		APPLICATION FOR ESCC QUALIFICATION APPROVAL			Page 1 Appl. No. 348
Component Title: RF FLEXIBLE CABLE ASSEMBLY, TNC, VERY HIGH POWER, 50 OHMS, DC TO 8GHZ BASED ON TYPE TNC-VHP		Executive Member: CNES		Date: 16/04/2018	
Components (including series and families) submitted for Qualification Approval					
ESCC COMPONENT. NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
3408001	4 to 13	Frequency Range 0-8 GHz designed for RF Power Applications Right angle and straight Cable assembly for flexible Ø7.6mm cable Power capability tested up to : - 350W @ 2Ghz and 200W @ 4Ghz (continuous wave) - 2000Wpp @ 1Ghz (pulsed wave) Integrated of the cable is qualified up to 120Mrad Temperature range: -65/+165°C	TNC type	Variant 04, 11, 12	
Component Manufacturer RADIAL		Location of Manufacturing Plant RADIAL 39 Rue Velpeau BP30 - 37110 Château-Renault (France)		ESCC Specification used for Qualification Generic: 3408 Issue: 1 Detail/s: 3408/001 Issue: 1	
Qualification Report Reference and date: Test report n°2015.38.4573 Rev.A_Qualification of cable assemblies Test report n°2016.12.4714 Rev. 1_Power test Date: 07/10/2016			PID used for manufacturing Qualification Lot Ref No: PID EPH11003 (F) Issue: Draft 2 Date: 30/03/2015		
PID changes since start of qualification None <input type="checkbox"/> Minor* <input checked="" type="checkbox"/> Major* <input type="checkbox"/> (* Details not published, provided in confidential annex 2.)			Current PID Verified by JB SAUVEPLANE Name of Executive Representative Ref No: PAQ CHR 0014 Issue: 1-E Date: 30/03/2018		
Current Manufacturing facilities surveyed by: JB SAUVEPLANE (Name of Executive Responsible)					
Report Reference Satisfactory: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Explain All audit actions are closed (CR-Audit Radiall CHR 19-02-18)					
Quality and Reliability Data Evaluation testing performed Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Report Ref. No.: EPH0701-FET Date: 03/01/2012 Equivalent Data: Certification:			Failure analysis, DPA, NCCS available Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (supply data) Ref Nos. and purpose:		



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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 13; that the reports and data are available at the ESCC Executive and therefore applies for ESCC qualification status to be given to the component(s) listed herein.

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Date: 17/04/2018



JP. BUSSENOT

(Signature of the Executive Coordinator)

Continuation of Boxes above: (Only non-confidential comments)

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(10) EJA CONSTRUCTION ANALYSIS REF. MTSL CA0602074

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Non compliance to ESCC requirements:		13
No.:	Specification	Paragraph
1	3408 3408/007	8.33 POWER HANDLING 1.5 MAXIMUM RATING
2	3408 3408/001	8.27 RADIATION 2.5 IL MEASUREMENTS
		RATED RF POWER COULD NOT BE USED DURING TEST DUE TO LIMITATIONS IN TEST EQUIPMENT INSERTION LOSS DEGRADES AFTER STEP AT 10 Mrad
Additional tasks required to achieve full compliance for ESCC qualification or rationale for acceptability of noncompliance:		14
1. REF. POWER TEST REPORT W42016.12.4714 Rev. 1 INCLUDES ALSO RE-ASSURING MEASUREMENTS ON LOCAL TEMPERATURE 2. A DEGRADATION OF PERFORMANCE REGARDING LOSSES IS CHARACTERISTIC OF CABLE ASSEMBLIES USING PTFE. THE MATERIAL INTEGRITY OF THE JACKET WAS NOT AFFECTED WHEN TESTED UP TO 120 Mrad		
Executive Manager Disposition		15
Application Approval: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Action / Remarks:		
1. OPL ENTRY SHALL INCLUDE A CLARIFICATION ON THE ACTUAL POWER HANDLING CAPABILITIES VERIFIED BY TEST. 2. OPL ENTRY SHALL INCLUDE A CLARIFICATION : SPECIFIED MAXIMUM INSERTION LOSSES WERE ONLY VERIFIED BY TEST UP TO 10 Mrad(S).		
Date:		 Signature, ESA Representative



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ANNEX 1: LIST OF TESTS DONE TO SUPPORT QUALIFICATION

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Tests conducted in compliance with:

- ESCC 3402 generic specification; Chart IV (for ESCC/QPL parts);
- Or PID-TFD (for ESCC/QML parts)

Tests vehicle identification/description:

3408001040.40	3408001110.40
3408001120.40	

Detail Specification reference: 3408001

ChartF4A	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
	Radiation	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.27				
	Permanance of Marking	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.37	1528	1	0	
	Mating / Unmating Forces	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.19.2	1523	7	0	
	Coupling Proof Torque	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.18	1523	7	0	
	Shielding Effectivness	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.25	1523	7	0	
	Cable retention force	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.26	1523	7	0	
	Ageing	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.28	1523	7	0	
	Mating Endurance	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.29	1523	7	0	
	Bending	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.30	1523	7	0	
	Vibration	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.31	1523	7	0	
	Temperature Cycling I	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.17.2.1	1523	3	0	
	Temperature Cycling II	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.17.2.2	1523	4	0	
	Thermal Stability of Insertion Loss	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.35	1523	4	0	
	Corona	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.32	1523	3	0	
	RF Power Handling	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.33	1523	3	0	
	Multipaction	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.21	1523	3	0	
	RF Power Cycling	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.34	1523	3	0	
	Shielding Effectivness	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.25	1523	7	0	
	Electrical Measurement	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.20.4	1523	7	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.24	1523	7	0	
	Radiographic Inspection	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.22	1523	4	0	
	DPA	<input checked="" type="checkbox"/>	ESCC 3408, Para. 8.38	1523	1	0	

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NOTES ON THE COMPLETION OF THE APPLICATION FORM FOR ESCC QUALIFICATION APPROVAL**ENTRIES**

- Form Heading** shall indicate:— the title of the component as given in its detail specification or the name of the series or family; — the entering date; — the serial number and the suffix of the form.
- Box 1** shall provide details given in table; in particular there shall be listed - the variants or range of variants; the range of components by using the ESCC code for values tolerances, etc.; the designation given in detail specification as 'based on'; —under Test Vehicle enter either a cross or the specific characteristic capable to identify the component tested; — under component similar enter a cross.
- Box 2 and 3** Manufacturer's name and location of plant where the components were manufactured and tested.
- Box 4** Generic and detail specifications used during qualification program.
- Box 5** Reference to test report(s) submitted in support of application.
- Box 6** Enter details to identify the PID that was applicable at the time the qualification lot was manufactured.
- Box 7** If the PID was evolved after qualification lot manufacture, adequate details of such evolution shall be provided together with reasons for changes. Major changes shall be clearly marked.
- Box 8** The box serves to identify the current PID and the Executive Representative that has verified it together with the date of this occurrence.
- Box 9** This box can be completed only after a physical visit to the plant to confirm that the practices, procedures, materials, 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 10** Details entered shall be sufficient to evidence that an evaluation program according to ESCC Basic Specification No. 22600 has been performed and that the results thereof are summarized in the survey and test reports. If the evaluation program has not been carried out according to established ESCC documents, the applicant Executive Representative shall provide alternative data and declare its assessed degree of satisfactory compliance with the ESCC basic requirements. Reference shall be made to the reports on Destructive Physical Analysis (DPA), Failure Analysis and Non conformance (NCCS) issued during the Evaluation and/or Qualification Phase.
- Box 11** Enter the name of the Executive Coordinator and the signature.
- Box 12** To be used when there is a need to expand any of the boxes from 1 through 10. Identify box affected and reference the Box 12 in the relevant Box. Box 12 can be broken into 12a, 12b, etc. if several Boxes have to be expanded.
- Box 13** Fill table as requested.
- Box 14** Fill in any additional tasks required to achieve full compliance.
- Box 15** All Executive recommendations on the application itself, special conditions or restrictions, modifications of the QPL or ESCC QML entry, letters to the manufacturer, etc. shall be entered clearly in Box 15, signed by the ESA Representative.
- Box 16** Fill in Table as requested.
- Box 17** Confidential details of PID changes shall be provided.
- Box 18** State noncompliance with reference to specification(s) and paragraph(s). To simplify reference in Box 18 each nonconformance shall be sequentially numbered. If relevant state 'None'
- Box 19** Any additional action deemed necessary by the Executive Representative 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 nonconformance.
- Box 20** Additional Comments