



APPLICATION FOR ESCC QUALIFICATION APPROVAL

Component Title: Solid state thin film fuses based on type HCSF

Executive Member: ESTEC

Date: 05/10/2020

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Components (including series and families) submitted for Qualification Approval

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ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
4008/002	24, 26, 28, 32	as per Specification	HCSF Type	400800226 400800228	400800224 400800232

Component Manufacturer SCHURTER AG	2	Location of Manufacturing Plant Werkhofstrasse 8-12 CH-6002 Lucerne SWITZERLAND	3	ESCC Specification used for Qualification	4
				Generic: 4008 Issue: 4 / July 2015 Detail/s: 4008/002 Issue: 3 / May 2019	

Qualification Report Reference and date: SCHURTER Report No.: D10-046-817 Date: 23/09/2020	5	PID used for manufacturing Qualification Lot	6
		Ref No: 0109.0063 Issue: B Date: 13/06/2018	

PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> (* Details not published, provided in confidential annex 2.)	7	Current PID Verified by Ref No: Issue Date	8
		ESA - S. Hernandez Name of Executive Representative 0109.0063 C 23/09/2020	

Current Manufacturing facilities surveyed by: ESA (Name of Executive Responsible Agency) MOM-surv-SCH-201020	20/10/2020 (Date)	9
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Report Reference Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Remark: Online survey due to travel restrictions
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Quality and Reliability Data Evaluation testing performed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Report Ref. No.: Equivalent Data: Certification:	Failure analysis, DPA, NCCS available Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> CA0449, CA0538	10
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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 13; that the reports and data are available at the ESCC Executive and therefore applies on behalf of ESA as the responsible Executive Member for ESCC qualification status to be given to the component(s) listed herein.

Date: 27/10/2020

F. Chiusano

(Signature of the Executive Coordinator)

Continuation of Boxes above: (Only non-confidential comments)

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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:

14


Executive Manager Disposition

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Application Approval: Yes No

Action / Remarks:

Date:

 Digitally signed
by Britta Schade
Date: 2020.10.30
11:36:27 +01'00'

B. Schade: Head of the Product Assurance
and Safety Department



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ANNEX 1: LIST OF TESTS DONE TO SUPPORT QUALIFICATION

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Tests conducted in compliance with:

- ESCC 4008 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD 0109.0044.M (for ESCC/QML parts)

Tests vehicle identification/description:

400800226	HCSS 7.5 A
400800228	HCSF 10 A

Detail Specification reference: 4008/002

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroup	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.13	2020	2x 20	0	---
	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC 60068-2-14	2020	2x 20	0	---
	Vibration	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 204	2020	2x 20	0	---
	Shock	<input checked="" type="checkbox"/>	IEC 60068-2-27	2020	2x 20	0	---
	Fusion Characterisation Tests	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.5	2020	2x 20	0	---
	Insulation Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 302	2020	2x 15	0	---
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2020	2x 20	0	---
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.13	2020	2x 20	0	---
	Damp Heat, Steady State	<input checked="" type="checkbox"/>	IEC 60068-2-78	2020	2x 20	0	---
	Fusion Characterisation Tests	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.5	2020	2x 20	0	---
	Insulation Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 302	2020	2x 15	0	---
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2020	2x 20	0	---
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.13	2020	2x 6	0	---
	Thermal Vacuum	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.15	2020	2x 6	0	---
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2020	2x 6	0	---



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Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Endurance Subgroup	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.13	2020	2x 20	0	---
	Operating Life	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 108	2020	2x 20	0	---
	Fusion Characterisation Tests	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.5	2020	2x 20	0	---
	Insulation Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 302	2020	2x 15	0	---
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2020	2x 20	0	---
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	2020	2x 20	0	---
Assembly Capability Subgroup	Robustness of Terminations	<input checked="" type="checkbox"/>	IEC 60068-2-21	2020	2x 5	0	---
	Solderability	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.4	2020	2x 20	0	---
	Verification of Overload Operation at DC Rated Voltage (Room Temperature)	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.6	2020	2x 20	0	---
	Insulation Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 302	2020	2x 20	0	---
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.13	2020	2x 20	0	---
	Verification of Overload Operation at DC Rated Voltage (Low Temperature)	<input checked="" type="checkbox"/>	ESCC 4008 Para. 8.6	2020	2x 20	0	---
	Insulation Resistance	<input checked="" type="checkbox"/>	MIL-STD-202, Test Method 302	2020	2x 20	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 APPROVAL

ENTRIES

- Form Heading** shall indicate:— the title of the component as given in its detail specification or the name of the series or family; — the entering date; — the serial number and the suffix of the form.
- Box 1** shall provide details given in table; in particular there shall be listed - the variants or range of variants; the range of components by using the ESCC code for values tolerances, etc.; the designation given in detail specification as 'based on'; ---under Test Vehicle enter either a cross or the specific characteristic capable to identify the component tested; — under component similar enter a cross.
- Box 2 and 3** Manufacturer's name and location of plant where the components were manufactured and tested.
- Box 4** Generic and detail specifications used during qualification program.
- Box 5** Reference to test report(s) submitted in support of application.
- Box 6** Enter details to identify the PID that was applicable at the time the qualification lot was manufactured.
- Box 7** If the PID was evolved after qualification lot manufacture, adequate details of such evolution shall be provided together with reasons for changes. Major changes shall be clearly marked.
- Box 8** The box serves to identify the current PID and the Executive Representative that has verified it together with the date of this occurrence.
- Box 9** This box can be completed only after a physical visit to the plant to confirm that the practices, procedures, materials, 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 10** Details entered shall be sufficient to evidence that an evaluation program according to ESCC Basic Specification No. 22600 has been performed and that the results thereof are summarized in the survey and test reports. If the evaluation program has not been carried out according to established ESCC documents, the applicant Executive Representative shall provide alternative data and declare its assessed degree of satisfactory compliance with the ESCC basic requirements. Reference shall be made to the reports on Destructive Physical Analysis (DPA), Failure Analysis and Non conformance (NCCS) issued during the Evaluation and/or Qualification Phase.
- Box 11** Enter the name of the Executive Coordinator and the signature.
- Box 12** To be used when there is a need to expand any of the boxes from 1 through 10. Identify box affected and reference the Box 12 in the relevant Box. Box 12 can be broken into 12a, 12b, etc. if several Boxes have to be expanded.
- Box 13** Fill table as requested.
- Box 14** Fill in any additional tasks required to achieve full compliance.
- Box 15** All Executive recommendations on the application itself, special conditions or restrictions, modifications of the QPL or ESCC QML entry, letters to the manufacturer, etc. shall be entered clearly in Box 15, signed by the ESA Representative.
- Box 16** Fill in Table as requested.
- Box 17** Confidential details of PID changes shall be provided.
- Box 18** State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 18 each nonconformance shall be sequentially numbered. If relevant state 'None'
- Box 19** Any additional action deemed necessary by the Executive Representative 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 nonconformance.
- Box 20** Additional Comments