



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: CAPACITORS, FIXED, CHIPS, BASE METAL ELECTRODE, CERAMIC DIELECTRIC
 Executive Member: ESA Date: 05/02/2018

Page 1
 Appl. No. 331A

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
3009/041	01, 02, 06, 07 03, 04, 05	5%, 10%, 20 % 16V, 25V, 50V, 100	various various	See page 4	Yes

Component Manufacturer AVX Limited 2	Location of Manufacturing Plant(s) 3 HILLMANS WAY INDUSTRIAL ESTATE BALLYCASTLE ROAD COLERAINE COUNTY LONDONDERRY NORTHERN IRELAND, UK	Date of original qualification approval: Date: 30/04/2015 Certificate Ref No. 331 4
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ESCC Specifications used for Maintenance of qualification testing: Generic: 3009 Issue: 3 Detail(s): 3009/041 Issue: 1 5	Deviations to LVT testing and Detail Specification used: No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (supply details in Box 15) Deviation from current Specifications: No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (Supply details) 6	Qualification Extension Report reference and date: See box 14 7
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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
				100000 pcs within the previous qualification period

PID changes since start of qualification 9 None <input type="checkbox"/> Minor* <input type="checkbox"/> Major* <input checked="" type="checkbox"/> *Provide details in box: Editorial + addition of 0402 and 2220 variants + addition of optional Ir@Thigh	Current PID Verified by: <u>ESA</u> 10 Name of Executive Representative Ref No: COL/ESA/PI-02 (BME) Issue: D Date 09/02/2018 Rev Date: 05/02/2018
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Current Manufacturing facilities surveyed by: <u>ESA</u> on <u>24/01/2017</u> (Name of Executive Representative) (Date)	11
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain	
Report Reference: <u>ESA-TECQES-MIN-004092</u>	



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Executive Member: ESA

Date: 05/02/2018

Page 2

Appl. No.

331A

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

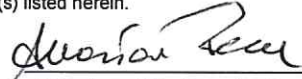
12

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

13

Date: 15/02/2018


(Signature of the Executive Coordinator)

Continuation of Boxes above:

14

[5] and [6]: DCR1028 to ESCC 3009 and ESCC 3009/041 has been implemented in November 2017, hence this update was not taken into account at the time of MOQ testing and ESCC survey as referenced in this form. The latest PID update (rev. D) already accounts for the revised versions of the specifications.

[7]: test evidence related to this extension of validity of qualification is found in individual test reports for each of the variants tested – see page 4



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Page 3

Appl. No.

331A

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: 23/02/2018

Signature, ESA Representative



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Page 4

Appl. No.

331A

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

18

Tests conducted in compliance with:

- ESCC 3009 generic specification; Chart V (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

300904101273KC, dc 1729, Lot Number: F847140	300904102183KE, dc 1724, Lot Number F89160	300904106825KA, dc 1724, Lot number F751480
300904101333KA, dc 1728, Lot Number F799810	300904102184KA, dc 1724, Lot Number F88920	300904107106KC, dc 1723, Lot Number F751450,
300904101682KE, dc 1728, Lot Number F799800	300904106225KE, dc 1724, Lot Number F751500	300904107226KA, dc 1723, Lot Number F751530
300904102124KC, dc 1724, Lot Number F847130	300904106475KC, dc 1724, Lot Number F751510	300904107475KE, dc 1723, Lot Number F75120

Detail Specification reference: 3009/041

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroup	Rapid Change of Temperature	<input type="checkbox"/>	ESCC 3009, Para. 8.8				100 cycles performed before OLT
	Steady State Humidity	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.2	All above	484	0	22 from each dc
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.5	All above	484	0	22 from each dc
Endurance Subgroup	Thermal shock	<input checked="" type="checkbox"/>	MIL-PRF-32535	All above	984	0	100 CYCLES (not required in ESCC), 123 from each dc.
	Operating Life	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.9. (extended up to 4000 hours in some cases)	All above	984	0	123 from each dc.
	Electrical Meas. After Endurance Testing	<input checked="" type="checkbox"/>	ESCC 3001, Para. 8.12	All above	96	0	123 from each dc.
	Temperature Characteristic	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.10	All above	96	0	12 from each dc.
Assembly Capability Subgroup	Solderability	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.11	All above	96	0	12 from each dc.
	Permanence of Marking	<input type="checkbox"/>	ESCC 3009, Para. 8.12			0	N/A components not marked
Other tests	Robustness of terminations	<input checked="" type="checkbox"/>	MIL-PRF-32535	All above	144	0	18 from each dc. Shear stress after board flex
	Resistance to soldering heat	<input checked="" type="checkbox"/>	MIL-PRF-32535	All above	176	0	22 from each dc
	Dielectric breakdown voltage	<input checked="" type="checkbox"/>	MIL-PRF-32535	All above	240	0	30 from each dc



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Page 6

Appl. No.

331A

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.