Component Title:

CAPACITORS, CERAMIC, TYPE II, HIGH CAPACITANCE, BASED

ON CASE STYLES BR, CV, AND CH

Executive Member: ESA Date: 24/01/2017 Appl. No.

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231K 1 Components (including series and families) submitted for Extension of Qualification Approval: **FSCC** BASED COMPONENT **TEST** COMPONENT **VARIANTS** RANGE OF COMPONENTS ON VEHICLE / S SIMILAR NO. 3001/030 01 up to 74 50V, 100V, 200V, 10%, 20% various See page 4 3001/030 01 up to 52, 59, 60 500V various See page 4 Component Manufacturer 2 3 Location of Manufacturing Plant(s) 4 **AVX Limited** Date of original qualification approval: HILLMANS WAY INDUSTRIAL ESTATE Date: 30/07/1996 BALLYCASTLE ROAD COLERAINECOUNTY Certificate Ref No. 231 LONDONDERRY NORTHERN IRELAND, UK 7 5 6 ESCC Specifications used for Deviations to LVT testing and Detail Specification Qualification Extension Report Maintenance of qualification testing: reference and date: Generic: 3001 Issue: 2 No (supply details in Box COL/ESR/16-01, -02, -05; January 2017 Detail(s): 3001/030 Issue: 6 Deviation from current Specifications: Yes (Supply details) 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** More than 600 lots and 70000 pcs for the qualified range PID changes since start of qualification Current PID Verified by: 9 10 **ESA** Name of Excutive Representative None Minor* X Ref No: COL/ESA/PI-01 5, REV I 24/01/2017 Major* Issue: Date *Provide details in box: 30/12/2016 Rev Date: 11 Current Manufacturing facilities surveyed by: **FSA** 24/01/2017 on (Name of Executive Representative) (Date) Satisfactory: Yes X No Explain Report Reference: ESA-TECQES-MIN-004092



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Failure Analysis, DPA, NCCS available: Yes No		
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. Date: 26/01/2017 (Signature of the Executive Coordinator)	Failure Analysis, DPA, NCCS available: Yes □ No ⊠ (Supply data)	12
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. Date: 26/01/2017 (Signature of the Executive Coordinator)	Ref. No's and purposes:	
	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. Date: 26/01/2017	13
Continuation of Boxes above: 14.		
	Continuation of Boxes above:	14
		1
		1



Component title:

CAPACITORS,CERAMIC, TYPE II, HIGH CAPACITANCE,BASED ON CASE STYLES BR, CV, AND CH

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Non comp	pliance to ESCC requirements:			15
No.:	Specification	Paragraph	Non compliance	
Additional	tasks required to achieve full compliance for	ESCC qualification or rationale for acceptability	of	16
noncompl	liance:			2005
Everything	Manager Disposition			
	Manager Disposition			17
Application / R	on Approval: Yes ⊠ No □ demarks:		1 Del	
Date:	30/01/2017		Signature, ESA Representative	

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

Tests conducted in compliance with:

ESCC 3001 generic specification; Chart V (for ESCC/QPL parts); Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

300103022C156KE (CH541C156KE3TX0) 1637A	
CH642C106KE7UW0 (RA.0101.112.41-CN- 106KG) F610700	

Detail Specification reference:

3001/030, RA.0101.112.41

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroup	Robustness of Terminations		IEC 68-2-21				Not required in ESCC 3001 iss2
	Resistance to Soldering Heat		ESCC 3001, Para. 8.9	1637A F610700 1626A	6 6 6	0	
	External Visual Inspection	\boxtimes	ESCC 20500	1637A F610700 1626A	6 6 6	0	
Me	Climatic Test Sequence			1			Not required in ESCC 3001 iss2
group	Rapid Change of Temperature		ESCC 3001, Para. 8.5	1637A F610700 1626A	20 +6 20+6 20+3	0	
nical Sub)	Steady State Humidity		ESCC 3001, Para. 8.2	1637A F610700 1626A	20 20 20	0	
Environmental / Mechanical Subgroup (Column 2)	Vibration		ESCC 3001, Para. 8.10	1637A F610700 1626A	6 6 3	0	
nmental (0	Shock		ESCC 3001, Para. 8.11	1637A F610700 1626A	6 6 3	0	
Enviro	External Visual Inspection	\boxtimes	ESCC 3001, Para. 8.8	1637A F610700 1626A	6 6 6	0	
Endurance Subgroup	Operating Life	×	ESCC 3001, Para. 8.12	1637A F610700 1626A	6 6 6	0	
	Electrical Meas. After Endurance Testing	×	ESCC 3001, Para. 8.12	1637A F610700 1626A	6 6 6	0	
Electrical Subgroup (Electrical Measurem	Temperature Coefficient (Type I)		ESCC 3001, Para.8.13				N/A ·
	Temperature Characteristic (Type II)	×	ESCC 3001, Para. 8.13	1637A F610700 1626A	6 6 3	0	
	Solderability	×	ESCC 3001, Para. 8.14	1637A F610700 1626A	6 6 3	0	
	Permanence of Marking	×	ESCC 24800	ESCC 3001, Para. 8.13	6 6 3	0	



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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.