DOCUMENT CHANGE REQUEST

DCR number 1028	Changes required for: Qualification	Originator: Jean-Paul Bussenot
Date: 2017/11/29	Date sent: 2016/08/24	Organisation: CNES
Status: IMPLEMENTED		

Title:	Generic Specification for Capacitors Fixed Ceramic Dielectric Types I and II		
Number:	3001	Issue:	3

Other documents affected:

Page:

22

Paragraph:

8.13 CAPACITANCE-TEMPERATURE CHARACTERISTICS

Original wording:

8.13 CAPACITANCE-TEMPERATURE CHARACTERISTICS
The capacitance-temperature characteristics of the components shall be measured as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification. The following details shall apply:
· Test Conditions:
(a) For type I capacitors: Temperature Coefficient in accordance with Para. 8.6.1.5.
(b) For type II capacitors: Temperature Characteristic in accordance with Para. 8.6.1.6.

Proposed wording:

8.13 TEMPERATURE CHARACTERISATION
The temperature characteristics of the components shall be measured as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification. The following details shall apply:

(a) Insulation Resistance in accordance with Para 8.3.1.3 at maximum operating temperature rating ±2°C as specified in the Detail Specification.

(b) For type I capacitors: Temperature Coefficient in accordance with Para. 8.6.1.3.

(c) For type II capacitors: Temperature Characteristic in accordance with Para. 8.6.1.6.

3001, 12.4 Chart F4 - rename box CAPACITANCE-TEMPERATURE CHARACTERISTICS to CAPACITANCE-TEMPERATURE CHARACTERISTICS

Justification:

Elimination of levels B and C resulted in an unwanted removal of High Temperature Insulation Resistance definition. In order to re-introduce the parameter, capacitance-temperature characteristics is changes to temperature characterisation and Insulation Resistance added to High and Low

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Temperature Measurement Table in the detail specifications.
In order to avoid changes (and cost addition) to previous situation, the performance of the measurement is limited to Chart F4 Qualification and Periodic Testing through the addition of a note to the High and Low Temperature Measurement Table. For procurement, this parameter is therefore guaranteed and not tested in a similar way as other parameters in ICs specifications for example.

Title:	Capacitors Fixed Ceramic Dielectric Type II, based on type TCN83E		
Number:	3001/027	Issue:	3

Other documents affected:

3001/028-3, 3001/030-9, 3001/033-5, 3001/034-5, 3001/037-3, 3001/038-3, 3009/003-7, 3009/004-6, 3009/005-6, 3009/006-6, 3009/008-6, 3009/009-6, 3009/010-5, 3009/011-5, 3009/022-6, 3009/023-6, 3009/034-4, 3009/037-3, 3009/038-4, 3009/039-4, 3009/040-4, 3009/041-2, 3009/042-3, 3009/043-2

Page:

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Paragraph:

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Original wording:

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Proposed wording:

see modification

Justification:

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Title:	Generic Specification for Capacitors Fixed Chips Ceramic Dielectric Types I and II		
Number:	3009	Issue:	4

Other documents affected:

Page:

21 and 28

Paragraph:

8.10 and 12.4

Original wording:

3009 para 8.10 CAPACITANCE-TEMPERATURE CHARACTERISTICS
The capacitance-temperature characteristics of the components mounted in accordance with Para. 8.6 shall be measured as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification. The following details shall apply:
· Test Conditions:
(a) For type I capacitors: Temperature Coefficient in accordance with Para. 8.3.1.5.
(b) For type II capacitors: Temperature Characteristic in accordance with Para. 8.3.1.6.

Proposed wording:

3009, 8.10 TEMPERATURE CHARACTERISATION
The temperature characteristics of the components shall be measured as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification. The following details shall apply:
(a) Insulation Resistance in accordance with Para 8.3.1.3 at maximum operating temperature rating ±2°C as specified in the Detail Specification.
(b) For type I capacitors: Temperature Coefficient in accordance with Para. 8.3.1.5.
(c) For type II capacitors: Temperature Characteristic in accordance with Para. 8.3.1.6.
3009, 12.4 Chart F4 - rename box CAPACITANCE-TEMPERATURE CHARACTERISTICS to CAPACITANCE-TEMPERATURE CHARACTERISTICS and change note 7 accordingly.
3009/008, 2.3.2 and 2.4 see appended implementation of changes.

Justification:

Elimination of levels B and C resulted in an unwanted removal of High Temperature Insulation Resistance definition. In order to re-introduce the parameter, capacitance-temperature characteristics is changes to temperature characterisation and Insulation Resistance added to High and Low Temperature Measurement Table in the detail specifications.
In order to avoid changes (and cost addition) to previous situation, the performance of the measurement is limited to Chart F4 Qualification and Periodic Testing through the addition of a note to the High and Low Temperature Measurement Table. For procurement, this parameter is therefore guaranteed and not tested in a similar way as other parameters in ICs

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specifications for example.

Attachments:

original_text_of_dcr.pdf, 3009008_draft_5b_mftr_review.pdf

Modifications:

In order for full and proper implementation of this DCR the following other documents shall be included:
ESCC 3001
ESCC 3009/xxx Detail Specifications (i.e. / 003, 004, 005, 006, 008, 009, 010, 011, 022, 023, 034, 037, 038, 039, 040, 041, 042, 043)
ESCC 3001/xxx Detail Specifications (i.e. / 027, 028, 030, 033, 034, 037, 038)

.....
The changes proposed for ESCC 3009 Para 8.10 & Chart F4 shall also be implemented into ESCC3001 Para 8.13 & Chart F4 with the same details.

.....
For each 3009/xxx & 3001/xxx Detail Specification, replace with the following amendments:

A) Implement Insulation Resistance into the 'High and Low Temperature Electrical Measurements' table with the following Details:
: test temperature: Tamb = +125 +/-2degC

: Test method and Conditions: per ESCC 3009 or 3001 and add new Note 1 as below

: Limits: as per each applicable previous ESCC Detail Spec revision that included Insulation Resistance at high temperature (in Table 3)(but with units: Gohm or Gohm.nF as applicable)

: Add new Note 1 (Other notes in the table to be renumbered & reallocated accordingly):
1. Guaranteed but not tested during Chart F3 Screening Tests; only tested in Temperature Characterisation during Chart F4 Qualification and Periodic Testing.

B) In the 'Intermediate and End-Point Electrical Measurements' table:
amend title of test 'Capacitance-Temperature Characteristics' to be 'Temperature Characterisation'

Add Insulation Resistance, RI, as the first test in 'Temperature Characterisation' with existing Note # as below in the limits column.

Note # (# number as applicable):

#. As specified in High and Low Temperatures Electrical Measurements.

Additional Modifications

The following additional editorial changes, agreed by PSWG81, shall apply:

For ESCC3001:

The paragraphs applicable to the amended Para 8.13 should be corrected to be:

in new (a): Para. 8.6.1.3

in new (b): Para. 8.6.1.5

The associated test box in Chart F4 should be renamed: Temperature Characterisation

For ESCC3009:

The associated test box in Chart F4 (& test title in Note 7) should be renamed: Temperature Characterisation

Approval signature:
Date signed:
2017-11-29