DOCUMENT CHANGE REQUEST

DCR number 1535	Changes required for: General	Originator: Steve Jeffery
Date: 2023/03/23	Date sent: 2022/11/08	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Connectors Electrical Filtered Rectangular Non-Removable Solder Bucket Contacts, based on type		
Number:	3405/001	Issue:	3

Other documents affected:

Page:

All.

Paragraph:

Total reformat/re-write of ESCC Detail Specification 3405/001 issue 3 as part of the ongoing conversion of legacy ESA/SCC specifications to the ESCC format, as well as reflecting changes resulting from the conversion of ESCC Generic Specification No. 3405 (ref. DCR1380).

The layout, format and general content of 3405/001 issue 4 is based on other converted ESCC Detail Specifications, see the attached draft Detail specification that implements all the proposed changes: ESCC3405001draft4B for DCR review.docx

The technical content of ESCC 3405/001 issue 4 remains closely based on the original ESCC 3405/001 issue 3 except as detailed herein.

Original wording:

See 3405/001 issue 3

Proposed wording:

Total reformat of this Detail Specification as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3405/001 issue 4.

Note: There was support for procurement against this specification, on a non-ESA-Qualified basis, from the following Manufacturers:
• C&K
• Esterline Souriau.

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

1) General
Rewording and restructure of various sections and paragraphs of the specification, plus other editorial changes including deletion of any redundant paragraphs and information, based on the layout and editorial content of other Detail Specifications already converted to ESCC format.

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Specific amendments include:

2) Para 1.2 and Table 1(a):
• The Filter Arrangements tables are moved to their own separate, dedicated, paragraphs.
• The term “Sub-Variants” is amended to “Filter Arrangement Codes”.

3) Para 1.3 and Table 1(b), Maximum Ratings:
• Rated / Working Voltage (UR) information for Grounded Contacts is now included in wording of new Note 1.
• Existing Note 1 is re-numbered Note 2; “minimum” is a typographic error and is therefore corrected/restored to “maximum”.

4) Para 1.4 and Figure 1, Parameter Derating Information:
• The chart showing UR derating vs temperature is deleted (derating details are now included in new Note 1).
• The chart showing Insulation Resistance vs Temperature, applicable to Filtered Contacts, is confusing (it appears that, for Medium Frequency Filter Contacts, either the ‘curve’ or the limits for High and Low Temperature Electrical Measurements are wrong) and not relevant to procurement, and is therefore deleted.

5) Para 1.5 and Figure 2, Physical Dimensions: Contact Arrangements is moved to a separate dedicated paragraph, with the references to Type Variants deleted and Shell Size references added.

6) Figure 3, Functional Diagram of Filter Type NF: the ‘diagram’ is deleted (as it is irrelevant / not applicable) and replaced with the wording “Not applicable”.
7) Para 2, Applicable Documents: The references to the documents which are unnecessary are deleted.

8) Para 4.2, Deviations from Generic Specification, is revised because Chart F4 now applies instead of Chart IV and Chart V:
• Para 4.2.2 is deleted.
• Paras. 4.2.4 and 4.2.5 are effectively combined.

9) Weight limit requirements are moved to the Component Type Variants paragraph.

10) Para 4.3.5, Mating and Unmating Forces: paragraph is deleted as the details are already specified in the Component Type Variants paragraph.

11) Paras. 4.4.1, 4.4.2 and 4.4.3.1 are revised, including additional details where necessary, and the various materials document references (MIL-G-45204, MIL-C-14550 etc.) are deleted.

12) Paras. 4.5.1 and 4.5.4, Marking:
• The information to be marked now includes “The ESCC qualified components symbol (for ESCC qualified components only).” for completeness.
• ‘Characteristics’ are now included within “The ESCC Component Number” and are therefore deleted.

13) Para 4.6.1 and Table 2 (was “Electrical Measurements at Room Temperature”, now “Room Temperature Electrical and

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Mechanical Measurements"):
• "Mated Shell Conductivity" is not applicable to all Component Type Variants and is therefore deleted.
• Ground Resistance is clarified as a maximum limit.

14) Para. 4.6.2 and Table 3 (was "Electrical Measurements at High and Low Temperatures", now "High and Low Temperatures Electrical Measurements"): The limits of Insulation Resistance at Low Temperature are specified in G instead of M.

15) Note 1 to Tables 4 and 5 is deleted (unnecessary repetition of Deviations from the Generic Specification).

16) Table 6 (Measurements and Inspections on Completion of Environmental Tests and at Intermediate Points and on Completion of Endurance Testing) is modified and incorporated into new Para "Intermediate and End-Point Electrical and Mechanical Measurements" (Para 2.12):
• The Initial and Final Measurements for Vibration are deleted as all Component Type Variants do not have coupling screws.
• Test temperature is added, for clarification, to the Insulation Resistance measurement to be made immediately after Damp Heat test (Climatic Sequence).
• Voltage Proof measurement (Operating Life) is clarified as being measured at 90% of rated voltage and the Condition "90% of Table 2 Item 2" is corrected to be the Voltage Proof limits.
• The measurements applicable to the Pin Bending Test are corrected to "Capacitance" and "Insulation Resistance" (in line with the Generic Specification).

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 the current issue of ESCC Generic Specification No. 3405.

See also change details above for justification for specific items.

Attachments:

escc3405001draft4b_for_dcr_review.docx

Modifications:

N/A

Approval signature:

Date signed:

2023-03-23