



DOCUMENT CHANGE REQUEST

DCR number 1173 Changes required for: General

Date: 2019/04/02

Date sent: 2018/08/22

Originator: Zdenek Pesina

Organisation: Honeywell Aerospace

Status: IMPLEMENTED

Title: Generic Specification for Connectors RF Coaxial

Number: 3402 Issue: 2

Other documents affected:

Page:

21, 22, 32 – 39, 41 and 42

Paragraph:

Charts IV and V; Paras. 9.15, 9.16 and 9.19; Figures II, III and IV

Original wording:

Original Wording: See the relevant Charts, Paras. and Figures of ESCC Generic Specification No. 3402 Issue 2.

Proposed wording:

Chart IV – Qualification Tests

Sample Quantity shall be changed from “32 Connector Pairs” to “30 Connector Pairs”;

Leg No. II sample quantity shall be changed from “8 Pairs” to “6 Pairs” and shall become just a single leg of testing with “RF Insertion Loss” located between “V.S.W.R.” and “Corona Level”;

The reference “(Note 3)” in “V.S.W.R.” and “RF Insertion Loss”, and Note 3 itself, shall be deleted;

The reference “(4)” in “Plating Thickness” and Note 4 itself shall be re-numbered accordingly.

Chart V – Lot Acceptance Tests

Level 2, i.e. the “Electrical and Endurance Subgroup”, shall become just a single leg of testing with “RF Insertion Loss” located between “V.S.W.R.” and “Coupling Proof Torque”;

The reference “(Note 2)” in “V.S.W.R.” and “RF Insertion Loss”, and Note 2 itself, shall be deleted;

The reference “(3)” in “Plating Thickness” and Note 4 itself shall be re-numbered accordingly.

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The current wording of Para. 9.15, Cabling and Crimping Capability (Cable Connectors only) shall be replaced by the following wording:

“The connector shall be assembled and crimped or soldered to the cable as specified in the Detail Specification, using the Manufacturer's approved crimping tools and cabling procedure.

6 cables shall be assembled. In cases where both male and female connectors are required for Qualification/LAT testing, there shall be 3 cable assemblies with male connectors at each end and 3 cable assemblies with female connectors at each end. These 6 cable assemblies shall have identical lengths.

Once assembled, the cable assemblies shall be subjected to the following examinations and measurements, as applicable:

- Crimps shall be examined under X10 magnification and shall be free from cracks.
- Solder joints shall be examined under X10 magnification. They shall be bright and show a good wetting.
- Interface and external dimensions shall conform to those shown in Figure 2 of the Detail Specification.
- Insulation resistance and voltage proof shall meet the requirements of the Detail Specification.”

The current wording of Para. 9.16, Voltage Standing Wave Ratio (VSWR) or Reflection Coefficient shall be replaced by the following wording:

“The VSWR or reflection coefficient shall be measured in accordance with a suitable test method using an appropriate test set-up and measuring equipment. The rear part of flange-mounted connectors may be machined off to allow direct assembly of a coaxial test set-up to the rear part of the connector.

The measured values shall not exceed those given in the Detail Specification.”

Figures II(a) and II(b) on page 34 and Figure II(c) on page 35 shall be deleted in toto.

The current wording of Para. 9.19, RF Insertion Loss shall be replaced by the following wording:

“The RF Insertion Loss shall be measured in accordance with a suitable test method using an appropriate test set-up and measuring equipment. If not already done for the previous measurements, the rear part of flange-mounted connectors may



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be machined off to allow direct assembly of a coaxial test set-up to the rear part of the connector.

The measured values shall not exceed those given in the Detail Specification.”

Figure III(a) on page 37 and Figures III(b) & III(c) on page 38 shall be deleted in toto.

The Figure references in Paras. 9.23.1 and 9.23.2 shall be re-numbered from “IV(a)”, “IV(b)” and “IV(c)” to “II(a)”, “II(b)” and “II(c)”.

Figures IV(a) and IV(b) on Page 41 and Figure IV(c) on page 42 shall be re-numbered II(a), II(b) and II(c) accordingly.

Justification:

The changes above are proposed to simplify and clarify the sampling, flow, and the test requirements of the sequence from “Cabling and Crimping Capability” through to “RF Insertion Loss” performed as part of Qualification Testing and Lot Acceptance Testing.



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Paragraph:

CHART V - LOT ACCEPTANCE TESTS

Original wording:

Clarify distribution of samples for LAT2 tests

Proposed wording:

...see proposed chart in attachment.

Justification:

Current version of 3402 is not clear about distribution of samples for LAT2. RF Insertion Loss test is to be done on 2 pairs that were previously tested VSWR however visually on Chart V it shows to be done in parallel to VSWR.

Attachments:

escc_3402_lat2.pdf, escc_3402_lat2.vsd

Modifications:

We propose to modify Para. 9.15 as indicated below in red.

An example to explain our point of view:

In case user order for example only male connectors, then it makes no sense to test in the frame of the LAT2 as well the female connectors and thus reduce the test data for the male connectors. In such a case it is more useful for the user to have LAT2 data on 6 male connectors instead of data on 3 male and 3 female connectors. We consider combining useful if both, male and female connectors, are procured/qualified. Therefore, propose to modify Para. 9.15 as shown below in red.

"The connector shall be assembled and crimped or soldered to the cable as specified in the Detail Specification, using the Manufacturer's approved crimping tools and cabling procedure.

There shall be 6 cables assembled.

In case male and female connectors are required for LAT/Qualification testing, there shall be 3 cable assemblies with male connectors at each end and 3 cable assemblies with female connectors at each end.

These 6 cable assemblies shall have identical lengths.

Approval signature:

A handwritten signature in black ink, appearing to read "A. R. R.", is written in the signature box.

Date signed:

2019-04-02