

	APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL Component Title: Resistors, Heaters, Flexible, single and double layer Executive Member: ESA Date: 13/10/13	Page 1 Appl. No. 184K			
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
4009002 xx yyyy	01 through 48	as in ESCC 4009/002	Single layer	400900204R1015	Similar to 400900204R1271, w/ bridged extension, strip heater
			Double layer	400900228R1016	
			Single layer	1EFISI508002	
Component Manufacturer IRCA, RICA Division		Location of Manufacturing Plant(s) Via Podgora 26 21029 Vittorio Veneto (TV) Italy		Date of original qualification approval: Date: 01/04/1992 Certificate Ref No. 184	
ESCC Specifications used for Maintenance of qualification testing: Generic: 4009 Issue 5 Detail(s): 4009/002 Issue 6 See box 14 for strip heater		Deviations to LVT testing and Detail Specification used: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (supply details in Box 15) Deviation from current Specifications: No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details)		Qualification Extension Report reference and date: ER.CMP.R 310/3 4-Sept.-2013 EFR.CMP.R 309.13 6-Sept.-2013 EFR.CMP.R 308.13 9-Sept.-2013	
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	
European customers	ESCC	-	many	More than 500 specific heater designations	
Non-European customers	ESCC	-	many	Less than 100 specific heater designations	
PID changes since start of qualification None <input checked="" type="checkbox"/> Minor* <input type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:			Current PID Verified by: ESA Name of Executive Representative Ref No: 5.34.16 Issue: 20 Rev Date: 27/07/2011		
PID unchanged since last MOQ in 2011			Date: 2011		
Current Manufacturing facilities surveyed by: ESA on 23/10/2013 (Name of Executive Representative) (Date) Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain Report Reference: RIC-AUD-2013					

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

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Ref. No's and purposes:

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.

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Date: 15.01.2014

(Signature of the Executive Coordinator)

Continuation of Boxes above:

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The manufacturing of the bridged, strip heater uses materials and processes already within the current domain of qualification. The configuration of these bridged parts was however not compatible with ESCC 4009/002 issue 06, as it set a maximum limit of length at 60 cm., and only specified single-segment heaters (no bridged configurations were acknowledged in Figure under Para. 1.6). This anomaly has been corrected with the update of the specification up to its issue 07. A strip heater, reference 1EFIS1508002 was also put through tests for this exercise of extension of qualification.

The manufacturing of strip heaters was already possible in the IRCA space line of heaters on the basis of their released process control specifications and the use of the already approved materials and processes. The current revision of the PID refers to the relevant procedure 8.240.003, which absorbed already this additional possibility of bridging segments to make strip heaters.

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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance

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

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RICA-IRCA will initiate a DCR to amend ESCC 4009/002 as described in Box 14. The change will not imply changes to variants definition. The materials and processes necessary to bridge segments to make strip heaters are all within the qualified domain and approved PID since 2011.

Executive Manager Disposition

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Application Approval: Yes ☐ No ☐

Action / Remarks:

*DCR 828 has been raised, reviewed and accepted in relation to the addition of strip heaters to the scope as mentioned in §16. above.

Date:

17.01.2014

Signature, ESA Representative

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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 4009 generic specification; Chart F4 (for ESCC/QPL parts);
- PID- 5.34.16 rev. 20 of 27.07.2011 (for ESCC/QML parts)
- N/A

Tests vehicle identification/description:

4009002 04 R1015 (RICA 1EFISD838007) 10pcs	RICA 1EFIS08002, similar to 4009002 04 R1271\ 10pcs
4009002 28 R1013 (RICA 1EFISD83808) 10 pcs	

Detail Specification reference: ESCC 4009/002

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
Environ./ Mech Subgroup	Robustness of Terminations	<input checked="" type="checkbox"/>	IEC 60068-2-21, Test Ua1	1313A	5+5+5	0	
	Climatic Sequence	<input checked="" type="checkbox"/>	ESCC 4009, Para. 8.7	1313A	5+5+5	0	
	Initial Measurements	<input checked="" type="checkbox"/>	Intermediate & End-Point Electricals Per Detail	1313A	5+5+5	0	
	Dry Heat	<input checked="" type="checkbox"/>	IEC 60068-2-2, Test Ba	1313A	5+5+5	0	
	Damp Heat (First Cycle)	<input checked="" type="checkbox"/>	IEC 60068-2-30, Test Db	1313A	5+5+5	0	
	Cold	<input checked="" type="checkbox"/>	IEC 60068-2-1, Test Ad	1313A	5+5+5	0	
	Low Air Pressure	<input checked="" type="checkbox"/>	IEC 60068-2-13, Test M	1313A	5+5+5	0	
	Damp Heat (Remaining Cycles)	<input checked="" type="checkbox"/>	IEC 60068-2-30, Test Db	1313A	5+5+5	0	
	DC Load	<input checked="" type="checkbox"/>	ESCC 4009, Para. 8.7.7	1313A	5+5+5	0	
	Final Measurements	<input checked="" type="checkbox"/>	Intermediate & End-Point Electricals Per Detail	1313A	5+5+5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC 20500	1313A	5+5+5	0	
Endurance Subgroup	Operating Life	<input checked="" type="checkbox"/>	ESCC 4009, Para. 8.8	1313A	5+5+5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC 20500	1313A	5+5+5	0	
	Permanence of marking	<input checked="" type="checkbox"/>	ESCC 24800	1313A	5+5+5	0	
Additional tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					

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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.