

		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL			Page 1 Appl. No. 109P rev1
Component Title: Capacitors, Fixed, Chip, Ceramic Dielectric, type I, based on types 0805, 1206, 1210, 1812, 2220		Executive Member: CNES			Date: 17/12/2019
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 003 3009 004	03, 06	See box 14	0805 1210	3009003061301JC 3009004061501FE 3009004061002JC AN13CE0392KT5	
3009 005	03, 06		1812	3009005061502JE	Click here to enter text.
3009 006	03, 06		2220	3009006063302FE	Click here to enter text.
3009 022	03, 06		1206	3009022063921FE AN20CE0332KT2 AD20CE0272KT3	Click here to enter text.
Component Manufacturer TPC A division of AVX Corporation		2	Location of Manufacturing Plant(s) Avenue du Colonel Prat 21850 SAINT APOLLINAIRE – France		3
			Date of original qualification approval: Date: 01/02/1983		4
			Certificate Ref No. 109		
ESCC Specifications used for Maintenance of qualification testing: Generic: 3009 Issue: 2 / 3 Detail(s): 3009/003 Issue: 7 / 6 3009/004 3009/005 3009/006		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 checked="" type="checkbox"/> Yes <input type="checkbox"/> (Supply details)		6
			Qualification Extension Report reference and date: VoQ 2019 Certificate 109 (Type 1), 05/04/2019		7
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	
AIRBUS (TESAT) TAS			April 2017 to March 2019	33 456 parts	
TTI A.BEHRENS (G)					
RUAG APC (UK)					
PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:		9	Current PID Verified by: CNES Name of Executive Representative Agency		10
19			Ref No: 1G2 PID 100 19WQ Issue: 19 Rev Date: 18/12/2019		
Date: 19/12/2019					
Current Manufacturing facilities surveyed by: CNES on 18/12/2018 (Name of Executive Representative) Agency (Date)					11
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain					
Report Reference: 2018-0022759-CR					



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

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

Date: 19/12/2019

JP. BUSSENOT

(Signature of the Executive Coordinator)

Continuation of Boxes above:

Style	Model	Detail Spec.	Variants (1)	Capacitance Range (pF)	Rated Volt. (V)	Tolerance (±%)	TC (ppm/°C)
0805	A_12C	3009/003	03, 06	4.7 to 9.1 10 to 1 500 1800 to 2200 (2)	50, 100 50	0.5 pF 1, 2, 5, 10 1, 2, 5, 10	± 30
1206	A_20C	3009/022	03, 06	10 to 3 900 4 700 (2)	50, 100 50	1, 2, 5, 10	± 30
1210	A_13C	3009/004	03, 06	22 to 6 800 8 200 to 10 000	50, 100 50	1, 2, 5, 10	± 30
1812	A_14C	3009/005	03, 06	100 to 15 000	50, 100	1, 2, 5, 10	± 30
2220	A_15C	3009/006	03, 06	470 to 33 000	50, 100	1, 2, 5, 10	± 30

(1) Variant 01 (AgPd) replaced in 2013 with variant 03 (AgPdPt) was removed from TPC PID revision 15

(2) Extension of 50V qualified ranges for 0805 and 1206 ranges is covered with the 2012/2013 similar extension of 50V qualified ranges for 1210 sizes. Electrical (same dielectric thickness therefore same electrical field) and Mechanical data (smaller chip sizes) including evaluation testing were presented as part of the introduction of ceramic 90C (report 1G2-220038Y-00CQ dated 26/11/2012)

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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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Executive Manager Disposition

17


Application Approval: Yes ☒ No ☐

Action / Remarks:

Date:

27.01.2020

B. Schade, Head of ESA Product Assurance and Safety Department

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

Tests vehicle identification/description:


3009003061301JC – DC 1727	AN20CE0332KT2 – DC 1735
3009022063921FE – DC 1820	AD20CE0272KT3 – DC 1839
3009004061501FE – DC 1751	
3009004061002JC – DC 1805	3009005061502JE – DC 1817
AN13CE0392KT5 – DC 1739	3009006063302FE – DC 1730, 1843

Detail Specification reference: 3009/003/004/005/006/022

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	<input checked="" type="checkbox"/>	IEC 60384-1	1727	20	0	(a) 1206 / AN20CE0332J2L (T2) (b) 1206 / AD20CE0272J2L (T3)
				1820	20		
				1735 (a)	20		
				1839 (b)	20		
				1751	20		
				1805	20		
				1817	20		
				1730	20		
				1843	20		
	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC 60068-2-14	1727	20	0	
				1820	20		
				1735 (a)	20		
				1839 (b)	20		
				1751	20		
				1805	20		
				1817	20		
				1730	20		
				1843	20		
	Steady State Humidity	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.2	1727	20	0	1 000 hours
				1820	20		
				1735 (a)	20		
				1839 (b)	20		
				1751	20		
				1805	20		
				1817	20		
				1730	20		
				1843	20		

	Visual Inspection	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.5	1727 1820 1735 (a) 1839 (b) 1751 1805 1817 1730 1843	20 20 20 20 20 20 20 20 20	0	
Endurance Subgroup	Mounting	<input checked="" type="checkbox"/>	IEC 60384-1	1727 1735 (a) 1751 1739 (c) 1805 1817 1730 1820 1839 (b) 1843	20 40 20 40 40 20 20 20 20 2 x 25	0	(c) 1210 / AN13CE0392J2K (T5)
	Operating Life	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.9	1727 1735 (a) 1751 1739 (c) 1805 1817 1730 1820 1839 (b) 1843	20 40 20 40 40 20 20 20 20 2 x 25	0	2 000 hours
	Electrical Measurements during Endurance Testing	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.9	1727 1735 (a) 1751 1739 (c) 1805 1817 1730 1820 1839 (b) 1843	20 40 20 40 40 20 20 20 20 2 x 25	0	
Electrical Subgroup (Elect. Meas.)	Mounting	<input type="checkbox"/>	IEC 60384-1				Option
	Temperature Coefficient (Type I)	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.10	1735 (a)	5	0	
	Temperature Characteristic (Type II)	<input type="checkbox"/>	ESCC 3009, Para. 8.10				Not Applicable
	Robustness of Terminations	<input checked="" type="checkbox"/>	ESCC 3009, Para 8.7	1735 (a) 1751 1817 1843	20 6 6 6	0	
Assembly Capability Subgroup	Solderability	<input checked="" type="checkbox"/>	IEC 60068-2-58 Test Td	1825	6	0	Customer LAT3
	Permanence of Marking	<input type="checkbox"/>	ESCC 24800				Not Applicable

Additional Tests	Insulation resistance at +125°C	<input checked="" type="checkbox"/>	ESCC 3009 Iss. 1 Para 9.4.1.3	1727 1730 1751 1817 1820 1843 1845	6 6 6 6 6 6 6	0	
		<input type="checkbox"/>					
		<input type="checkbox"/>					

	<p align="center">APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</p> <p>Component title: Capacitors, Fixed, Chip, Ceramic Dielectric, type I, based on types 0805, 1206, 1210, 1812, 2220</p> <p>Executive Member: CNES Date: 17/12/2019</p>	<p align="right">Page 6</p> <p align="right">Appl. No.</p> <p align="right">109P rev1</p>
<p align="center">NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL</p>		
<p>ENTRIES</p>		
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.	