



## DOCUMENT CHANGE REQUEST

DCR number 1483 Changes required for: General

Date: 2022/04/05

Date sent: 2022/01/18

Status: IMPLEMENTED

Originator: Steve Thacker

Organisation: ESCC Executive  
Secretariat

Title: Resistors Heaters Flexible Single and Double Layer, Follow-up Specification for ESA/SCC Detail

Number: 4009/002

Issue: 11

Other documents affected:

Page:

16

Paragraph:

Appendix A

Original wording:

See 4009/002 issue 11

Proposed wording:

An additional deviation is included in RICA Appendix A to permit a modification to the high temperature measurement of Resistance Change: RA/RA(H)  
i.e. Change from a test at +200°C to one at +150°C with the change limit adjusted accordingly from +3.17% maximum to +2.29% maximum

See attached mark-up specification for details

Justification:

This change is raised on behalf of Manufacturer RICA.

RICAs justification is as follows:

Due to the need to replace existing test hardware, RICA propose to standardise the high temperature test condition across products (i.e. with 4009/004) and thereby use less energy with a reduced environmental impact.

The purpose of this test is to verify the temperature coefficient of the heater resistive element which can be done equally at +150°C as it can at +200°C.

Attachments:

escc4009002iss\_draft\_12a\_in\_review.docx

Modifications:

Modifications

The following additional changes are included in this DCR as agreed by ESA and RICA (see new attachment 4009/002 Draft 12B):

1. In Appendix A, add a requirement to test during Qualification and Periodic testing (on 3 samples from the Endurance Subgroup, on completion of subgroup testing), the Resistance change between +200 (+0 -3)°C and +22 ±3°C per the original Para. 2.4.2 requirements & limits. No failures are allowed.

2. Add a note to the deviation to Para. 2.4.2 per this DCR, that the Resistance change between +200 (+0 -3)°C and +22 ±3°C shall be guaranteed but not tested.

Additional changes as follows shall be included as agreed with all parties:

In Appendix A:

Under item Para. 2.1.1, add new deviation:

- During Qualification and Periodic Testing, on completion of the Endurance Subgroup testing, 3 components selected at random from the test samples, shall be tested for Resistance change between +200 (+0 -3)°C and +22 ±3°C, RA/RA(H), in accordance with Para. 2.4.2 of this specification. No failures are allowed.

Under item Para. 2.4.2, amend 1st & 2nd sentences of the new deviation per DCR1483 to read:

- Resistance change between +200 (+0 -3)°C and +22 ±3°C, RA/RA(H), shall be guaranteed but not tested. This test shall be replaced by a test performed at +150°C instead of +200°C as follows:

Approval signature:



Date signed:

2022-04-05