



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: **Capacitors, Fixed, Reconstituted Mica, High Voltage, based on type HT86PS**
 Executive Member: CNES Date: 12/06/2020

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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
3006 022	01	See box 14	HT86PS	See box 14	Values Covered by ESCC Specification 3006/022

Component Manufacturer EXXELIA Technologies	2	Location of Manufacturing Plant(s) 1, rue des Temps Modernes 77 600 CHANTELOUP en BRIE	3	Date of original qualification approval: Date: 01/08/1998 Certificate Ref No. 251	4
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ESCC Specifications used for Maintenance of qualification testing: Generic: 3006 Issue: 2 Detail(s): 3006/022 Issue: 3	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: Test Reports 18/1236, Oct. 2018 & 20/0296, Feb. 2020 Test Reports 19/0196, Feb. 2019 & 20/0295, Feb. 2020 Test Report 20/0052, Jan. 2020 Test Report 20/0073, Jan. 2020 & 20/0291, Feb. 2020 Test Report 20/0152, Feb. 2020	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)

Project Name	Testing Level	LAT	Date code	Quantity Delivered
Main customers :	B C			Level B: 82,9% Level C: 17,1% 35 lots
TESAT SP2009 (*)				
THALES ALENIA Space AIRBUS DS				
See in appendix				(*) TESAT specification SP2009 is based on ESCC level B format and is tailored to TESAT needs (voltages ...). It represents more than 75% of space parts delivered and 60% of space orders.

PID changes since start of qualification None <input checked="" type="checkbox"/> Minor* <input type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:	9	Current PID Verified by: CNES Name of Agency Representative Ref No: 423.91.390 Issue: J Date: 29/05/2018 Rev Date: 30/04/2018	10
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Current Manufacturing facilities surveyed by: Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Report Reference: 2018-0009182-CR	CNES (Name of Agency Representative)	on (Date)	30/05/2018 (Date)	11
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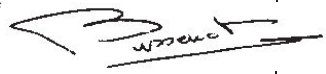
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Failure Analysis, DPA, NCCS available: Yes No (Supply data)

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: 12/06/2020


JP. BUSSENOT
(Signature of the Executive Coordinator)

Continuation of Boxes above:

Range of Components: items No 01 to 194 :

- 33nF to 2.2µF 1.5kV ±10/20%
- 15nF to 1.5µF 2.5kV ±10/20%
- 15nF to 1.0µF 3.5kV ±10/20%
- 6.8nF to 470nF 5kV ±10/20%
- 2.2nF to 220nF 7.5kV ±10/20%
- 1nF to 100nF 10kV ±10/20%
- 3.3nF to 68nF 12.5kV ±10/20%
- 1.5nF to 33nF 15kV ±10/20%
- 680pF to 15nF 20kV ±10/20%

Test Vehicles :

- (1) HT86PS 102MJ, 1000pF ±20%, 12.5kV date code 1839 Lot Nr 338.18.04.0152 – Reports 18/1236 (C2) and 20/0296 (LAT1 Environmental / Mechanical Subgroups)
- (2) HT86PS 101MK, 100pF ±20% 15kV date code 1906 Lot Nr 338.18.11.0127 – Reports 19/0196 (C2) and 20/0295 (LAT1 Environmental / Mechanical Subgroups)
- (3) HT86PS 102MJ, 1000pF ±20% 12.5kV date code 2001 Lot Nr 338.19.05.0097 – Report 20/0052 (C3)
- (4) HT86PS 103 KG 10nF ±10% 7.5kV date code 2002 Lot Nr 338.19.09.0131 – Report 20/0073 (C-) and 20/0291 (LAT2)
- (5) HT86PS 101MJ 100pF ±20% 12.5kV date code 2001 Lot Nr 338.19.05.0096 – Report 20/0152 (C3)

Values 100pF @ 12,5kV, 1000pF @ 12.5kV and 100pF @ 15kV available from stocks are not strictly within ranges defined in ESCC 3006/022, but were found pertinent, in particular for Environmental / Mechanical testing to supplement the 10nF @ 7,5kV Endurance tests performed for the purpose of the maintenance testing performed.



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Non compliance to ESCC requirements:

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No.:	Specification	Paragraph	Non compliance
	3006	Chart V	None

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:

 Digitally signed by Britta Schade
Date: 2020.06.30 13:49:00 +02'00'

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 3006 generic specification; Chart V (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

HT86PS 1nF ±20%, 12.5kV date code 1839	HT86PS 100pF ±20% 15kV date code 1906
HT86PS 1nF ±20%, 12.5kV date code 2001	HT86PS 10nF ±10% 7.5kV date code 2002
HT86PS 100pF ±20% 12.5kV date code 2001	

Detail Specification reference: EFD 421.91.390, ESCC 3006/022,

Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental / Mechanical Subgroup (Column 1)	Robustness of Terminations	<input checked="" type="checkbox"/>	IEC 68-2-21	1839 1906	4 4	0 0	
	Resistance to Soldering Heat	<input checked="" type="checkbox"/>	IEC 68-2-20	1839 1906	4 4	0 0	
	Climatic Sequence	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.14	1839 1906	4 4	0 0	
	Seal Test	<input type="checkbox"/>	IEC 68-2-17				NA
Environmental / Mechanical Subgroup (Column 2)	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC 68-2-14	1839 1906	4 4	0 0	
	Vibration	<input checked="" type="checkbox"/>	IEC 68-2-6	1839 1906	4 4	0 0	
	Shock or Bump	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.13	1839 1906	4 4	0 0	
	Climatic Sequence	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.14	1839 1906	4 4	0 0	
	Seal Test	<input type="checkbox"/>	IEC 68-2-17				NA
Endurance Subgroup	Operating Life	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.16	1839 1906 2002	16 16 16	0 0 0	1 000H
	Electrical Measurements during Endurance Testing	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.6.5	1839 1906 2002	16 16 16	0 0 0	
Electrical Subgroup (Electrical Measurements)	High and Low Temperature Stability	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.15	1839	6	0	-
				1906	6	0	-
				2001	6	0	-
				2002	-	-	NA per ESCC 3006/022
				2001	6	0	-
	Electrical Measurements at Room Temperature	<input checked="" type="checkbox"/>	ESCC 3006, Para. 9.6.4	1839 1906 2001 2002 2001	6 6 6 6 6	0 0 0 0 0	
External Visual Inspection	<input checked="" type="checkbox"/>	ESCC 20500	1839 1906 2001 2002 2001	6 6 6 6 6	0 0 0 0 0		

Electrical Subgroup (Assembly / Capability Tests	Solderability	<input checked="" type="checkbox"/>	IEC 68-2-20	1839	4	0	
				1906	4	0	
				2001	4	0	
				2002	4	0	
				2001	4	0	
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC 24800	1839	4	0	
				1906	4	0	
				2001	4	0	
				2002	4	0	
				2001	4	0	



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Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Additional Tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					

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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.