



## APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: Quartz Crystal Units in metal holder TO5

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Appl. No.

Executive Member: CNES

Date: 08/12/2025

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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
3501/018	All	Frequency Range : 14 to 140 MHz	Type T807	350101801 C0232 (DC2445) 350101801 C0309 (DC2335)	
Component Manufacturer RAKON France		Location of Manufacturing Plant(s) 2 Rue Robert Keller 10 150 Pont Sainte Marie	3	4 Date of original qualification approval: Date: 09/01/2015 Certificate Ref No. 333	
5 ESCC Specifications used for Maintenance of qualification testing: Generic: 3501 Issue: 5 Detail(s): 3501/018 Issue: 6		6 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)		7 Qualification Extension Report reference and date: Periodic testing report_51002109.570-B0_STC6062 DC2335 & STC3487A DC2445 25-2574-100-200-Test_report Acceptance test report_51002022.520-D0_dossier 6490_DC2335 Acceptance Test report_51002022.520-D0_dossier 6508_DC2445	
8 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	
SalesOverview_September2023-August2025_ESCC3501				86	
PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box: General Updating		9	Current PID Ref No: PID GEN_PSM 51001881_H0 Issue: H0 Rev Date: 12/11/2025	10 Verified by: CNES Name of Executive Representative Date: 17/10/2014	
11 Current Manufacturing facilities surveyed by: CNES & ESA on 01/02/2024 (Name of Executive Representative) (Date)					
Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain					
ESCC Audit Report Rakon - DTN/QE/CQ- Report Reference: 2024.0003926					

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

Ref. No's and purposes: N/A

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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: 08/12/2025

Signature  
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Fontaine Lya  
Date : 2025.12.08  
14:36:10 +01'00'

L. FONTAINE

(Signature of the Executive Coordinator)

Continuation of Boxes above:

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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: 31 December 2025

A. Zadeh: Head of the Avionics and EEE Division

	<b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b> Component: Quartz Crystal Units in metal holder TO5 Title: Executive Member: CNES Date: 08/12/2025 :						Page 4 Appl. No. 333E
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: <div style="border: 1px solid black; padding: 2px;">           350101801 C0232 / 20.000000 MHZ AT P1 DC2445         </div> <div style="border: 1px solid black; padding: 2px;">           350101801 C0309 / 59.300000 MHZ AT P3 DC2335         </div>							
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	2445	5	0	
	Vibration	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-6	2445	5	0	
	Seal Test	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-17	2445	5	0	
	Electrical Measurements at Reference Temperature	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	2445	5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2445	5	0	
Environmental/Mechanical Subgroup (Column 2)	Climatic Sequence	<input checked="" type="checkbox"/>	ESCC 3501 Para. 8.9	2445	5	0	
	Rapid Change of Temperature	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-14	2445	5	0	
	Seal Test	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-17	2445	5	0	
	Electrical Measurements at Reference Temperature	<input checked="" type="checkbox"/>	Table 2 of the Detail Specification	2445	5	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2445	5	0	
Endurance Subgroup	Life Test	<input checked="" type="checkbox"/>	ESCC 3501 Para. 8.11.2	2445 2335	8 8	0	
	Electrical Measurements during Endurance Testing	<input checked="" type="checkbox"/>	Table 6 of the Detail Specification	2445 2335	8 8	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	2445 2335	8 8	0	
Electrical Subgroup – Ass. Capab. Tests	Solderability	<input checked="" type="checkbox"/>	IEC Publication No. 68-2-20	2445	3	0	
	Permanence of Marking	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 24800	2445	3	0	
	Robustness of Terminations	<input checked="" type="checkbox"/>	ESCC 3501 Para. 8.14	2445	3	0	

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