



DOCUMENT CHANGE REQUEST

DCR number 725 Changes required for: General

Date: 2016/11/28

Date sent: 2012/05/17

Originator: Steve Thacker

Organisation: ESCC Executive
Secretariat

Status: IMPLEMENTED

Title: Capacitors Fixed Ceramic Dielectric Type II High Capacitance 50 to 500V, based on case styles BR,

Number: 3001/030

Issue: 6

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 3001/030 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. 3001 issue 1 (per DCR694).

The layout, format and general content of 3001/030 issue 5 is based on other converted ESCC Detail Specifications (see attached for proposed 3001/030 issue 5 Draft A).

The technical content of ESCC 3001/030 issue 5 remains closely based on the original ESCC 3001/030 issue 4 except as detailed herein.

Paragraph:

see below

Original wording:

see 3001/030 issue 4

Proposed wording:

Total reformat of this Detail Specification (from the range of various ESCC Detail Specifications, 3001/xxx, for capacitors under Generic Specification No. 3001) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3001/030 Issue 5 Draft A.

Note: known support for active procurement against this specification includes the following Manufacturer:

- AVX LTD (GB) (ESCC Qualified)

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 based on the layout and editorial content of other Detail Specifications already converted to ESCC format.

DCR number 725 Changes required for: General

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In addition, editorial and technical amendments resulting from the changes made to the test requirements of the Generic Specification No. 3001.

Specific amendments include:

- Paras 4.2.2(a), 4.2.3(a) are deleted
- Table 2 & Table 6: Insulation Resistance and Voltage Proof are amended to clarify Dielectric & Body Insulation tests, as well as reflecting the test sampling specified in the Generic spec.
- Table 3: Delete Insulation Resistance, & Temperature Characteristic tests on each value (due to SCC level B being deleted)
- Table 4 is deleted (due to SCC level B being deleted)
- Table 5 is Deleted (test conditions are already specified in the Generic spec (Temperature & Voltage)).
- Table 6 only includes specified electrical measurement requirements as required for the various Chart F4 Qual level tests (editorial change)
- Appendix A Deviation on Radiographic Inspection is deleted.

2) Table 1(a), Para 4.4.1, Para 4.4.2

All component range and selection options (including Variant, Capacitance, tolerance, voltage, Case & leads details, and weight) are brought together under a single Para. (Para. 1.4.2 in issue 5) (editorial changes for clarification & consistency purposes)

3) Figure 3: Note is added to clarify lead connection to the capacitor terminals.

4) Para 3: symbol definition VT is deleted (no longer required, to be to be consistent with ESCC 21300)

5) Para 4.2.1, Deviation on Robustness of Terminations (Lead Peel Test)

Test conditions per the original Robustness of Terminations test that were not specified/clarified in the deviated lead peel test, are now specified:

i.e.

- sampling of 5 components from each manufacturing lot with 0 fails allowed
- test samples are not encapsulated
- tensile force shall be applied evenly across the length on the capacitor terminal, to all leads on that side of the component together.
- All leads shall be tested

6) Para 4.2.2(b), 4.2.3(b), 4.2.4(a), 4.2.5(a) are deleted (now covered by Para 1.4.2 & 2.4.1 in issue 5)

7) Para 4.4.3, Robustness of Termination test requirements are now specified with test conditions in accordance with the generic spec (i.e. per the IEC test method). A minimum of one lead on each side of the component shall be tested.

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8) Para 4.5.3.1: Capacitance value code table is corrected to reflect the actual specified capacitance range.

9) Table 2 & Table 6: Units for Insulation Resistance are rewritten as Mohm.uF (instead of sec).

10) Table 3 Temperature Characteristic (Para 2.4.2 in issue 5)

Clarify that the 1st test condition is 'VT = no voltage applied' (rather than 'VT = 0V')

Amend remark against Test No. 6(ii) to read "... 5 components from each manufacturing lot ..." (instead of "5 parts for each fired ceramic lot") (to be consistent with ESCC terminology & the Generic spec).

11) Table 6 for Voltage Proof testing (in Climatic Sequence, Damp Heat Steady State & Operating Life) correct limit to also cover components with UR = 500V (limit = 2UR)

12) Table 6 & Appendix A for AVX LTD (GB): the last 2 pages of the specification (21 & 22) had become removed from the published document during a previous issue (since issue 2). These are reinstated in issue 5.

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 ESCC Generic Specification No. 3001 issue 2.

See also change details for justification for specific items above.

Attachments:

3001030_draft_7c_for_dcr725_mod.pdf, 3001030_draft_5a_in_progress.pdf

Modifications:

Based on the review performed by the PSWG adhoc WG on ceramic capacitor generic specification as implemented into ESCC3001 issue 2, the following modifications shall apply to this DCR. Note that changes made by subsequent DCR831 have also been taken into account:

a) All changes, including these modifications, have been implemented in the new DCR attachment 3001/030 draft 7C (which shall replace the DCR attachment 3001/030 draft 5B).

b) Ref. original DCR item 1) General:

The following additional editorial and technical amendments resulting from the changes made to the test requirements of the Generic Specification No. 3001, shall apply:

- Table 6: Climatic Test Sequence requirements are deleted.
- Table 6: Damp Heat Steady State is deleted and replaced by Steady State Humidity (85/85) test requirements.
- Table 6: Add notes applicable to Operating Life, to explain when the 1000h & 2000h measurements apply.

c) Ref. original DCR item 7) Para 4.4.3, Robustness of Termination: item is deleted (and replaced by item 5)

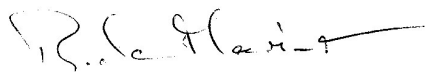
d) Ref. original DCR item 9) Table 2 & 6: units Gohm.nF are used for Insulation resistance (instead of sec)

e) Add new change items to this DCR as follows:

13) Figure 2(d): Dimensions a1 & b1 are included (same limits as in Figure 2(c))(for consistency purposes).

14) Appendix A for AVX (UK): replace the various specific document references for Microsectioning, and Internal and External Visual Inspection by "document as per PID."

Approval signature:



Date signed:

2016-11-28