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2	603			
	Dear of	1000		

Component Title: Quartz Crystal Units in metal holder TO5

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-	SCC	500000000000000000000000000000000000000							Appl. No	<b>D</b> .
T. Market R. Coll.		Executiv	ve Member:	CNES		Da	te: 19/09/2014		33M	_
Components (including	ng series and familie	s) submitte	ed for Extension	of Qualification	Approval:					_ 1
ESCC COMPONENT NO.	All		Frequency Range :15 to 140 MHz		BASEL	0	TEST VEHICLE / S		COMPONENT SIMILAR	
3501001 , 3501008, 3501011, 3501012, 3501018					Туре Т807;		Mhz , ES' ES' ES' ES'		other variants in CC 3501001 CC 3501008 CC 3501011 CC 3501012 CC 3501018	
C			Landing of Ma	aufacturia - Dia	1 2					1
Component Manufacturer 2  RAKON France			rue de la Gla 05 ARGENTE			Date:	f original qualification ap 01/10/1976 cate Ref No. 33	oproval:		_ 4_
		5			6					7
ESCC Specifications used for Maintenance of qualification testing: Generic: 3501 Issue: 3  Detail(s): 3501 018 Issue: 5			Deviations to LVT testing and Detail Specification used:  No ⊠ Yes □ (supply details in Box 15)  Deviation from current Specifications:  No ⊠ Yes □ (Supply details)				Qualification Extension Report reference and date:			
						04/06/2014				
		3,5								8
Summary of procurent Project Name	nent or equivalent to Testing Lev	1008 - 53	during current va	alidity period in	support of this ap Date code	pplication ·	(those to ESCC listed for Quantity	7.5	red	
Cf. Salleoverview_ <b>M</b> ai20 2-August2014	1/13 95	9:09	* 1 PF	2	nd a					
							7.9 X 1 X 1 X 5			
PID changes since st	art of qualification		9	Current PID	Verified by:		CNES			10
None						Na	me of Excutive Represe	ntative		
Minor* ⊠ Major* □	*Provide details in b	OX:		Ref No: Issue:	3-QLT-005-07 07		Date:	. )	09/09/2014	
				Rev Date:	09/09/2014			-		11
Current Manufacturing facilities surveyed by:  (Na				CNES & ESA			on 21		1 '	1.1
			(Name	e of Executive F	Representative)		(Da			
Satisfactory:  Report Reference:	Yes ⊠ RAK-A	No UD-2011	⊃ □ Ex	olain						

# **ESCC**

#### APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component title:

Executive Member:

Quartz Crystal Units in metal holder TO5

Date: 19/09/2014

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Failure Analysis, DPA, NCCS available:

Yes

CNES

12

(Supply data)

Ref. No's and purposes:

2CRAK401

- MRB CLOSED OUT 77.1X.14.

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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:

25/09/2014

P.I. Philippe LAY (Head of Components and Qualification Section)For JP.BUSSENOT (Signature of the Executive Representative)

(Signature of the Executive Coordinator)

Continuation of Boxes above:

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#### PID Modification:

- Upload of FIF
- Correction of errors
- Add of materials and glue control

12/ A) PART OF THE MAB INVESTIGATION, THE RECIABILITY OF RAKON PARTS ( DESIGN AND PRODUCTION) COULD BE RE-CONFIRMED AND DEMONSTRATED. AN ISOLATED SINGLE CASE TRIGGERED THE NCCS; THE CAMP OF FAILURE WAS CONSIDENED TO BE THENHAL /M ECHAMICAL OVERSTRESS.

	ESCC	APPLICAT Component title: Executive Member	Quartz Crystal Units in	F ESCC QUALIFICATION APPROVAL metal holder TO5 Date: 19/09/2014	Page 3 Appl. No.
Non compliance	to ESCC requirements				
No.:	Specification		Paragraph	Non c	ompliance
THE I HAS BEE EDA. TI CONFINA	VOW-CONFOR  N MANAGED  TE MRB CO  RED A SING  LITY CONCER  Ger Disposition  oval: Yes	MANCE OB: IN MRBS NCLUSIEN FLE (JOLAT	WITH MAN TO CLOSE TH FO FAILURE	, A) REPERENCED WFACTURENS, USER	, CNES AND JEPT. NAL

Date:

Signature, ESA Representative

Component Title: Quartz Crystal Units in metal holder TO5

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Executive Member: CNES

Date: 19/09/2014

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

Tests conducted in compliance with:

ESCC 3501 generic specification; Chart V (for ESCC/QPL parts); Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

3501 018 C0073 , 48 Mhz , T807		
Contract to the Contract of th	0 11 11 1	V -41

Detail Specification reference:

Chart V	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
le.	Shock		IEC Publication No. 68-2-27	1342	3	0	
hanica nn 1)	Vibration	×	IEC Publication No. 68-2-6	1342	3	0	
(Colun	Seal Test		IEC Publication No. 68-2-17	1342	3	0	1
Environmental/Mechanical Subgroup (Column 1)	Electrical Measurements at Reference Temperature	×	Table 2 of the Detail Specification	1342	3	0	
Ш	External Visual Inspection	×	ESCC Basic Specification No. 20500	1342	3	0	
	Climatic Sequence	$\boxtimes$	ESCC 3501 Para. 9.14	1342	3	0	
n 2)	Rapid Change of Temperature	×	IEC Publication No. 68-2-14	1342	3	0	
/Mech Colum	Seal Test	$\boxtimes$	IEC Publication No. 68-2-17	1342	3	0	
Environmental/Mechanical Subgroup (Column 2)	Electrical Measurements at Reference Temperature	×	Table 2 of the Detail Specification	1342	3	0	
П	External Visual Inspection	$\boxtimes$	ESCC Basic Specification No. 20500	1342			
	Life Test	$\boxtimes$	ESCC 3501 Para. 9.17	1342	5	0	
Endurance Subgroup	Electrical Measurements during Endurance Testing		Table 6 of the Detail Specification	1342	5	0	
Ш S	External Visual Inspection	×	ESCC Basic Specification No. 20500	1342	5	0	
Electrical Subgroup – Electr. Meas.	Electrical Measurements at Reference Temperature	×	Table 2 of the Detail Specification	1342	3	0	
	Electrical Measurements at High and Low Temperatures	×	Table 3 of the Detail Specification	1342	3	0	



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Executive Member: CNES Date: 19/09/2014

Appl. No.

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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
al o – ab.	Solderability	$\boxtimes$	IEC Publication No. 68-2-20	1342	3	0	
Subgrand Sub	Permanence of Marking	$\boxtimes$	ESCC Basic Specification No. 24800	1342	3	0	
	Robustness of Terminations	$\boxtimes$	ESCC 3501 Para. 9.16	1342	3	0	
nal s	FINE LEAK TEST	4	3501 9.5	٠.	5	O	PERFURMENT ON LIFETEST
Additional							SAMPLES
							(END SUBGROUP)



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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,