



DOCUMENT CHANGE REQUEST

DCR number 667 Changes required for: General

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Originator: Steve Thacker

Organisation: ESTEC

Status: IMPLEMENTED

Title: Generic Specification for Attenuators and Loads RF Coaxial Fixed

Number: 3403 Issue: 3

Other documents affected:

Page:

Paragraph:

Original wording:

Page 20; Para 8.12.2 & 8.12.5

Proposed wording:


After discussion with Manufacturer Radiall over the test conditions applicable to Climatic Sequence-Damp Heat Accelerated, the following additional editorial change is required to ESCC3403 (to those already detailed in point B of DCR648):

Paras 8.12.2, 8.12.5 Replace incomplete test condition

Justification:

Correction of editorial errors and omissions.

This DCR should be considered together with DCR648.

Attachments:
3403_draft_4a_mark_up_pages(2).pdf, null
Modifications:
N/A
Approval signature:

Date signed:
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Additional change)

MARUP S.1
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Electrical measurements as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification shall be performed. If parameter drift is specified initial measurements also shall be performed.

8.12 CLIMATIC SEQUENCE

8.12.1 Dry Heat

The components shall be subjected to Test Ba of IEC Publication No. 60068-2-2 under the following conditions:

- Duration: 2 hours.
- Temperature: Maximum operating temperature as specified in Maximum Ratings in the Detail Specification.
- Data Points
While still at the specified high temperature and at the end of the period of high temperature, electrical measurements as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification shall be performed.

Db, Severity b (+55°C), Variant 2,

8.12.2 Damp Heat, Accelerated, First Cycle

Unless otherwise specified in the Detail Specification, the components shall be subjected to Test B of IEC Publication No. 60068-2-30 for one cycle of 24 hours. After recovery, the components shall be subjected immediately to the Cold test.

8.12.3 Cold

The components shall be subjected to Test Aa of IEC Publication No. 60068-2-1 under the following conditions:

- Duration: 2 hours.
- Temperature: Minimum operating temperature as specified in Maximum Ratings in the Detail Specification.
- Data Points
While still at the specified low temperature and at the end of the period of low temperature, electrical measurements as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification shall be performed.

8.12.4 Low Air Pressure

The components shall be subjected to Test M of IEC Publication No. 60068-2-13 under the following conditions:

- 1 or 2 minutes at 85mbar.
- Temperature: +15 to +25°C.

Maximum rated DC Power as specified in Maximum Ratings in the Detail Specification shall be applied to one end of the Attenuator under test while the other end shall be connected to a matched fixed coaxial load, for 1 to 2 minutes immediately after the pressure of 85mbar has been attained. There shall be no evidence of flash-over or breakdown.

When Loads are tested alone, maximum rated DC Power shall be applied directly.



Db, Severity b (+55°C), Variant 2,

- 8.12.5 Damp Heat, Accelerated, Remaining Cycles
The components shall be subjected to Test *1* of IEC Publication No. 60068-2-*1* for 5 cycles of 24 hours.
- 8.12.6 Final Inspection and Electrical Measurements (Data Points)
On completion of testing and after a recovery period of 1 to 24 hours, the components shall be visually inspected and there shall be no evidence of mechanical damage. Electrical measurements as specified in Intermediate and End-Point Electrical Measurements in the Detail Specification shall be performed. If parameter drift is specified initial measurements also shall be performed.
- 8.13 COUPLING PROOF TORQUE
The components under test shall be engaged with the applicable mating gauge as specified in the Detail Specification and the coupling nut tightened to the torque specified in the Detail Specification. After 1 minute, the connected pair shall be disconnected.
- Data Points
On completion of testing, the component shall be visually inspected. The coupling mechanism shall not be dislodged and the interface dimensions of the component shall remain as specified in the Detail Specification.
- 8.14 MATING AND UNMATING FORCES
- 8.14.1 Bayonet and Screw Coupling
The component under test shall be mated with its mating gauge as specified in the Detail Specification. During the entire mating or unmating cycle (until the component is fully mated or unmated), the necessary torque shall not exceed the value specified in the Detail Specification.
- A screw-coupling component is fully mated with its mating gauge when their reference planes coincide.
- A bayonet-coupling component is fully mated with its mating gauge when the bayonet studs have passed the detent and their reference planes coincide.
- No additional tightening torque shall be applied.
- 8.14.2 Push-Pull Coupling
The component under test shall be mated with its mating gauge as specified in the Detail Specification. During this engaging cycle, the force necessary to fully mate the component shall not exceed the value specified in the Detail Specification.
- Upon completion of mating, an opposite force necessary for unmating shall be applied. The force necessary to fully unmate the component shall not exceed the value specified in the Detail Specification.
- 8.15 CONNECTOR REPEATABILITY (ATTENUATORS ONLY)
The components shall be tested for Connector Repeatability. The following details shall apply:
- Perform 10 complete engagements and separations, both ends separately.
 - Rotate Attenuator body through the full 360° with an increment of approximately 36° for each engagement.
 - Cleaning of components or reshaping of contacts is not permitted during the test sequence.
 - Side-thrust shall not be permitted during the test.