DOCUMENT CHANGE REQUEST

DCR number 1541	Changes required for: General	Originator: Steve Jeffery
Date: 2023/03/30	Date sent: 2022/12/06	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Capacitor Filters C-Type Feedthrough Electromagnetic Interference Suppression Hermetically		
Number:	3008/020	Issue:	3

Other documents affected:

Page:

All.

Paragraph:

Total reformat/re-write of ESCC Detail Specification 3008/020 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. 3008.

The layout, format and general content of 3008/020 issue 4 is based on other converted ESCC Detail Specifications, see the attached draft Detail specification that implements all the proposed changes:
escc3008020iss4 draftC for DCR review.docx

The technical content of ESCC 3008/020 issue 4 remains closely based on the original ESCC 3008/020 issue 3 except as detailed herein.

Original wording:

See 3008/020 issue 3

Proposed wording:

Total reformat of this Detail Specification (one of a range of various ESCC Detail Specifications for capacitor filters under Generic Specification No. 3008) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3008/020 issue 4.

Note: known support for active procurement against this specification includes the following Manufacturers:
• Exxelia Technologies (formerly Eurofarad).

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), Component Type Variants and Range of Components Table, and Notes, are revised as follows:
• The table consists of a listing of the available Type Variants by Case Description and Terminal Configuration, with characteristics (Rated DC Voltage, etc.) defined in new Note 1 as a separate table.
• The Rated DC Voltage characteristic is clarified as being applicable up to +85°C. Column 2(b), showing values of “UR at +125°C” (in other words, “de-rated rated voltages”), is deleted.

3) Para 1.3 and Table 1(b), Maximum Ratings: The Note regarding the derating of Rated DC Voltage is revised.

4) Para 1.5 and Figure 2, Physical Dimensions:
• Note 1 is deleted as redundant/repetition, as this information is only required to be included in the Robustness of Terminations paragraph.
• Note 2 is re-numbered and re-worded, and now applies to ØU (“Detail T” is not necessary and is therefore removed from the dimensions table).
• A new Note 2 is added for ØE to clarify that it applies to both leads.
• Note 3 is re-numbered Note 1.

5) Para. 1.6 and Figure 3, Functional Diagram: Unnecessary information (IN, OUT) is removed from the diagram.

6) Para 4.2 Deviations from Generic Specification is revised as follows:
• The Seal Test deviation is removed (but an “Agreed Deviation for Exxelia” is added to Appendix ‘A’ ref. Screening Tests) as all Variants include one hermetic seal (although all Variants also include one non-hermetic seal).
• Para 4.2.4(b) is deleted as it has been agreed that Accelerated Damp Heat shall be performed.
• Paras 4.2.4(c) and 4.2.5(b) are deleted (the deviation “Immersion: Not applicable” is no longer required. The Immersion test has always only been applicable to hermetically sealed components, and therefore the Generic Specification has been changed accordingly).

7) Weight limit requirements are moved to the Component Type Variants and Range of Components paragraph.

8) Para 4.3.3, Robustness of Terminations: paragraph is re-worded for clarification purposes.

9) Para 4.6.1 and Table 2 (was “Electrical Measurements at Room Temperature”, now “Room Temperature Electrical Measurements”):
• Voltage Drop Test Conditions are deleted as the applicable paragraph in the Generic Specification already defines this condition.
• Test Conditions for IL6 are corrected from “5 MHz” to “5 GHz”.
• Notes 1 and 3 of the AC Measurements table are re-numbered and re-written as Notes 2, 3 and 4 for clarification purposes. These Notes also take into account various changes from Charts II, III, IV & V to Charts F3 & F4.

10) Para 4.6.2 and Table 3 (was “Electrical Measurements at High and Low Temperatures”, now “High and Low Temperatures Electrical Measurements”):
• Note 1 (which defines the sampling) is amended to “Measurements shall be performed on a sample of 5 components. In

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the event of any failure a 100% inspection may be performed."
• The applicable test temperatures for the Characteristics are specified in the new Test Method and Conditions column; Note 2 is therefore deleted.
• New explanatory Note 2 is added regarding Change in Capacitance.

11) Para 4.7.2 and Table 5(a) (was "Conditions for Burn-in Tests", now "Burn-in Conditions"), Voltage Characteristic and Conditions: The actual Applied Voltages applicable to each Type Variant are now defined. This will avoid any confusion over "UR at +125°C" (which is a derated voltage and therefore can no longer be "Rated DC Voltage").

12) Para 4.8.4 and Table 5(b) (was "Conditions for Operating Life Tests", now "Operating Life Conditions"), Voltage Characteristic and Conditions: The actual Applied Voltages applicable to each Type Variant are now defined. This will avoid any confusion over "UR at +125°C" (which is a derated voltage and therefore can no longer be "Rated DC Voltage").

13) 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 Measurements" (Para. 2.8).

14) Appendix 'A' is made applicable to Charts F3 and F4 and is also re-worded for clarification purposes.

15) An "Agreed Deviation for Exxelia" is added to Appendix 'A' regarding Seal Test, ref. Item 6) above.

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. 3008.

See also change details above for justification for specific items.

Attachments:

escc3008020iss4_draftc_for_dcr_review.docx

Modifications:

N/A

Approval signature:

Date signed:

2023-03-30