DOCUMENT CHANGE REQUEST

DCR number 775	Changes required for: General	Originator: Steve Thacker
Date: 2017/10/11	Date sent: 2013/02/06	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	Capacitors Fixed Ceramic Dielectric Type II for Surface Mounting, based on types CNC82RE and		
Number:	3001/028	Issue:	1

Other documents affected:

Page:

ALL

Paragraph:

ALL

Original wording:

Completely re-written as a result of the update of ESCC 3001 and successive reviews with manufacturer and CNES

Proposed wording:

Final draft 2c+ proposed by the ESCC Technical Writer in Feb. 2017 (attached)

Justification:

Final draft 2c+ agreed by CNES and Exxelia in August 2017

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Total reformat/re-write of ESCC Detail Specification 3001/028 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 3001/028 issue 2 is based on other converted ESCC Detail Specifications (see attached for proposed 3001/028 issue 2 Draft A).

The technical content of ESCC 3001/028 issue 2 remains closely based on the original ESCC 3001/028 issue 1 except as detailed herein.

Paragraph:

see below

Original wording:

see ESCC 3001/028 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 3001/028 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 4.2.2, 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(a) and Figures 2(a) & 2(b): Figures 2(a) & 2(b) are incorporated into a single figure. Reference to Figure 2 is removed from Table 1(a).

3) Table 1(a): CNC83RE 3.9uF 400V case J: the weight is corrected to be 30g max (was 25g max)

4) 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).

5) Figure 2(b): Case sizes F & G are removed from the table (as they are included in the specified range)

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

7) Para. 4.2.1(a): Delete deviation (a) on Lead Pull Test (as it is already covered by the Robustness of Termination requirements in Para 2.3 in issue 2)

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

9) Para. 4.2.4(b): Delete deviation (b) (as it is already covered by the Robustness of Termination requirements in Para 2.3 in issue 2, including the mounting on substrate requirement)

10) Para. 4.2.4(c) & (d): These 2 deviations are amended and made the same as follows (as the other applicable requirements are already specified in the generic spec):
“Resistance to Soldering Heat and Solderability: Only the part of the terminals designed to be soldered shall be tested.”

11) Para. 4.3.3: Add classification of the terminals as rigid. The applicable test is clarified to be: Ue3 (shear) only.

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

13) 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

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specs)(was 24 +/-2 hours)

14) 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.”

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

16) 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).

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

18) 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:
3001028_draft_2c+_for_dcr775_mod.docx, 3001028_draft_2a_in_review.pdf
Modifications:
N/A
Approval signature:

Date signed:
2017-10-11