DOCUMENT CHANGE REQUEST

DCR number 1319	Changes required for: General	Originator: Steve Jeffery
Date: 2020/05/12	Date sent: 2020/01/27	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Capacitors Fixed dc Self Healing Structured Metallised Polyester (PET) Film Dielectric, based on		
Number:	3006/019	Issue:	3

Other documents affected:

Page:

All.

Paragraph:

Total reformat/re-write of ESCC Detail Specification 3006/019 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. 3006 (ref. DCR 1231).

The layout, format and general content of 3006/019 issue 4 is based on other converted ESCC Detail Specifications, see the attached draft Detail specification that implements all the proposed changes:
3006019 draft 4B for DCR review.docx

The technical content of ESCC 3006/019 issue 4 remains closely based on the original ESCC 3006/019 issue 3 except as detailed herein.

Original wording:

See 3006/019 issue 3

Proposed wording:

Total reformat of this Detail Specification (one of a range of various ESCC Detail Specifications for capacitors under Generic Specification No. 3006) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3006/019 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.

DCR number 1319	Changes required for: General	Originator: Steve Jeffery
Date: 2020/05/12	Date sent: 2020/01/27	Organisation: ESCC Executive
Status: IMPLEMENTED		

Specific amendments include:

2) Para 1.2 and Table 1(a): Range of Components Table, and Notes, are revised (e.g. Column 1 “Item No.” is deleted).

3) Para 1.5 and Figure 2, Physical Dimensions (re-named “Physical Dimensions and Terminal Identification”): New Note 2 for Terminal Identification is added.

4) Para 4.2 Deviations from Generic Specification is revised as follows:
• Paras 4.2.2(a), 4.2.3(a), 4.2.4(a), 4.2.5(a) “Seal Test: Not applicable” are deleted (not a deviation, as by definition the components are non-hermetically sealed).
• Para 4.2.4(b) is re-worded to account for the ESCC-format Generic (e.g. Chart F4 applies).
• Para 4.2.4(c), Operating Life includes an additional deviation for Temperature [+85 (+0 5)°C not maximum operating temperature (+0 -5)°C, i.e. +125, (+0 -5)°C, defined in new Generic 3006].
• Para 4.2.5 (b) and (c) are deleted.

5) Para 4.3.3, Robustness of Terminations, is re-worded (e.g. “Both leads of the component shall be tested”) for clarification purposes.

6) Para 4.4, Materials and Finishes: Case information is no longer needed (per new Generic) and is therefore deleted; the Lead Material and Finish information is split into two subparagraphs.

7) Para 4.5.1, Marking, General, is re-worded to account for the ESCC-format Generic e.g. “(a) Polarity” is deleted (unnecessary); “Lead” is amended to “Terminal”; new item (b) “The ESCC Qualified Components Symbol (for ESCC Qualified Components only)” is added.

8) Para 4.6.1 and Table 2 (was “Electrical Measurements at Room Temperature”, now “Room Temperature Electrical Measurements”):
• Capacitance Limits column, the limit reference and existing Note 1 are replaced by two new Notes where Note 1 defines the Minimum Limit and Note 2 defines the Maximum Limit.
• Insulation Resistance Test Conditions column contains an editorial error, “33µF” is corrected to “0.33µF”.
• The two Insulation Resistance Characteristics are re-named (simplification and clarification).
• The unit for Insulation Resistance, “sec”, is re-written as G.nF.
• VPB Test Conditions are added and the limits (including Note 2) are clarified.
• Note 2 is re-numbered (Note 3).

9) 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 “… a sample of 5 components from each manufacturing lot with 0 failures allowed. In the event of any failure a 100% inspection may be performed.”
• Capacitance Change characteristic is re-named “Temperature Coefficient” and the applicable tolerances added to the Test Temperatures. Associated Note 2 re-worded for clarification purposes.

10) Para 4.7.2 and Table 5 (was “Conditions for Burn-in”, now “Burn-in Conditions”): The sentence regarding 24 ±2 hours

DOCUMENT CHANGE REQUEST

DCR number 1319	Changes required for: General	Originator: Steve Jeffery
Date: 2020/05/12	Date sent: 2020/01/27	Organisation: ESCC Executive
Status: IMPLEMENTED		

recovery is re-worded and is included in Note 1. There is now no Para for Operating Life, as this is specified by the new Generic ESCC 3006 and deviations (Para 2.1.1.1(a)).

11) 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 2.5):
• The Tangent of Loss Angle limit of “+5×10-3” (ref. Rapid Change of Temperature, Operating Life and Climatic Sequence) is replaced by the absolute limit value (by means of a new Note).
• Note 2 (for Voltage Proof and Insulation Resistance and Climatic Sequence Final Measurements) is deleted because the components have sleeves (i.e. measurements are always applicable).
• Where limits are specified as either “Record Values” or “Table 2”, this is now a Note directing to Room Temperature Electrical Measurements.
• Voltage Proof testing (during Climatic Sequence, Final Measurements): Note 3 for VP is re-written and re-numbered. Editorial error for VP limit: “20×UR” is corrected to “2×UR”. For VPB, the limits are defined in a Note directing to Room Temperature Electrical Measurements.
• The Temperature Coefficient limits are amended to be the same as the equivalent limits given in High and Low Temperature Electrical Measurements.
• Climatic Sequence, Final Measurements: The unit for Insulation Resistance, “sec”, is re-written as M.µF.
• Note 4 is re-worded (and re-numbered as necessary).

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. 3006.

See also change details above for justification for specific items.

Attachments:

3006019_draft_4b_for_dcr_review.docx

Modifications:

N/A

Approval signature:



Date signed:

2020-05-12