	DC1351-13J011A	6	0	
	Electrical Measurements at Room Temp.	☒	Table 2 of the Detail Specification	DC1351-13J011A	6	0	
	External Visual Inspection	☒	ESCC Basic Specification No. 20500	DC1351-13J011A	6	0	
Endurance Subgroup	Operating Life	☒	MIL-STD-750 Test Method 1026	DC1351-13J011A	8	0	
	Electrical Measurements during Endur. Test	☒	Table 6 of the Detail Specification	DC1351-13J011A	8	0	
	External Visual Inspection	☒	ESCC Basic Specification No. 20500	DC1351-13J011A	8	0	

Chart V	Test	Tick when done	Conditions	Date Code Diffusion Lot	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Electrical Subgroup – Electrical Measurements	Electrical Measurements at Room Temp.	☒	Table 2 of the Detail Specification	DC1351-13J011A	4	0	
	Electrical Measurements at High & Low Temp's	☒	Table 3 of the Detail Specification	DC1351-13J011A	4	0	
	External Visual Inspection	☒	ESCC Basic Specification No. 20500	DC1351-13J011A	4	0	
	Special Testing	☐	The Detail Specification				Not applicable (agreed deviation) (*)
Electrical Subgroup – Assembly Capability Tests	Solderability Test	☒	MIL-STD-750 Test Method 2026	DC1351-13J011A	2	0	
	Permanence of Marking	☒	ESCC Basic Specification No. 24800	DC1351-13J011A	2	0	
	Terminal Strength	☐	MIL-STD-750 Test Method 2036				Not applicable for M208b package (*)
Additional Tests		☐					
		☐					
		☐					

(*) DEVIATIONS AGREED IN ESCC 5512/016, Para. 4.2.5

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.