



**APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL**

Component Title: RF COAXIAL CONNECTORS, TNC, VERY HIGH POWER, 50 OHMS  
BASED ON TYPE TNC-VHP

Executive Member: CNES

Date: 04/07/2022

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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 |
|--------------------|----------|--|----------|--|-------------------|
| 3402/027           | 01 & 02  | Frequency Range 0-8 GHz designed for RF Power Applications | TNC type | 34020702B variant 02 - RADIALL IDENTIFICATION R143.417.604, workshop batch 2151633433, datecode 2151A samples 1 to 6   |                   |
| 3402/028           | 01 to 06 | Straight and right angle adaptors, very high Power 50 Ohms | TNC type | 340202802B variant 02 R340202802B-RADIALL IDENTIFICATION R143.705.604, workshop batch 2204665193, datecode 22025A, sample 7<br>340202805B variant 05 R340202802B-RADIALL IDENTIFICATION R143.770.604, workshop batch 2201639955, datecode 2201A sample 8 |                   |
|                    |          |  |          |  |                   |
|                    |          |  |          |  |                   |

|                                  |   |  |   |   |   |
|----------------------------------|---|--|---|---|---|
| Component Manufacturer<br>Radial | 2 | Location of Manufacturing Plant(s)<br>RADIALL (Centralp), 641 Rue Emile Romanet,<br>38340 Voreppe (France) | 3 | Date of original qualification approval:<br>Date: 09/01/2018<br><br>Certificate Ref No. 350 | 4 |
|----------------------------------|---|--|---|---|---|

|   |   |  |   |  |   |
|---|---|--|---|--|---|
| ESCC Specifications used for Maintenance of qualification testing:<br>Generic: 3402 Issue 5<br>: :<br>Detail(s): 3402/027 Issue 2<br>3402/028 : : | 5 | Deviations to LVT testing and Detail Specification used:<br>No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (supply details in Box 15)<br><br>Deviation from current Specifications:<br>No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> (Supply details) | 6 | Qualification Extension Report reference and date:<br>Test report n. 2022.16.026 Rev1 24/06/2022 | 7 |
|---|---|--|---|--|---|

Summary of procurement or equivalent test results during current validity period in support of this application (those to ESCC listed first)

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| Project Name | Testing Level | LAT | Date code | Quantity Delivered |
|--------------|---------------|-----|-----------|--------------------|
|              |               |     |           | See annex          |
|              |               |     |           |                    |
|              |               |     |           |                    |
|              |               |     |           |                    |

|   |   |   |   |    |
|---|---|---|---|----|
| PID changes since start of qualification<br>None <input checked="" type="checkbox"/><br>Minor* <input type="checkbox"/><br>Major* <input type="checkbox"/> *Provide details in box: | 9 | Current PID Verified by:<br>Ref No: PAQP VOR 0065<br>Issue: 1 rev.A | G. Quadri, CNES<br>Name of Executive Representative<br>Date: 25/05/2022 | 10 |
|---|---|---|---|----|



Rev Date: 05/07/2022

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Current Manufacturing facilities surveyed by: CNES/ESA on 12/04/2022  
(Name of Executive Representative) (Date)

Satisfactory: Yes  No  Explain

Report Reference: DTN/QE/CQ-2022.0005817

|  |  |                              |
|--|--|------------------------------|
|   | <b>APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL</b><br>Component title: RF COAXIAL CONNECTORS, TNC, VERY HIGH POWER, 50 OHMS<br>BASED ON TYPE TNC-VHP<br>Executive Member: CNES Date: 04/07/2022 | Page 2<br>Appl. No.<br>350 B |
| Failure Analysis, DPA, NCCS available:    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (Supply data)  |  | 12                           |
| Ref. No's and purposes:    2CRAD04 deviations CLOSED   |  |                              |
| <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> <div style="text-align: right; margin-top: 20px;"> <br/> <hr style="width: 200px; margin: 0 auto;"/>         (Signature of the Executive Coordinator)       </div> <p>Date:    04/07/2022</p> |  | 13                           |
| Continuation of Boxes above:   |  | 14                           |

Box: extension of qualification approval refers to the new manufacturing site of Centr'alp which takes the place of the the former one (Isle d'Abeau)  
 Box 6: deviations from ESCC 3402 issue 5 are listed in NCCS 2CRAD04. They refer to the following items:  
 1/The screening of final production tests was carried out in accordance with chart II of the specification ESCC3402 Issue 4 to allow a comparison between CTA and IDA manufacturing sites  
 2/ The detail specifications applied for the qualification are the draft versions associated with the update of the ESCC 3402 issue 5



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Non compliance to ESCC requirements:

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| No.: | Specification    | Paragraph | Non compliance  |
|------|------------------|-----------|---|
| 1    | ESCC3402 issue 5 | 12.3      | Screening sequence(chart F3) not accomplished on test vehicles (production and controls performed in compliance with issue 4) |

Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:

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See NCCS 2CRAD04, manufacturing and test control performed following the issue 4 of ESCC 3402 in order to allow a comparison with the former extension of qualification performed on the Isle d'Abeau site. No further action required

Executive Manager Disposition

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Application Approval: Yes  No

Action / Remarks:

Date:

  
B. Schade: Head of the 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 3402 generic specification; Chart V (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

|                      |                      |
|----------------------|----------------------|
| 340202702 (DC 2151A) | 340202802 (DC 2205A) |
| 340202805 (DC 2201A) |                      |

Detail Specification reference: ESCC 3402/027 issue 2; ESCC 3402/028 issue 2

| Chart                      | Test  | Tick when done                      | Conditions             | Date Code                 | Tested Qty | No. of Rejects | Comments if not performed.<br>Comments on Rejection                               |
|----------------------------|---|-------------------------------------|------------------------|---------------------------|------------|----------------|---|
| ESCC 3402 issue 5 chart F4 | Mating and unmating Force                   | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.11  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Random Vibration                            | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.15  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Mechanical shock                            | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.16  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Temperature cycling                         | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.8   | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Thermal Stability of insertion loss         | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.17  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Shielding effectiveness                     | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.18  | 2101A, 2205A              | 1,1        | 0              | Only applicable to connector transition, adaptor and connecting piece components  |
|                            | Electrical measurements at room temperature | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.9.9 | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Endurance                                   | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.19  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Seal  | <input type="checkbox"/>            | ESCC 3402, Para. 8.13  | Click here to enter text. |            |                | Only applicable to hermetically sealed, barrier-sealed or panel-sealed components |
|                            | Coupling Proof Torque                       | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.10  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | External Visual Inspection                  | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.14  | 2151A, 2101A, 2205A       | 6,1,1      | 0              |   |
|                            | Destructive Physical Analysis               | <input checked="" type="checkbox"/> | ESCC 3402, Para. 8.17  | 2151A, 2205A              | 1,1        | 0              |   |





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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.  |