DOCUMENT CHANGE REQUEST

DCR number 1316	Changes required for: General	Originator: Steve Jeffery
Date: 2020/06/23	Date sent: 2020/01/27	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Capacitors, Fixed, Surface Mount,D.C. Self Healing, Non Inductive, Polyphenylene Sulphide		
Number:	3006/023	Issue:	4

Other documents affected:

Page:

All.

Paragraph:

Total reformat/re-write of ESCC Detail Specification 3006/023 issue 4 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 3006/023 issue 5 is based on other converted ESCC Detail Specifications, see the attached draft Detail specification that implements all the proposed changes:
3006023 draft 5B for DCR review.docx

The technical content of ESCC 3006/023 issue 5 remains closely based on the original ESCC 3006/023 issue 4 except as detailed herein.

Original wording:

See 3006/023 issue 4

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 3006/023 issue 5.

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): Range of Components and Size Variants Table, and Notes, are revised (e.g. “Size Variant” is now Type Variant) and Terminal Finish information and Note added.

3) Table 1(a):
• Maximum Weight of Item No. 230 is corrected from 0.9g to 1.3g.
• The Capacitance Value of Item No. 499 is amended from the non-standard value “107.5” to the E96 Series value “107”.
• Item Nos. 500 and 505 are identical, Item No. 500 is therefore deleted.

4) Para 1.3 and Table 1(b), Maximum Ratings: Note 2 is deleted (as information is now included in the Para “Deviations from the Generic Specification”).

5) Figure 2, Physical Dimensions: Dimension “F max” for Variant 01 is corrected from 3.2 to 4.2.

6) 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 4.2.3(b): This deviation is considered to no longer be required (different yield possibility in new format of Generic 3006) and is deleted accordingly.
• Para 4.2.3(c) is deleted (as, per new Generic Chart F3, Sleeving is only “If specified in the Detail Specification”).
• Para 4.2.4(b) is deleted (however test Ua is now specified in the Para “Robustness of Terminations”).
• Para 4.2.5(b) to (f) are deleted.

7) Para 4.2.4 and Table 6: Permanence of Marking (for which the Identification in Table 6 was “not applicable”) is now considered to be required and performed.

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

9) Para 4.4.2, Lead Material and Finish: only the Terminal Finish is now required to be specified and this information is moved to Component Type Variants and Range of Components.

10) Para 4.5.3.2, Capacitance Values: the missing capacitance value range “XXX 104”, unit code “XXX4” is added (new row to table).

11) Para 4.6.1 and Table 2 (was “Electrical Measurements at Room Temperature”, now “Room Temperature Electrical Measurements”):
• Capacitance Limits column, the limit reference is replaced by two new Notes where Note 1 defines the Minimum Limit and Note 2 defines the Maximum Limit.
• The two Insulation Resistance Characteristics are re-named (simplification and clarification).
• Insulation Resistance Test Condition and Limits: Units changed (was µF, now nF; was M, now G; was “sec”, now G.nF).
• New Note 3 is added for VP and VPB limits.

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12) 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.

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

14) 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 Capacitance Change Identification for Shock or Bump was never required and is therefore deleted.
• 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 (Climatic Sequence, Final Measurements): different notes apply to VP and VPB; Note 3 is re-written (now only applicable to VPB).
• Notes 4 and 5 are 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:
3006023_draft_5b_for_dcr_review.docx
Modifications:
Note: Please refer to the Comments against DCR 1317 (ESCC 3006/022 conversion) from which these modifications have arisen. Para. 2.4.2, Note 1: The sample size is 6 pieces (was 5) Additional specific deviations included in Appendix 'A' - Agreed Deviations for Exxelia Technologies, as required (various agreed and required deviations against Chart F3 & F4), i.e.: * All lots, prior to the performance of High and Low Temperatures Electrical Measurements, shall be serialised 100%; * The Temperature Coefficient measurements (High and Low Temperatures Electrical Measurements, Chart F3) shall be R+R in order that this data may be used in lieu of performing this test again per Subgroup 2B of Chart F4. These measurements may also be performed at the end of Screening and therefore, if required, any parts which are electrically 'good' following Room Temperature Electrical Measurements but have gone on to fail External Visual inspection may be used.
Approval signature:

Date signed:
2020-06-23