



APPLICATION FOR EXTENSION OF ESCC QUALIFICATION APPROVAL

Component Title: RF CABLE ASSEMBLY, SMA 50 OHMS, 2.2mm FLEXIBLE CABLE, DC TO 22GHz BASED ON TYPE 8S-SMA
 Executive Member: ESA Date: 28/07/2023

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Components (including series and families) submitted for Extension of Qualification Approval:

ESCC COMPONENT NO.	VARIANTS	RANGE OF COMPONENTS	BASED ON	TEST VEHICLE / S	COMPONENT SIMILAR
3408/002	01 thru 06 12;14;	Conn1 SMA male straight plug Conn2 SMA male 90° box plug	8S-SMA	8SS01S71; +Control	
	07 thru 11	Conn1 SMA male straight plug Conn2 SMA female straight jack	8S-SMA	8SS01S02; x2	
	07 thru 11 15;19;20;21	Conn1 SMA male 90° clip plug Conn2 SMA female bulkhead jack	8S-SMA	8SY04R42 x1	

Component Manufacturer W.L.GORE & ASSOCIATES (UK) LTD	Location of Manufacturing Plant(s) Dundee Technology Park Mariner Drive, DD21JA Dundee Scotland, United Kingdom	Date of original qualification approval: Date: 25/04/2019 Certificate Ref No. 358
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ESCC Specifications used for Maintenance of qualification testing: Generic: ESCC 3408 Issue: 03 Detail(s): ESCC 3408/00 2	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)	Qualification Extension Report reference and date: WLG-01671
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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
Not provided 34080021200096	Acceptance Testing		Feb 2020	5
Not provided 34080021200120	Acceptance Testing		Feb 2020	4
Not provided 34080021200160	Acceptance Testing		Feb 2020	18
Not provided 34080021200104/90(P/M)	Acceptance Testing		Apr 2020	3
Not provided 34080021200104/90(P/M)	Acceptance Testing		Feb 2022	3
Not provided 34080021200160	Acceptance Testing		Aug 2022	2
Not provided 34080020200145	Acceptance Testing		Feb 2023	45
Not provided 34080020100190	Acceptance Testing		Feb 2023	45
Not provided 34080021200195	Acceptance Testing		Feb 2023	45
Not provided 34080021200125	Acceptance Testing		Feb 2023	45

PID changes since start of qualification None <input checked="" type="checkbox"/> Minor* <input type="checkbox"/> Major* <input type="checkbox"/> *Provide details in box:	Current PID Verified by: D. Lacombe, ESA Name of Executive Representative Ref No: WLG-01320 Issue: Rev 02 Rev Date: 25/05/2021	Date: 30/01/2023
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Current Manufacturing facilities surveyed by:

L.Farhat; Fernando Martinez on

02/04/2018

(Name of Executive Representative)

(Date)

Satisfactory: Yes No Explain Findings from 8-9 Feb and 23-24 Nov 2017 closed out in April 2018

Report Reference: CA report MTSL CA
0002318 (Jan 2018)



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

Ref. No's and purposes: Periodic Testing completed in the report with DPAs completed

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 as the responsible Executive Member for ESCC qualification status to be extended to the component(s) listed herein.

Date: 8-8-2023

(Signature of the Executive Coordinator)
D. LeComte

	Periodic Test Report	WLG-01671	
		03/07/23	Revision: 1

1.9.24 Radio Graphic Inspection

Radiographic inspection was performed on 3 assemblies. All solder joints (centre contacts and connector bodies) were found to be acceptable when inspected in accordance with ESCC basic specification No. 20900 & ESCC Generic Specification No. 3408 paragraph 8.22. See Appendix K.

1.9.25 Destructive Physical Analysis

Destructive physical analysis was performed on 3 assemblies. The micro-section of the connector configuration was visually inspected and meet the criteria in ESCC Basic Specification No. 21001. (See Fig 11 below)

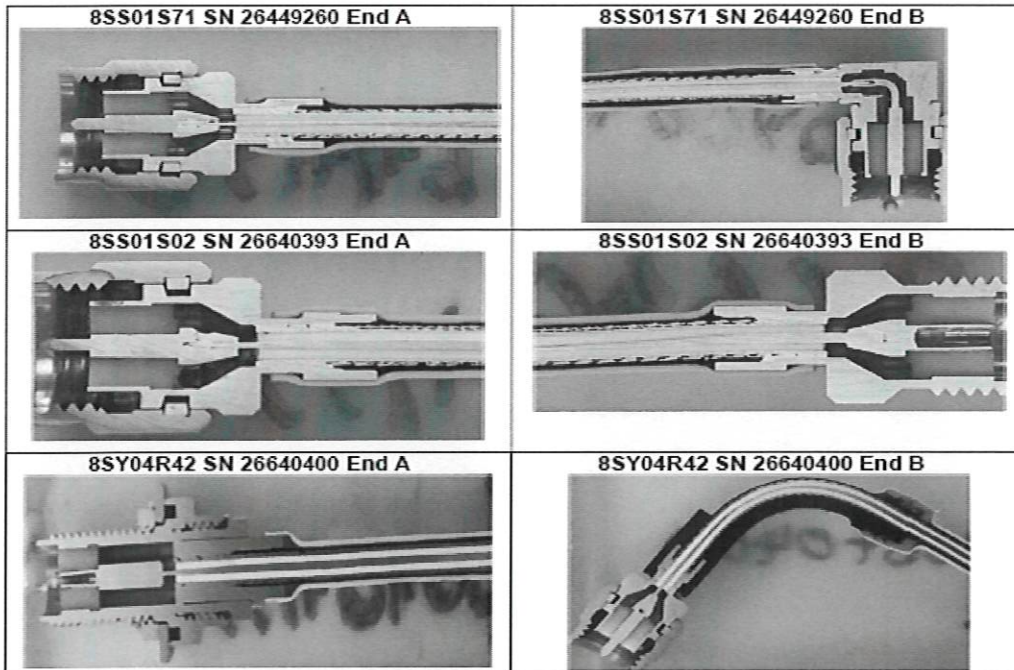


Fig 11 Microsections of the 8S Cable Assemblies

Note : The solder fill at the contact and bodies of all 6 samples were verified to be acceptable. The condition of the foil and braid was also verified to be acceptable on each of the DPA items.



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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:


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 3408 generic specification; Chart F4 B (for ESCC/QPL parts);
- Or PID-TFD GORE_ESA - PID WLG-01320 Issue 02 May 2021.pdf (for ESCC/QML parts)

Tests vehicle identification/description:

See Periodic Test Report WLG-01671

Variant 2 x 2	Variant 5 x2
Variant 11 x 1	Click here to enter text.

Detail Specification reference: ESCC3408/002

Chart F4	Test	Tick when done	Conditions	Date Code	Tested Qty	No. of Rejects	Comments if not performed. Comments on Rejection
Column 1 6 TVs	Shielding Effectiveness	<input checked="" type="checkbox"/>	IEC Publication No. 61726	May 2023	5	0	
	Cable Retention Force	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
	Ageing	<input type="checkbox"/>	MIL-STD-202 Test Method 108				Not required for Chart F4B – Periodic Testing
	Mating Endurance	<input type="checkbox"/>	ESCC Generic Specification No. 3402				Not required for Chart F4B – Periodic Testing
	Bending	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
	Vibration (Random and Sine)	<input type="checkbox"/>	MIL-STD-202 Test Method 214 & 204				Not required for Chart F4B – Periodic Testing
	Thermal Stability of Insertion Loss	<input checked="" type="checkbox"/>	As specified in Detail Specification	May 2023	4	0	
	Temperature Cycling II (100 cycles)	<input checked="" type="checkbox"/>	As specified in Detail Specification	July 2023	4	0	
	Thermal Stability of Insertion Loss x2	<input checked="" type="checkbox"/>	As specified in Detail Specification	July 2023	4	0	
	Ageing	<input type="checkbox"/>	MIL-STD-202 Test Method 108				Not required for Chart F4B – Periodic Testing
	Vibration (Random and Sine)	<input type="checkbox"/>	MIL-STD-202 Test Method 214 & 204				Not required for Chart F4B – Periodic Testing
	Temperature Cycling I (25 cycles)	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
	Corona	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
	RF Power Handling	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
	Multipaction	<input type="checkbox"/>	ECSS-E-20-01				Not required for Chart F4B – Periodic Testing
	RF Power Cycling	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
Shielding Effectiveness	<input checked="" type="checkbox"/>	IEC Publication No. 61726	July 2023	5	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
Column 1 6 TVs	Electrical Measurements at Room, High and Low Temperatures	<input checked="" type="checkbox"/>	As specified in Detail Specification	June 2023	4	0	
	External Visual Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20500	July 2023	5	0	
	Radiographic Inspection	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 20900	July 2023	5	0	
	Destructive Physical Analysis	<input checked="" type="checkbox"/>	ESCC Basic Specification No. 21001	July 2023	3	0	
Column 3 1 TV	Radiation	<input type="checkbox"/>	As specified in Detail Specification				Not required for Chart F4B – Periodic Testing
Column 4 1 TV	Permanence of Marking	<input type="checkbox"/>	ESCC Basic Specification No. 24800				Not required for Chart F4B – Periodic Testing
	Mating and Unmating Forces	<input checked="" type="checkbox"/>	ESCC Generic Specification No. 3402				This s from Chart F3
	Coupling Proof Torque	<input checked="" type="checkbox"/>	ESCC Generic Specification No. 3402				This s from Chart F3
	Crimp Contact Tensile Strength	<input type="checkbox"/>	ECSS-Q-ST-70-26				NA
Additional Tests	Rf interface Gauging	<input checked="" type="checkbox"/>		July 2023			This s from Chart F3
	Length and Weight	<input checked="" type="checkbox"/>		May 2023			This s from Chart F3
	Microsectioning of strands	<input checked="" type="checkbox"/>		April 2023			Sample cable

Periodic Tesing completed to Chart F4B for Extension of ESCC qualification



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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.