DOCUMENT CHANGE REQUEST

DCR number 1409	Changes required for: General	Originator: Steve Thacker
Date: 2021/05/07	Date sent: 2021/03/05	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	Generic Specification for Connectors RF Coaxial		
Number:	3402	Issue:	4

Other documents affected:

Page:

Various; see below

Paragraph:

Total reformat/re-write of ESCC Generic Specification 3402 issue 4 as part of the ongoing conversion of legacy ESA/SCC specifications to the ESCC format.

Original wording:

As per 3402 issue 4

Proposed wording:

The Generic Specification is proposed to be extensively amended to incorporate various policy, technical & editorial amendments & corrections in order to bring it in line with other ESCC Generic Specifications that have already been converted to the new ESCC format.

The layout, format and general structure, and editorial content of ESCC 3402 draft 5 are based on other published, converted ESCC Generic Specifications such as ESCC 5000, 9000, 4001, 3001, etc.

The proposed technical content of ESCC 3402 draft 5 is based on the current content of ESCC 3402 issue 4 plus additional changes proposed for the purposes of general improvement.

This DCR summarises all the amendments to ESCC 3402 issue 4, plus identifies the additional technical changes not already generally detailed and justified by previous, approved DCRs related to conversion of other ESCC Generic Specifications.

Several of these additional changes were instigated by the ESA RF Working Group for the purposes of improvement and alignment with other ESCC Generic specifications (where possible).

For full details of the proposed contents of ESCC 3402 issue 5, see the attached draft Generic specification ESCC 3402 Draft 5 that implements all the proposed changes.

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Change Details:

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A) Main General Changes (similar to those already incorporated into other converted ESCC generic specifications e.g. ESCC5000, etc, including: rewording and restructure of various sections, paragraphs and Charts of the specification, plus other editorial changes based on the layout and editorial content of other Generic Specifications already converted to ESCC format):

1) Chart I, The General Flow Chart is replaced by Chart F1; It clarifies the flow of components for Procurement.

2) Para 5 & Chart II have been replaced by Chart F2 Production Controls & Chart F3, Screening Tests.

3) Chart IV & V, Qualification and Lot Acceptance Testing charts have been incorporated, with some modifications, into a single Chart F4, Qualification, Periodic Testing and Lot Validation Testing. The tests included in Chart F4 are based on a mix of qualification and LAT level 1 requirements.

Modifications include:
• Periodic testing is mandatory for ESCC qualified components with a defined testing schedule (i.e. 24 months for all testing).
• Para 8.2 & Chart V, etc, Lot Acceptance Testing has been deleted but an Orderer option for similar Lot Validation Testing, for procurement, has been added. Lot Validation Testing is not mandatory and will only be done if specifically stipulated by the Orderer in the PO.
• Para 8.2.1, The requirement for LAT level 3 as a minimum for non-qualified component procurement is removed.
• No failures are allowed during Chart F4 testing.
• Sampling in Chart F4 is reduced.

4) Para 1.2, etc, Introduction of ESCC 23100 (ESCC Recommendations on the use of the ESCC Specification System for the Evaluation and Procurement of Unqualified Components) to the generic spec.

5) Para 1.2, etc, The Generic Specification has been made applicable and fully usable for procurement of unqualified components as well as for ESCC Qualified components.

6) Para 2.1, etc, Clarification that the term PID is specific to ESCC qualified components.

7) Para 2.1 & 4.5, Material outgassing reference document is corrected to be ESCC No. 22600 (not PSS-01-702). Material restrictions per ESCC No. 22600 are specified.

8) Para 4.1, 4.3, 4.3.2, Chart I, etc, The SCC testing level B has been deleted; the single ESCC testing level, equivalent to old SCC level B, is not given a specific designation.

9) Para 4.3, When using the ESCC System to procure components from an unqualified source and marking the parts with the ESCC component number, the Manufacturer should possess a manufacturing and quality assurance system that is compatible with space application. As such, the user expectation should be that parts would be compatible with passing the testing requirements of Chart F4. Accordingly the requirement placed on qualified sources to not knowingly supply components that cannot meet the Chart F4 testing is extended to unqualified sources.

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10) Para 4.3.1, The maximum allowed delay for Lot failure notification (provided by the Manufacturer) is now 5 working days (was 2).

11) Para 4.4, Marking requirements per ESCC No. 21700 shall apply.

12) Para 5 & Chart F2, Production Control/Special In-Process Controls, replaces Paras 5 & 6 and Chart II. Some tests are moved to new Chart F3.

13) Para 9.5 & Chart II, Dimension Check is performed on 3 samples.

14) Para 10.1.2, 10.1.3, The minimum required delivered documentation to the customer for procurement is a Certificate of Conformity & a Cover sheet.

B) Other Technical Changes (specific to ESCC 3402):
15) Para 2.1 & 2.2:
Reference documents that are not actually referenced in 3402 or are obsolete are removed, i.e. IEC No. 410, IEC No. 169-1.

ESCC 21001, 22600, 23100, IEC 61726 and ECSS-Q-ST-70-37 are added.

16) Para 4.5: ECSS-Q-ST-70-37 stress-corrosion resistance requirements added.

17) Para. 5.2.1, 9.4, 9.5: sampling is made a fixed quantity.

18) Weight requirements are added (to Para 5.2.7 & Chart F2).

19) Para 9: Various test requirements are clarifed and different details about test conditions are specified:
Paras: 9.2, 9.5, 9.7, 9.9, 9.10, 9.11, 9.12, 9.15, 9.16, 9.18, 9.19, 9.23 (renamed Shielding Effectiveness), 9.26, 9.29.

20) Para. 9: Various test/paragraphs are deleted:
Paras: 9.13, 9.14, 9.15, 9.17, 9.20, 9.21, 9.22, 9.24, 9.27, 9.29.

21) New test and inspection Paras are added:
Paras. 8.17, 8.20.

22) Chart II: Marking is deleted.

23) Charts IV & V: the test sampling is changed to be on 4 samples plus 1 control.
Various tests have been deleted:9.9, 9.13, 9.14, 9.15, 9.17, 9.20, 9.21, 9.22, 9.24, 9.27, 9.29.

DPA is added on 2 samples.

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Justification:

All changes have been defined and included to serve the purposes of technical improvement, clarification, accuracy, completeness, simplification, harmonisation and consistency. The aim is to simplify and improve the content and interpretation of the specification and its requirements whilst maintaining an efficient and acceptable technical baseline.

ESCC 3402 draft 5 is written to closely follow the layout, format and content of the latest converted ESCC Generic specifications such as ESCC 5000, 9000, 4001, 3001, etc. The justifications for the related policy and editorial changes given in all other previous DCRs related to the conversion of ESCC Generic Specifications also apply to this DCR.

Note: For information purposes, and to hopefully aid the review process, an associated Detail Specification in the “converted” format is attached to this DCR. i.e. 3402/009 Draft 5A

Attachments:

escc3402009iss_draft_5a_for_information.docx, escc3402_draft_5b_for_review.docx

Modifications:

Typo in chart F3 – para 6.4: the applicable note should (4) instead of (3).

Approval signature:



Date signed:

2021-05-07