DOCUMENT CHANGE REQUEST

DCR number 1446	Changes required for: General	Originator: Steve Thacker
Date: 2023/11/30	Date sent: 2021/07/15	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	RF Coaxial Connectors, Type SMA, 50 Ohms (Female Contact)		
Number:	3402/002	Issue:	8

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 3402/002 issue 8 as part of the ongoing conversion of legacy ESA/SCC specifications to the ESCC format as well as reflecting changes in the recently converted ESCC Generic Specification No. 3402 issue 5.

The layout, format and general content of 3402/002 Draft 9 is based on other converted ESCC Detail Specifications (see attached for proposed 3402/002 Draft 9).

The technical content of ESCC 3402/002 Draft 9 remains closely based on the original ESCC 3402/002 issue 8 except as detailed herein.

Paragraph:

see below

Original wording:

as per current spec

Proposed wording:

Total reformat of this Detail Specification (from the range of various ESCC Detail Specifications, 3402/xxx, for RF connectors under Generic Specification No. 3402) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3402/002 Draft 9.

Note: known support for active procurement against this specification includes the following Manufacturers:
• Radiall (on ESCCQPL)
• Rosenberger (on ESCCQPL)

Summary of changes to the current format, layout and content is as follows:

General
Rewording and restructure of various sections and paragraphs of the specification, plus other editorial changes based on the layout and editorial content of other Detail Specifications already converted to ESCC format.

In addition, editorial and technical amendments resulting from the changes made to the test requirements of the Generic

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Specification No. 3402.

Specific amendments include:
• Table 1(a):
unused Variants 33, 35, 52 are removed from the table (= redundant information).
Delete 50ohm from variant descriptions (i.e. Variants 07, 08)
Variant 24 change sealing to be compression gasket.

• Figures 2(a) and 3: are replaced by direct references within MIL-STD-348.
• Para 4.2.2(a): Deviation is deleted (effectively replaced by notes to Paras 2.4 & 3)
• Para 4.3.4 & Para. 3: Cable retention force/torque is deleted (as the requirements have been deleted in the Generic spec).
• Para. 4.3.7, 4.4.1, 4.4.2, 4.4.3 & 4.5.3.3: Magnetism requirements are deleted (as the requirements have been deleted in the Generic spec) (except add Amagnetic description for stainless steel material code/types 3 and 4).
• Para. 4.4: Materials and finishes for washers, and EMI and Compression gaskets are added.
• Para. 4.4.4 (a) Shell & Centre Contact material amended to be Iron-nickel alloy (was Iron & Steel)
• Para 4.5.1, 4.5.2: ESCC component number is amended: ESCC qualified components symbol is added; Testing level is deleted (SCC level B/C being deleted)
• Para 4.5.3.1: Fixed Configuration identifier number is deleted)
• Table 2, Voltage Proof Leakage Current: test point details are added.
• Table 6 only includes specified electrical measurement requirements as required for the various Chart F4 Qual level tests (tests without electrical measurements are deleted) (editorial change).

• Figure 2(b) (now Para 3):
All variants:
RF leakage, Corona level Minimum cable retention force/torque are deleted (as the requirements have been deleted in the Generic spec).
Maxi leakage (panel sealed connectors) is deleted (= redundant information)
Soldering Proof is deleted (as the test has been deleted in the Generic spec).

Variant 04: Solderability corrected to Applicable.
Variant 25: Seal is corrected to be 10(-8) i.e. seal only is deleted (as this is a fully hermetic variant)
Variant 26: Operating Temperature range is corrected. Seal is corrected to be 10(-8) i.e. seal only is deleted (as this is a fully hermetic variant)
Variant 51: Solderability corrected to be On Centre contact only.

Justification:

Part of the ongoing conversion of legacy ESA/SCC specifications to the ESCC format. Amendments are made to the format and presentation to be consistent with the various other ESCC Detail Specifications, already converted to ESCC format, as well as ESCC Generic Specification No. 3402 issue 5.

See also change details for justification for specific items above.

Attachments:

escc3402002iss_draft_9a_in_review.docx

Modifications:

In Table 1(a):
Variant description is amended as shown in the attached.

Table 1(b), Figure 1(b):
rated soldering temperature is added.
Power is replaced by new power handling figure (new Note 1)(as provided by Radiall). Peak power rating is deleted.

Para 4.3.6: number/rate of cycles is amended to be as specified in ESCC3402 (i.e. 500Qual/100LAT is deleted).

Table 6:
The hermetic glass seal is added (i.e. contact resistance measurement requirements: 12mohm max.)
note on measurement details for VSWR is added.

In new Para 3, see attached for details including, as applicable:
Power handling category is added
amend dimension details
amend weight details
Add note on RF Leakage
Add/remove note on mounting of components
Amend characteristic values
Add notes on the maximum operating and storage temperature ratings, and test frequency being limited by the cable details.
Add seal requirements
Amend solderability requirements

Add Appendices to permit Manufacturers to still mark the current testing level option code as a Manufacturer Code.

Approval signature:

Date signed:

2023-11-30