



## DOCUMENT CHANGE REQUEST

DCR number 242 Changes required for: General

Date: 2006/03/17

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Originator: S Thacker

Organisation: ESA/ESTEC

Status: IMPLEMENTED

Title: Generic Specification for Resistors Heaters Flexible

Number: 4009 Issue: 2

Other documents affected:

Page:

Page 12 para 7.1.1

Page 22 para 10

Paragraph:

Page 12 para 7.1.1

Page 22 para 10

Original wording:

Proposed wording:

In addition to the changes per DCR229 additional minor editorial amendments as follows:

1) Para 7.1.1.

Capitalise the term "Qualification Test Lot" in the 1st & 2nd sub paras


Delete in 1st sub-para the redundant phrase "(Screening Tests)"

2) Para 10

Amend the term "test lot" in the final sub-para to be "Qualification Test Lot"

Justification:

Editorial changes for consistency purposes.

Attachments:
4009.pdf, null
Modifications:
N/A
Approval signature:

Date signed:
2006-03-17



## 7. QUALIFICATION, QUALIFICATION MAINTENANCE AND LOT VALIDATION TESTING

Requirements of this paragraph are applicable to the tests performed for component type qualification and qualification maintenance, and also for Lot Validation Testing. All components shall be serialised prior to the tests and inspections.

### 7.1 COMPONENT TYPE QUALIFICATION TESTING

#### 7.1.1 General

Qualification testing shall be in accordance with the requirements given in Chart F4. The tests of Chart F4 shall be performed on the specified sample, chosen at random from components which have successfully passed the tests in Chart F3. ~~Sampling Tests~~. This sample constitutes the qualification test lot.

The qualification test lot is divided into subgroups of tests and all components assigned to a subgroup shall be subjected to all of the tests in that subgroup, in the sequence shown. The applicable test requirements are detailed in the paragraphs referenced in Chart F4.

The conditions governing component type qualification testing are given in ESCC Basic Specification No. 20100.

#### 7.1.2 Distribution within the Qualification Test Lot

The qualification test lot shall be comprised in accordance with the following provisions:

- 1/3 of the lot with the maximum resistive density.
- 1/3 of the lot with the average resistive density (10 to 30 Ohms/cm<sup>2</sup>).
- 1/3 of the lot of the double layer type with separate outputs.

The component types may be specified by, but in any case shall be agreed with, the ESCC Executive, prior to the commencement of qualification testing and the justification for the selection shall be declared in the qualification test report.

### 7.2 QUALIFICATION MAINTENANCE (PERIODIC TESTING)

Component type qualification is maintained through periodic testing and the test requirements of Para. 7.1 shall apply. For each subgroup the period between successive subgroup testing shall be as given in Chart F4. The conditions governing qualification maintenance are given in ESCC Basic Specification No. 20100.

### 7.3 LOT VALIDATION TESTING

#### 7.3.1 General

For qualified components, Lot Validation Testing as defined in compliance with Chart F4, Subgroup 2, shall only be performed on the procured lot if required in the Purchase Order.

If unqualified components are procured using this specification then the Orderer shall define in the Purchase Order the required subgroups from Chart F4 to be used for Lot Validation Testing.

#### 7.3.2 Distribution within the Sample for Lot Validation Testing

Where a Detail Specification covers a range, or series, of components that are considered similar, then it is only necessary to perform Lot Validation Testing on representative types if a number of different types are procured together. The sample for Lot Validation Testing should be comprised of component

and/or the Detail Specification during Special In-Process Controls, Screening Tests and Qualification and Periodic Tests.

- (b) The serial number (if applicable) of the failed component.
- (c) The failed parameter and the failure mode of the component.
- (d) Detailed failure analysis (if requested by the ESCC Executive or Orderer).

#### 9.9 CERTIFICATE OF CONFORMITY

A Certificate of Conformity shall be established as defined in ESCC Basic Specification No. 20100.

#### 10. DELIVERY

For procurement, for each order, the items forming the delivery are:

- (a) The delivery lot.
- (b) The components used for Lot Validation Testing (when applicable), but not forming part of the delivery lot.
- (c) The relevant documentation in accordance with the requirements of Section 9.

In the case of a component for which a valid qualification is in force, all data of all components submitted to Lot Validation Testing shall also be copied, when requested, to the ESCC Executive.

For qualification or qualification maintenance, the disposition of the Test Lot and its related documentation shall be as specified in ESCC Basic Specification No. 20100 and the relevant paragraphs of Section 9 of this specification.

#### 11. PACKAGING AND DISPATCH

The packaging and dispatch of components to this specification shall be in accordance with the requirements of ESCC Basic Specification No. 20600.