APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: Capacitors, Fixed, Chip, Ceramic Dielectric, type II, based on types 0805, 1206, 1210, 1812, 2220

Executive Member: CNES Date: 14/06/2023

Appl. No. 110R

1 Components (including series and families) submitted for Extension of Qualification Approval:

ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
3009 008	03, 06, 07	See box 14	0805 - -	300900807331KG 300900806103KE 300900807683JC	
3009 009 -	03, 06, 07		1210 -	300900907224KE 300900906473KE	
3009 010 - 3009 011 - -	03, 06, 07		1812 - 2220 - -	300901007104KE 300901007474KC 300901106105KE 300901107105KE 300901107474KC	
3009 023 - -	03, 06, 07		1206 - -	300902307153KG 300902306183KE 300902307104KE	

2 Component Manufacturer

Kyocera-AVX

3 Location of Manufacturing Plant(s)

Avenue du Colonel Prat
21850 SAINT APOLLINAIRE - FRANCE

4 Date of original qualification approval:

Date: 01/02/1983

Certificate Ref No. 110

5 ESCC Specifications used for Maintenance of qualification testing:

Generic 3009 Iss 4

Detail(s) 3009/008 Iss 7
3009/009 7
3009/010 6
3009/011 6
3009/023 7

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:

Résultats type II - 110R - VOQ 2023.zip

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	LVT	Date code	Quantity Delivered
ALTER AIRBUS THALES TTI ARROW COMPUTADORAS ...				**2021 : 117154** **2022 : 207875** **2023 (until 04/2023) : 77432**

9 **PID** changes since start of qualification

None ☐
Minor* ☒
Major* ☐ *Provide details in box: 19

10 Current **PID** Verified by: L. Fontaine, CNES

Name of Excutive Representative

Ref No: 1G2 PID 100 21WQ
Issue: 21 Date: 17/09/1981
Rev Date: 07/04/2023

11 Current Manufacturing facilities surveyed by: JP Bussenot, CNES on 12/12/2018

(Name of Executive Representative) (Date)

Satisfactory: Yes ☒ No ☐ Explain

Report Reference: CNES/DSO/AQ/CQ-2018.0022759, 18/12/2018

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

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: 14/06/2023

Gianandrea Quadri

(Signature of the Executive Coordinator)

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Continuation of Boxes above:

Style	Detail Spec.	Model	Variants	Capacitance Range (pF)	Rated Volt. (V)	Tolerance (±%)
0805	3009/008	A_12G	03, 06	820 to 47 000 820 to 27 000 820 to 10 000	25 50 100	5, 10, 20
		A612Z	07, 10	2 700 to 150 000 2 700 to 100 000 2 700 to 47 000 330 to 15 000	25 50 100 200	
1210	3009/009	A_13G	03, 06	3 900 to 220 000 3 900 to 150 000 3 900 to 47 000	25 50 100	
		A613Z	07, 10	3 900 to 470 000 3 900 to 330 000 3 900 to 220 000 680 to 68 000	25 50 100 200	
1812	3009/010	A_14G	03, 06	6 800 to 470 000 6 800 to 270 000 6 800 to 82 000	25 50 100	
		A614Z	07, 10	22 000 to 1 000 000 22 000 to 680 000 22 000 to 470 000 3 300 to 150 000	25 50 100 200	
2220	3009/011	A_15G	03, 06	18 000 to 1 000 000 18 000 to 680 000 18 000 to 180 000	25 50 100	
		A615Z	07, 10	100 000 to 2 200 000 100 000 to 1 500 000 100 000 to 1 000 000 6 800 to 330 000	25 50 100 200	
1206	3009/023	A_20G	03, 06	2 200 to 100 000 2 200 to 68 000 2 200 to 22 000	25 50 100	
		A620Z	07, 10	3 300 to 220 000 3 300 to 150 000 3 300 to 100 000 470 to 47 000	25 50 100 200	

Note that in order to facilitate deliveries, minimum values were harmonized on the basis that a capacitance value may be delivered with a qualified process using either a higher voltage product or a compatible temperature characteristic (i.e. a variant 06 design against a variant 07 order) provided that the maximum chip thickness is compliant.

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 non compliance: 16

Executive Manager Disposition 17

Application Approval: Yes ☒ No ☐

Action / Remarks:

Date

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

ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION 18

Tests conducted in compliance with:

- ESCC 3009 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

300900807331KG DC2119 300900907224KE DC2122 300901007104KE DC2126 300900806103KE DC2127 300900906473KE DC2129 300901107105KE DC2146	300902307153KG DC2150 300902306183KE DC 2202 300901107105KE DC2150 300901106474KC DC2120 300901007474KC DC2151 300900807683JC DC2144 300902307104KE DC2050 (Customer LVT)

Detail Specification reference: 3009/008/009/010/011

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroup	Mounting	☒	IEC 60384-1	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 20	0	(*) Customer LVT
	Rapid Change of Temperature	☒	IEC 60068-2-14	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 20	0	(*) Customer LVT
	Steady State Humidity	☒	ESCC 3009, Para. 8.2	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 20	0	1 000 hours (*) Customer LVT

	Visual Inspection	☒	ESCC 3009, Para. 8.5	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 20	0	(*) Customer LVT
Endurance Subgroup	Mounting	☒	IEC 60384-1	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 10	0	(*) Customer LVT
	Operating Life	☒	ESCC 3009, Para. 8.9	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	25 25 25 25 25 25 25 25 25 25 25 25 10	0	2 000 hours (*) Customer LVT (1 000 hours)
	Electrical Measurements during Endurance Testing	☒	ESCC 3009, Para. 8.9	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144	25 25 25 25 25 25 25 25 25 25 25 25	0	(*) Customer LVT
Electrical Subgroup (Elect. Meas.)	Mounting	☒	IEC 60384-1	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	6 6 6 6 6 6 6 6 6 6 6 6 3	0	Before Robustness of Terminations (*) Customer LVT
	Insulation resistance at +125°C	☒	ESCC 3009, Para 8.10	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2050(*)	6 6 6 6 6 6 6 6 6 6 6 3	0	(*) Customer LVT

	Temperature Coefficient (Type I)	☐	ESCC 3009, Para. 8.10	-	-	-	Not applicable
	Temperature Characteristic (Type II)	☒	ESCC 3009, Para. 8.10	2119 2122 2126 2127 2129 2146 2150 2202 2150 2050(*)	6 6 6 6 6 6 6 6 6 3	0	(*) Customer LVT
	Robustness of Terminations	☒	ESCC 3009, Para.8.7	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	6 6 6 6 6 6 6 6 6 6 6 6 3	0	(*) Customer LVT
Electrical Subgroup (Ass. / Capab. Tests)	Solderability	☒	IEC 60068-2-58 Test Td	2119 2122 2126 2127 2129 2146 2150 2202 2150 2120 2151 2144 2050(*)	10 10 10 10 10 10 10 10 10 10 10 10 3	0	(*) Customer LVT
	Permanence of Marking	☐	ESCC 24800	-	-	-	Not applicable
Additional Tests		☐					
		☐					
		☐					

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 & 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.