	<u>ESC</u>	C	DC	DCUMENT	CHANGE REQUEST		
DCR number	1317	Changes re	quired for: Gen	eral	Originator: Steve Jeffery		
Date: 2020/06	6/23	Date sent: 2	2020/01/27		Organisation: ESCC Executive		
Status: IMPLE	EMENTED						
Title:	Capacitors Fixed F	Reconstituted N	/ICA High Volta	ge, based on type	e HT86PS		
Number:	3006/022 Issue:		lssue:	3			
Other documen	ts affected:			-			
Page:							
All.							
Paragraph:							
specifications to the ESCC format, as well as reflecting changes resulting from the conversion of ESCC Generic Specification No. 3006 (ref. DCR 1231). The layout, format and general content of 3006/022 issue 4 is based on other converted ESCC Detail Specifications, see the attached draft Detail specification that implements all the proposed changes: 3006022 draft 4B for DCR review.docx The technical content of ESCC 3006/022 issue 4 remains closely based on the original ESCC 3006/022 issue 3 except as detailed herein. Original wording: See 3006/022 issue 3							
Proposed wordi	ng:						
Total reformat of this Detail Specification (one of a range of various ESCC Detail Specifications for capacitors under Generic Specification No. 3006) as part of the ongoing conversion to the ESCC format.							
See below for summary of changes, also see attached the proposed 3006/022 issue 4.							
Note: known support for active procurement against this specification includes the following Manufacturers: • Exxelia Technologies (formerly Eurofarad).							
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 including deletion of any redundant paragraphs and information, based on the layout and editorial content of other Detail Specifications already converted to ESCC format. 							

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Specific amendments include:									
2) Para 1.2 and Table 1(a): Range of Components Table is amended and explanatory notes (Notes 1 & 2) added regarding the dimensions and the lead material and finishes of the components.									
3) Para 1.3 and Table	1(b): SI Unit	(Pa) is used for Operatin	g Air Pressure Range	instead of "mbar".					
 4) Para 1.5 and Figure 2, Physical Dimensions (re-named "Physical Dimensions and Terminal Identification"): Note 2 is revised (for some capacitors these dimensions will be greater than 2mm) in order that the approximate position of lead-outs with respect to the body is defined instead. Note 3 is re-worded as the Terminal Identification note. 									
5) Para 1.6 and Figure 3: Applicable Functional Diagram (for polarised capacitor) replaces the existing basic capacitor symbol.									
 6) Para 4.2 Deviations from Generic Specification is revised as follows: Paras 4.2.2(a), 4.2.4(a), 4.2.5(a) "Seal Test: Not applicable" are deleted (not a deviation, as by definition the components are non-hermetically sealed). Para 4.2.4(e) Climatic Sequence, the Low Air Pressure deviation is re-written and is clarified as being for Qualification Testing only. Para 4.2.4(e) Climatic Sequence, the Damp Heat Accelerated deviation to Test condition is irrelevant and is therefore delated. 									
 Paras. 4.2.4(e) and (f), the Partial Discharge (AC) measurements deviations are deleted (not considered deviations from the Generic; the details are now included in Intermediate and End-Point Electrical Measurements). Para 4.2.5 is deleted. 									
7) Para 4.3.3, Robustness of Terminations: paragraph is re-worded for clarification purposes.									
8) Para 4.4.2, Lead Material and Finish: this information is moved to Range of Components.									
9) Para 4.6.1 and Tab Measurements"):Capacitance Limits of	le 2 (was "Ele	ectrical Measurements at lote 1, the Note is replace	Room Temperature", ed by two new Notes w	now "Room Temperature Electrical					
and Note 2 defines th • Capacitance Test Con Range of Component • The two insulation R	Maximum L onditions for I s and The ES vesistance Ch	imit. nsulation Resistance (Te SCC Component Number.	rminal-to-Terminal) are	e changed from µF to pF to be in-line with					
The unit for Insulation R The unit for Insulation Note 3 is re-written Production Tests i.e. Note 2 is re-number	n Resistance Voltage appli Chart F2). ed (Note 4).	, "sec", is re-written as G cation time: 5s" (because	nF. electrical measureme	nts are no longer performed during Final					
10) Para. 4.6.2 and Ta	able 3 (was "l	Electrical Measurements	at High and Low Temp	peratures", now "High and Low					

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Status: IMPLEMENTED Temperatures Electrical Measurements"): • Note 1 (which defines the sampling) is amended to " a sample of 5 components from each manufacturing lot with 0 failures allowed. In the event of any failure a 100% inspection may be performed." • Capacitance Change characteristic is re-named "Temperature Coefficient". Associated Note 2 re-worded for clarification purposes. • Insulation Resistance Terminal to Terminal is re-named (Simplification and clarification). • Capacitance Test Conditions for Insulation Resistance (Terminal-to-Terminal) are changed from μF to pF to be in-line with Range of Components and The ESCC Component Number. • The unit for Insulation Resistance, "sec", is re-written as G.nF. 11) Para 4.7.2 and Table 5 (was "Conditions for Burn-in", now "Burn-in Conditions"): The sentence regarding 24 ±2 hours recovery is re-worded and is included in Note 1. There is now no Para for Operating Life, as this is specified by the new Generic ESCC 3006 and deviation (Para 2.1.1.2(f)). 12) Table 6 (Measurements and Inspections on Completion of Environmental Tests and at Intermediate Points and on Completion of Endurance Testing) is modified and incorporated into new Para "Intermediate and End-Point Electrical Measurements" (Para 2.5): • An absolute maximum limit of 60x10-4 is now specified for "Tangent of Loss Angle Change" instead of "+10" (as the applicable measurement is "Tangent of Loss Angle", which is not a drift value measurement). • Where limits are specified as either "Record Values" or "Table 2", this is now a Note directing to Room Temperature Electrical Measurements. • Where limits								
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 current issue of ESCC Generic Specification No. 3006.								

Attachments:

3006022_draft_4b_for_dcr_review.docx

Modifications:

Para. 1.7: The functional diagram is modified (polarised capacitor with additional "-", for full clarification)

Para. 2.4.2, Note 1: The sample size is 6 pieces (was 5)

A new Appendix, "Appendix 'A' Agreed Deviations for Exxelia Technologies", is added to list various agreed and required deviations against Chart F3 & F4, i.e.:

* All lots, prior to the performance of High and Low Temperatures Electrical Measurements, shall be serialised 100%;

* The Voltage application time (part of Voltage Proof during initial Room Temperature Electrical Measurements) shall be the standard 60 (+0 -1)s. 5s is specified for all other voltage proof measurements required during Charts F3 & F4;

* The Temperature Coefficient measurements (High and Low Temperatures Electrical Measurements, Chart F3) shall be R+R in order that this data may be used in lieu of performing this test again per Subgroup 2B of Chart F4;

100% X-ray shall be carried out at the end of Screening prior to External Visual inspection.

Approval signature:

Peter Allohan (

Date signed:

2020-06-23