DOCUMENT CHANGE REQUEST

DCR number 774	Changes required for: General	Originator: Steve Thacker
Date: 2016/11/14	Date sent: 2013/02/06	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	Capacitors Fixed Ceramic Dielectric Type II, based on type TCN83E		
Number:	3001/027	Issue:	1

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 3001/027 issue 1 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 3001/027 issue 2 is based on other converted ESCC Detail Specifications (see attached for proposed 3001/027 issue 2 Draft A).

The technical content of ESCC 3001/027 issue 2 remains closely based on the original ESCC 3001/027 issue 1 except as detailed herein.

Paragraph:

see below

Original wording:

see ESCC 3001/027 issue 1

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 3001/027 Issue 2 Draft A.

Note: known support for active procurement against this specification includes the following Manufacturer:
• Eurofarad/France

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.

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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:
• Figures 1, 4 & 5 are deleted
• Paras 4.2.1, 4.2.2, 4.2.3 & 4.2.5 are deleted
• Table 2 & Table 6: Insulation Resistance and Voltage Proof are amended to clarify Dielectric & Body Insulation Resistance tests, as applicable, as well as reflecting the test sampling specified in the Generic spec.
• Table 3: Delete Insulation Resistance and Note 1 (due to SCC level B being deleted)
• Table 4 is deleted (due to SCC level B being deleted)
• Table 6 only includes specified electrical measurement requirements as required for the various Chart F4 Qual level tests (editorial change).

2) Table 1(b) Temperature Characteristic is removed from the Maximum Ratings Table (as it is a characteristic, not a maximum rating). Requirements are fully specified in Table 3 (= Para.2.4.2 in issue 2).

3) Figure 3: Functional Diagram note 1 is amended to read ‘terminals’ (was ‘outputs’).

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

5) Para 4.2.4: The Voltage Proof Body Insulation deviations are made applicable to the Climatic Test Sequence and Damp Heat Steady State tests in Chart F4.

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

7) Para. 4.7.2: Add requirement for 24hours minimum recovery time after Burn-in (in order to provide the Manufacturer with flexibility & convenience when to perform the final measurements, and to be consistent with all other Type II capacitor specs)(was 24 +/-2 hours)

8) Table 2: Add note 1 on capacitance limits (in order to provide more flexibility to the Manufacturer during testing, and to be consistent with Generic spec para.8.6.1.1(b) on capacitance ageing):
i.e.
“1. Capacitance limits may be adjusted to take into account capacitance ageing, as specified in the Generic Specification.”

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

10) Table 3 Temperature Characteristic (Para 2.4.2 in issue 2)
Clarify that the 1st test condition is ‘VT = no voltage applied’ (rather than ‘VT = 0V’)
Amend Note 2 to read “... 5 components from each manufacturing lot ...” (instead of “5 pieces from each dielectric lot”) (to be consistent with ESCC terminology & the Generic spec).
Delete Note 3 and reference to Appendix ‘A’ in the main body of the spec (such an appendix reference is not required here and are non-standard for ESCC specs).

11) Table 5 (Para 2.6 in issue 2): Delete test conditions that are already specified in the Generic spec (Temperature &

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Voltage).

12) Table 6 Operating Life: It is clarified that the Tangent of Loss Angle and Voltage Proof tests only apply during the final measurements

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:

3001027_draft_2a_in_review.pdf, 3001027_draft_2c_for_dcr774_mod(2).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:

a) All changes, including these modifications, have been implemented in the new DCR attachment 3001/027 draft 2C (which shall replace the original DCR attachment).

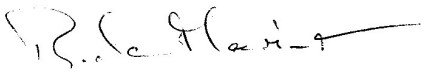
b) Ref. original DCR item 1) General:
The following additional editorial and technical amendments resulting from the changes made to the test requirements of the Generic Specification No. 3001, shall apply:
• Para. 4.2.4 is deleted.
• Table 6: Climatic Test Sequence requirements are deleted.
• Table 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 9) Table 2 & 6: units Gohm.nF are used for Insulation Resistance (instead of sec)

d) Ref. original DCR item 10): The required ambient temperatures are added to the Temperature Characteristic conditions

Note that the Manufacturer's name has changed since this DCR was originally raised (now Exxelia Technologies). Appendix A amended accordingly.

Approval signature:



Date signed:
2016-11-14