



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: Capacitors, Ceramic, Chip, Type II, sizes 0402 to 2220

Appl. No.

Executive Member: CNES

Date: 10/04/2024

324E

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

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ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
3009/008 3009/039 3009/009 - 3009/039	06 & 07 02 & 14 06 & 07 - 04 & 16	16V to 100V (See box 14)	CNC2 02S CNC2 04S CNC4 02S - CNC4 04S	300900806104KA 300903914154KA 300900907334KC 300900907104ME 300903904333KE	See box 14 for qualified ranges.
3009/010 - - 3009/039 3009/011 - 3009/039	06 & 07 - - 05 & 17 06 & 07 - 06 & 18	16V to 100V (See box 14)	CNC6 02S - - CNC6 04S CNC7 02S - CNC7 04S	300901006474JC 300901007104KE 3009039017334KE - 300901107395KX 300901106105KC	
3009/023 3009/039 3009/038 3009/039	06 & 07 03 & 15 06 & 07 01 & 13	16V to 100V (See box 14)	CNC12 02S CNC12 04S CNC14 02S CNC14 04S	- - - 300903904333KE	
3009/039 3009/043	25 & 26 06	10V to 50V (See box 14)	CNC19 04S CNC19 02S	- 300904306103KY	

Component Manufacturer EXXELIA Technologies	2	Location of Manufacturing Plant(s) EXXELIA 1, rue des Temps Modernes 77600 CHANTELOUP EN BRIE FRANCE	3	Date of original qualification approval: Date: 24/10/2012 Certificate Ref No. 324	4
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ESCC Specifications used for Maintenance of qualification testing: Generic: 3009 Issue: 4 Detail(s): 3009/008 Issue: 7 3009/038 6 3009/039 4/5 3009/009 6 3009/010 5/6 3009/011 5 3009/023 8 3009/043 3	5	Deviations to LVT testing and Detail Specification used: No <input checked="" type="checkbox"/> Yes <input 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: CNC2 02 S 100nF +-10% 25V lot MG313211200066 220103 i.B CNC2 04 S 150nF +-10% 25V lot MG313210700735 220024 i.B CNC4 02 S 100nF +-10% 100V lot MG313220300761 220787 i.B CNC4 02 S 330nF +-20% 50V lot MG313220100500 220688 i.B CNC4 04 S 33nF +-10% 100V lot MG313211200392 220194 i.B CNC6 02 S 100nF +-10% 100V lot MG313210700402 220074 i.B CNC6 02 S 330nF +-20% 100V lot MG313230100526 230749 i.A CNC6 02 S 470nF ±5% 50V lot MG313201100824 210759 i.B CNC7 02 S 1µF +-10% 50V lot MG313220500612 220471 i.B CNC7 02 S 3.9µF +-10% 16V lot MG313211000508 220513 i.B CNC14 04 S 100nF +-10% 16V lot MG313220100146 220086 i.B CNC19 02 S 10nF +-10% 10V lot MG313210300839 220299 i.B	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)

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Project Name	Testing Level	LAT	Date code	Quantity Delivered
3D PLUS AIRBUS DEFENCE & SPACE SAS ALTER TECHNOLOGY TUV BRADFORD ENGINEERING B.V. CSN ELEKTRONIK GMBH DA DESIGN OY MILEXIA ITALIA SPA OHB SYSTEM REMRED LTD SPUR ELECTRON LTD SYRLINKS TERMA A/S TESAT-SPACECOM GMBH UND CO.KG THALES ALENIA SPACE	-	-	Lots delivered since last MoQ	137 523 pièces

PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: 19	9	Current PID Verified by: L. Fontaine, CNES Name of Executive Representative Ref No: PID 624.03.390 Issue: Rev L Date: 13/12/2023 Rev Date: 01/06/2023	10
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Current Manufacturing facilities surveyed by: Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain	L. Farhat, ESA & L. Fontaine, CNES (Name of Executive Representative)	on 13/10/2023 (Date)	11
Report Reference: 2023.0016237 ESCC Audit Report EXXELIA Chanteloup-En-Brie			



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

Ref. No's 2 CETE 401 i.A, maintenance of qualification exceeding the three months delay CLOSED 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: 11/04/2024

Gianandrea Quadri
G. QUADRI, CNES
(Signature of the Executive Coordinator)

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Continuation of Boxes above:

Box 1, Range of Components :

Style	Detail Spec.	Model	Variants	Capacitance Range (pF)	Rated Volt. (V)	Tolerance (±%)
0805	3009/008	CNC2 02S	06	1 000 to 150 000	16	5, 10, 20
				1 000 to 100 000	25	
				1 000 to 47 000	50	
				1 000 to 10 000	100	
	3009/039	CNC2 04S	02	1 000 to 390 000	16	
				1 000 to 150 000	25	
				1 000 to 100 000	50	
				1 000 to 47 000	100	
1210	3009/009	CNC4 02S	06	2 200 to 560 000	16	
				2 200 to 390 000	25	
				2 200 to 220 000	50	
				2 200 to 56 000	100	
3009/039	CNC4 04S	04	2 200 to 560 000	16		
			2 200 to 390 000	25		
			2 200 to 220 000	50		
			2 200 to 56 000	100		
1812	3009/010	CNC6 02S	06	3 900 to 1 200 000	16	
				3 900 to 680 000	25	
				3 900 to 470 000	50	
				3 900 to 120 000	100	
3009/039	CNC6 04S	05	3 900 to 1 800 000	16		
			3 900 to 1 200 000	25		
			3 900 to 820 000	50		
			3 900 to 470 000	100		
2220	3009/011	CNC7 02S	06	22 000 to 2 700 000	16	
				22 000 to 1 500 000	25	
				22 000 to 1 000 000	50	
				22 000 to 270 000	100	
07	07	22 000 to 3 900 000	16			
		22 000 to 2 200 000	25			
		22 000 to 1 800 000	50			
		22 000 to 1 000 000	100			



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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

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Application Approval: Yes No

Action / Remarks:

Date:

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

	3009/039	CNC7 04S	06	22 000 to 2 700 000 22 000 to 1 500 000 22 000 to 1 000 000 22 000 to 270 000	16 25 50 100	
			18	22 000 to 3 900 000 22 000 to 2 200 000 22 000 to 1 800 000 22 000 to 1 000 000	16 25 50 100	
1206	3009/023	CNC12 02S	06	1 800 to 270 000 1 800 to 180 000 1 800 to 82 000 1 800 to 27 000	16 25 50 100	5, 10, 20
			07	1 800 to 1 000 000 1 800 to 270 000 1 800 to 100 000 1 800 to 120 000	16 25 50 100	
	3009/039	CNC12 04S	03	1 800 to 270 000 1 800 to 180 000 1 800 to 82 000 1 800 to 27 000	16 25 50 100	
			15	1 800 to 1 000 000 1 800 to 270 000 1 800 to 100 000 1 800 to 120 000	16 25 50 100	
0603	3009/038	CNC14 02S	06	270 to 33 000 270 to 22 000 270 to 10 000 270 to 2 700	16 25 50 100	
			07	270 to 100 000 270 to 33 000 270 to 22 000 270 to 12 000	16 25 50 100	
	3009/039	CNC14 04S	01	270 to 33 000 270 to 22 000 270 to 10 000 270 to 2 700	16 25 50 100	
			13	270 to 100 000 270 to 33 000 270 to 22 000 270 to 12 000	16 25 50 100	
0402	3009/043	CNC19 02S	06	68 to 12 000 68 to 8 200 68 to 5 600 68 to 3 300	10 16 25 50	5, 10, 20
	3009/039	CNC19 04S	25	68 to 12 000 68 to 8 200 68 to 5 600 68 to 3 300	10 16 25 50	



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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:

CNC2 02 S 100nF +/-10% 25V 300900806104KA DC2210	CNC7 02 S 3.9µF +/-10% 16V 300901107395KX DC2229
CNC4 02 S 330nF +/-20% 50V 300900907334KC DC2244	CNC7 02 S 1µF +/-10% 50V 300901106105KC DC2229
CNC4 02 S 100nF +/-10% 100V 300900907104ME DC2247	CNC14 04 S 100nF +/-10% 16V 300903913104KX DC2210
CNC6 02 S 470nF ±5% 50V 300901006474JC DC2141	CNC2 04 S 150nF +/-10% 25V 300903914154KA DC2210
CNC6 02 S 100nF +/-10% 100V 300901007104KE DC2208	CNC4 04 S 33nF +/-10% 100V 300903904333KE DC2217
CNC6 02 S 330nF +/-20% 100V 3009039017334KE DC2405	CNC19 02 S 10nF +/-10% 10V 300904306103KY DC2218

Detail Specification reference: 3009/008/038/039/009/010/011/023/043

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, 4.33	2210	20	0	
				2244	20		
				2247	20		
				2208	20		
				2405	20		
				2229	20		
				2229	20		
				2210	20		
	2218	20					
	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC 60068-2-14	2210	20	0	
				2244	20		
				2247	20		
				2208	20		
				2405	20		
				2229	20		
				2229	20		
2210				20			
2218	20						
Steady State Humidity	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.2	2210	20	0		
			2244	20			
			2247	20			
			2208	20			
			2405	20			
			2229	20			
			2229	20			
			2210	20			
2218	20						
Visual Inspection	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.5	2210	20	0		
			2244	20			
			2247	20			
			2208	20			
			2405	20			
			2229	20			
			2229	20			
			2210	20			
2218	20						
Mounting	<input checked="" type="checkbox"/>	IEC 60384-1, 4.33	2210	20	0		
			2244	20			
			2247	20			
			2141	10			
			2208	10			
			2405	20			
			2229	10			
			2229	10			
			2210	20			
			2210	10			
			2217	10			
			2218	20			

Electrical Subgroup	Operating Life	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.9	2210 2244 2247 2141 2208 2405 2229 2229 2210 2210 2217 2218	20 20 20 10 10 20 10 10 20 10 10 20	0	
	Mounting	<input checked="" type="checkbox"/>	IEC 60384-1, 4.33	2210 2244 2247 2141 2208 2405 2229 2229 2210 2210 2217 2218	6 6 6 3 3 6 3 3 6 3 3 3	0	
	Capacitance-Temperature Characteristics	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.10	2210 2244 2247 2141 2208 2405 2229 2229 2210 2210 2217 2218	6 6 6 3 3 6 3 3 6 3 3 3	0	Normally done prior to mounting
	Robustness of Terminations	<input checked="" type="checkbox"/>	ESCC 3009, Para. 8.7	2210 2244 2247 2141 2208 2405 2229 2229 2210 2210 2217 2218	6 6 6 3 3 6 3 3 6 3 3 3	0	
Ass. / Capab. Subgroup	Solderability	<input checked="" type="checkbox"/>	IEC 60068-2-58	2210 2244 2247 2141 2208 2405 2229 2229 2210 2210 2217 2218	6 6 6 3 3 6 3 3 6 3 3 3	0	
	Permanence of Marking	<input type="checkbox"/>	ESCC 24800				NA



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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.