O Selection	ES	CC
-0	20	

Component Title: Capacitors, Ceramic, Type II, types CNC 31 to CNC 34

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The same of the sa		Executive M	ember: (	CNES		Date	e: 22/11/2017		315C
Components (includ	ing series and families	submitted fo	r Extension	of Qualificatio	n Approval:				1
ESCC COMPONENT NO.	VARIANTS	RAN	GE OF COM	//PONENTS	BASED		TEST VEHICLE / S		PONENT MILAR
3001/037	01 to 04	All values	All values, 16 and 25V			0	CNC31NE 6.8µF 16 CNC31NE 6.8µF 25V CNC31NE 10µF 16V CNC33NE 33µF 16V		
	05 to 08	All values	s, 16 and 25	sv.	CNC3xPE		CNC31PE 10µF 16V CNC31PE 6.8µF 25V CNC31PE 12µF 16V CNC32PE 10µF 16V CNC34PE 47µF 16V		
	09 to 12	All values	s, 16 and 25	SV.	CNC3xPLE		CNC32PLE 10µF 16V	Click here	to enter text.
	13 to 16	All values	s, 16 and 25	5V	CNC3xLE			x	
Component M EXXELIA Technolog	Tomas a Ta	s Temps Mo	nufacturing Pla odernes IP EN BRIE	ant(s) 3	Date of original qualification approval: Date: 15/11/2011  Certificate Ref No. 315			4	
Maintenance of qualification testing: used:  Generic: 3001 Issue 1, 2 : No ⊠				l:  ☑ Yes ☐ (supply details in Box 15) ation from current Specifications:			Qualification Extension Report reference and date: Test Report 16/0071, February 2016 Test Report 17/1025, October 2017		
Summary of procure	ement or equivalent tes	t results durin	g current va	alidity period in	support of this ar	oplication (	those to ESCC listed	first)	8
Project Name	Testing Leve		LAT	andity period in	Date code	Spiredion (		y Delivered	
TESAT Spacecom		-				7 9	904 parts		
THALES ALENIA Space		-							
ALTER Technology		-				ĺ			
Click here to enter to	ext. Click here to en text.	ter Click h	ere to enter	Click h	ere to enter text.	CI	ick here to enter text.		
PID changes since s	start of qualification		9	Current PID	Verified by:		CNES		10
None 🗵			No analysis		Nan	ne of Excutive Represe	entative		
Minor*				Ref No:	640.03.390				
Major* □	*Provide details in bo	X:		Issue:	F		Date	18/00	8/2015
	19			Rev Date:	17/06/2015				11
Current Manufacturi	ng facilities surveyed b	y:		CNES		on	0	9/11/2017	1
(Nar				e of Executive	Representative)			(Date)	
Satisfactory:	Yes ⊠	No	□ Exp	plain					
Report Reference;	CNES/DSO/A	Q/CQ- 2017	.0018221						

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Failure Analysis, DPA, NCCS available:

Yes

No

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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.

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Date:

23/11/2017

JP. BUSSENOT

(Signature of the Executive Coordinator)

Continuation of Boxes above:

Box 1 - Test vehicles submitted to Chart F4 ESCC 3001 issue 2 as described below:

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Product	Date Code	N° Lot	Parts in Stock	Level	N° PV	Tests to be performed		
CNC31NE 6.8µF ±10% 16V	1647	E16120030	11	C-	16/1141	SubarrauntA		
CNC31PE 10µF ±10% 16V	1637	E16070131	9	C-	16/0909	Subgroup1A		
CNC31NE 6.8µF ±10% 25V	1618	E16040076	9	B-	16/0439			
CNC31NE 6.8µF ±10% 25V	1647	E16110140	6	C-	16/1139	Subgroup 1A		
CNC31PE 6.8µF ±10% 25V	1711	E17030101	5	C-	17/0399			
CNC31PE 10µF ±10% 16V	1606	E16010060	6	C-	16/0138	Subgroup 1B		
CNC32PE 10µF ±10% 16V	1704	E17030008	6	C-	17/0168	Subgroup 1B		
CNC33NE 33µF 10% 16V	1701	E17010065	20	C-	17/0078	Subgroup 2A		
CNC31PE 12µF ±10% 16V	1649	E17010021	9	C-	17/0018	Subgroup 2A		
CNC31PE 12µF ±10% 16V	1723	E17050157	11	C-	17/0680			
CNC31NE 10µF ±10% 16V	1637	E16070132	5	B-	16/0851	Subgroup 2B		
CNC31PE 10µF ±10% 16V	1709	E17020094	5	C-	17/0286	Subgroup 2B		
CNC31NE 6.8µF ±10% 25V	1703	E16120224	2	C-	17/0077	Subgroup 3		
CNC32PE 10µF ±20% 16V	1626	E16060016	2	B-	16/0606			
CNC32PLE 10µF 10% 16V	1601	E15110154	3	C-	16/0047	Subgroup 3		



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Non comp	pliance to ESCC_requirements:		15
No.:	Specification	Paragraph	Non compliance
1	ESCC 3001		Due to stock limitations, minimum Qty per test vehicle as described in note 1 to Chart F4 of ESCC 3001 Issue 2 could not be followed
A -J -J*#*		5000 - 15 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	
Additiona noncomp	tasks required to achieve full compliance for liance:	ESCC qualification or rationale for acceptability	of 16
1.		n of ESCC 3001 issue 2 on parts manufactured	according to issue 1
	, , , , , , , , , , , , , , , , , , , ,		3
	N. S. S.		
Executive	: Manager Disposition		17
Action / F	on Approval: Yes		Zu Di
Date:			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 F4 (for ESCC/QPL parts);
   PID- (for ESCC/QML parts)
   TFD (for ESCC/QML parts)

Tests vehicle identification/description:

CNC31NE 6.8µF ±10% 16V DC 1647	CNC31NE/PE 10µF ±10% 16V DC 1606, 1637, 1709
CNC31NE 6.8µF ±10% 25V DC 1618, 1647, 1703, 1711	CNC31PE 10µF ±10% 16V DC 1618, 1647, 1703, 1711
CNC32PE/PLE 10µF ±10% 16V DC 1601, 1626, 1704	CNC31PE 12µF ±10% 16V DC 1649, 1723
CNC33NE 33µF ±10% 16V DC 1701	CNC34PE 47µF ±10% 16V DC 1545, 1545A, 1545B (LAT 1)

Detail Specification reference:

3001/037

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	N° of Rejects	Comments if not performed. Comments on Rejection
	Rapid Change of Temperature	⊠	IEC 60068-2-14, test Na	1647 1637 1618 1647 1711	11 9 9 6 5	0	
	Steady State Humidity (85/85) 1 000H	Ø	ESCC 3001, Para 8.2	1647 1637 1618 1647 1711	11 9 9 6 5	0	
Subgroup 1	External Visual Inspection	Ø	ESCC 20500	1647 1637 1618 1647 1711	11 9 9 6 5	0	
S							
	Rapid Change Of Temperature	⊠	IEC 60068-2-14, test Na	1606 1704	6 6	0	
	Vibration	⊠	IEC 60068-2-6, test Fc	1606 1704	6 6	0	
	Shock	⊠	IEC 60068-2-27, test Ea	1606 1704	6	0	
	External Visual Inspection	Ø	ESCC 20500	1606 1704	6 6	0	
Subgroup 2	Operating Life	⊠	IEC 60384-1 clause 4.23	1701 1649 1723	20 9 11	0	
	Capacitance- Temperature Characteristic	⊠	ESCC 3001, Para 8.13	1637 1709	5 5	D	
Subgroup 3	Solderability	⊠	IEC 60068-2-20, test Ta	1703 1626 1601	2 2 3	0	
	Resistance to Soldering Heat	⊠	IEC 60068-2-20, test Tb	1703 1626 1601	2 2 3	0	
	Pennanence of marking	⊠	ESCC 24800	1703 1626 1601	2 2 3	0	
Tip.							
Additional							
Ade							



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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.