DOCUMENT CHANGE REQUEST

DCR number 1356	Changes required for: General	Originator: Steve Thacker
Date: 2020/10/02	Date sent: 2020/07/15	Organisation: ESCC Executive Secretariat
Status: IMPLEMENTED		

Title:	Capacitors Fixed Tubular Porous Tantalum Cathode and Anode Gelled Electrolyte Hermetically		
Number:	3003/005	Issue:	2

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 3003/005 issue 2 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. 3003 issue 3 (as published on 09/07/2020).

The layout, format and general content of 3003/005 Draft 3 is based on other converted ESCC Detail Specifications (see attached for proposed 3003/005 Draft 3).

The technical content of ESCC 3003/005 Draft 3 remains closely based on the original ESCC 3003/005 issue 2 except as detailed herein.

Paragraph:

see below

Original wording:

as per 3003/005 issue 2

Proposed wording:

Total reformat of this Detail Specification (from the range of various ESCC Detail Specifications, 3003/xxx, for capacitors under Generic Specification No. 3003) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 3003/005 Draft 3.

Note: known support for active procurement against this specification includes the following Manufacturers:
• Exxelia Tantalum (Firadec) (is willing to support procurement of all Variants).

Summary of changes to the current format, layout and content is as follows:

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. 3003.

Specific amendments include:

• Table 1(a): missing DF limit values at Tamb = +85C are now included in the table (same as +125C values). DF limits at -55C are deleted (as they are not tested per this spec).

• Table 1(b):
DC Category Voltage, Rated Temperature & Upper Category Temperature are added to the table (for consistency & clarification)

• Figure 1 is replaced by an equivalent note.

• Para 4.4.2, Lead material is renamed as type E (was nickel). Reference to “non-conductive and foreign materials” is deleted (as this is already covered by visual inspection requirements).

• Para 4.5,
ESCC component number is amended (due to SCC level B/C being deleted).
Marking items now include ESCC qualified components symbol.

• Table 2:
Capacitance limits are now absolute limits (i.e. based on specified min/max tolerance values) (clarification).
Capacitance is measured at 100Hz.

• Table 3:
Measurements 1 2 3 6 7 8 15 16 17 at +22C are removed (as they no longer apply due to changes in the Generic spec)
Capacitance limits are now absolute limits (i.e. based on specified min/max tolerance values with a Cn/Cn adjustment)(Clarification).
Capacitance is measured at 100Hz.
Impedance: IEC test method is added (clarification)
Note 1, sampling is amended to be 5/0 for each manufacturing lot (as per the Generic spec default requirement)

• Para. 4.7.1 & Table 4 is deleted (due to SCC level B being deleted)

• Para. 4.3.3, 4.7.2, 4.8.4 & Table 5 are deleted (as the default condition per the Generic spec apply)

• Table 6 only includes specified electrical measurement requirements as required for the various Chart F4 Qual level tests (tests without electrical measurements are deleted). Note: legacy LAT electrical measurements (Nos. 16 & 17) are deleted. (editorial change).

• Table 6: all tests: Capacitance is added to final measurements (clarification & consistency)

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• Table 6: Voltage Proof is added to: Damp Heat Steady State & Operating Life (clarification & consistency).

• Table 6: initial measurements added to: Rapid Change of Temperature, Climatic Sequence, Damp Heat Steady State, Reverse Voltage & Operating Life (clarification & consistency).

• Table 6: Vibration & Mechanical Shock: measurements during test are added (clarification & consistency).

• Table 6: Operating Life: intermediate measurements are added (clarification & consistency).

• Table 6: Add notes applicable to Operating Life, to explain when the 500h, 1000h & 2000h measurements apply.

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. 3003 issue 3.

See also change details for justification for specific items above.

Attachments:

3003005_draft_3b_for_review_(dcr_attachment).docx

Modifications:

N/A

Approval signature:



Date signed:

2020-10-02