




		APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL			Page 1 Appl. No. 333B rev.1
Component Title: Quartz Crystal Units in metal holder TO5 Executive Member: CNES		Date: 14/06/2021			
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
3501/018	All	Frequency Range : 15 to 140 MHz	Type T807	STC5896 – C0283 STC5889A – C0278	All other variants
Component Manufacturer RAKON France		2	Location of Manufacturing Plant(s) 2 Rue Robert Keller 10 150 Pont Sainte Marie		3
			Date of original qualification approval: Date: 09/01/2015 Certificate Ref No. 333		4
ESCC Specifications used for Maintenance of qualification testing: Generic: 3501 Issue: 5 Detail(s): 3501/018 Issue: 6		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: VOQ_T807_51002109-A0 570_Dossier6270-DC1812&Dossier6273-DC1813.pdf (29/07/2019) Qualification Environmental subgroup - ESCC3501018 based on 51002109.570-A0-is02.pdf (08/02/2021) Qualification Mechanical subgroup (higher level) - ESCC3501018 based on 51002109.570-A0-Is02.pdf (08/02/2021)		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	
SalesOverview_September2017-August2019.xlsx					
PID changes since start of qualification None <input type="checkbox"/> Minor* <input type="checkbox"/> Major* <input checked="" type="checkbox"/>		9	Current PID Verified by: C.Douchet,CNES Name of Agency Representative Ref No: PID_GEN_PSM 51001881_E0 Issue: E0 Rev Date: 17/02/2021		10
*Provide details in box: Relocation of Argenteuil manufacture to Gennevilliers			Date: 17/02/2021		
Current Manufacturing facilities surveyed by: CNES & ESA on 01/01/2015 (Name of Agency Representative) (Date)					11
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain					
Report Reference: RAKPSM-AUD-2015-01 V1 annexes					

	<p align="center">APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</p> <p>Component title: Quartz Crystal Units in metal holder TO5</p> <p>Executive Member: CNES Date: 14/06/2021</p>	<p>Page 2</p> <p>Appl. No.</p> <p>333B rev.1</p>
<p>Failure Analysis, DPA, NCCS available: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (Supply data)</p> <p>Ref. No's and purposes: 1CRKN901</p>		<p align="center">12</p>
<p>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.</p> <p>Date: 14/06/2021</p> <p align="right">  JP. BUSSENOT (Signature of the Executive Coordinator) </p>		<p align="center">13</p>
<p>Continuation of Boxes above:</p> <p>Box 5 & 7 : This revision of CNES application 333B acknowledges the implementation by Rakon of changes to ESCC 3501 and 3501/018 through the implementation of environmental and mechanical tests and sequences of test.</p> <p>These data will be supplemented, as a minimum, with endurance testing in the context of the next Maintenance of ESCC Qualification, due in September 2021.</p>		<p align="center">14</p>

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Non compliance to ESCC requirements:				
No.:	Specification	Paragraph	Non compliance	
Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:				
Executive Manager Disposition				
Application Approval: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>				
Action / Remarks:				
<div style="display: flex; justify-content: space-between; align-items: flex-end;"> <div> Date: </div> <div style="text-align: right;">  <div style="margin-left: 10px;"> Digitally signed by Britta Schade Date: 2021.06.30 17:47:37 +02'00' </div> </div> </div> <div style="text-align: right; margin-top: 10px;"> B. Schade: Head of ESA Product Assurance and Safety Department </div>				

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ANNEX 1: LIST OF TESTS DONE TO SUPPORT EXTENSION OF QUALIFICATION 18

Tests conducted in compliance with:


- ESCC 3501 generic specification; Chart F4 (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)


Tests vehicle identification/description:

STC5896-C0283/39.975000MHz	STC5956/108.870968MHz DC 1903	STC5955/90.000000MHz DC 1902
STC5889A-C0278/36.000000MHz	STC4945/16.000000MHz DC 2005	STC5895-C/43.200MHz DC 2009
STC5974/50.581395MHz DC 1918	STC4524/60.452000MHz DC 1825	STC5892/87.381333MHz DC 1802
STC5811-A/71.226600MHz DC 1808	STC5895-A/43.200MHz DC 1844	

Detail Specification reference: 3501/018

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Environmental/Mechanical Subgroup (Column 1)	Shock	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-27	1813 + see above	6 + 22	0	
	Vibration	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-6	1813 + see above	6 + 22	0	
	Seal Test	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-17	1813 + see above	6 + 22	0	
	Electrical Measurements at Reference Temperature	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1813 + see above	6 + 22	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1813 + see above	6 + 22	0	
Environmental/Mechanical Subgroup (Column 2)	Climatic Sequence	<input checked="" type="checkbox"/>	ESCC 3501 Para. 9.14	1813 + see above	6 + 13	0	
	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-14	1813 + see above	6 + 13	0	
	Seal Test	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-17	1813 + see above	6 + 13	0	
	Electrical Measurements at Reference Temperature	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1813 + see above	6 + 13	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1813	6 + 13	0	
Endurance Subgroup	Life Test	<input checked="" type="checkbox"/>	ESCC 3501 Para. 9.17	1812	5	0	
	Electrical Measurements during Endurance Testing	<input checked="" type="checkbox"/>	Table 6 of the Detail Specification	1812	5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	1812	5	0	
Electrical Subgroup - Electr. Meas.	Electrical Measurements at Reference Temperature	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	1812	3	0	
	Electrical Measurements at High and Low Temperatures	<input checked="" type="checkbox"/>	Table 3 of the Detail Specification	1812	3	0	

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Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Electrical Subgroup – Ass. Capab. Tests	Solderability	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-20	1812	2	0	
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	1812	2	0	
	Robustness of Terminations	<input checked="" type="checkbox"/>	ESCC 3501 Para. 9.16	1812	2	0	
Additional Tests		<input type="checkbox"/>					
		<input type="checkbox"/>					
		<input type="checkbox"/>					

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<p align="center">NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION EXTENSION APPROVAL</p>		
<p>ENTRIES</p>		
Form heading	<p>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.</p>	
Box 1	<p>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.</p>	
Box 2; 3 and 4	<p>As per QPL entry; otherwise, an explanation of the changes must be supplied.</p>	
Box 5	<p>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.</p>	
Box 6	<p>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.</p>	
Box 7	<p>Must reference the report(s) supplied in support of the application.</p>	
Box 8	<p>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.</p>	
Box 9	<p>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.</p>	
Box 10	<p>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.</p>	
Box 11	<p>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.</p>	
Box 12	<p>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.</p>	
Box 13	<p>Enter only the name of the Executive Member (i.e., CNES, DLR, ESTEC, etc.) and the signature of the responsible Executive Coordinator.</p>	
Box 14	<p>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.</p>	
Box 15	<p>Fill in Table as requested.</p>	
Box 16	<p>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.</p>	
Box 17	<p>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.</p>	
Box 18	<p>Fill in Table as requested.</p>	
Box 19	<p>Confidential Details of PID changes including those of a confidential nature, shall be provided.</p>	
Box 20	<p>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'.</p>	
Box 21	<p>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.</p>	
Box 22	<p>Additional Comments.</p>	