



## DOCUMENT CHANGE REQUEST

DCR number 934 Changes required for: General

Date: 2015/07/16

Date sent: 2015/05/13

Originator: Steve Jeffery

Organisation: ESCC Executive

Status: IMPLEMENTED

Title: Fuses, 0.14 to 3.5 Amps, Based on Type MGA-S

Number: 4008/001

Issue: 3

Other documents affected:

Page:

All.

Paragraph:

1.4.2, 1.5, 1.6, 2.1.1, 2.3 to 2.11 inclusive and Appendix A.

Original wording:

See existing issue of the spec.

Proposed wording:

Various editorial (including format changes) and technical changes are proposed - see the attached draft of ESCC 4008/001 (issue 4 draft C) and below for specific changes.

1. Para. 1.4.2, Component Type Variants and Range of Components: The Rated Current column header is amended and associated new Note 1 added (to clarify Rated Current).
2. Para. 1.4.2, Component Type Variants and Range of Components: The original Note 1 is re-numbered (Note 2) and amended (for clarification purposes and to be consistent with new Note 1).
3. Para. 1.5, Maximum Ratings: New remarks are added to Rated Current and Operating Temperature Range for clarification purposes; associated new Note 2 is added, also for clarification purposes.
4. Para. 1.6, Parameter Derating Information: The Chart is revised/simplified.
5. Para. 2.1.1, Deviations from the Generic Specification: The deviation given in Para. 2.1.1.1(a) is considered to be manufacturer-specific rather than component-specific, and has therefore been moved from the main body of the spec to Appendix A. The wording of the deviation given in Para. 2.1.1.1(b) is amended (the materials and construction of the fuse are such that the Vibration test is not applicable).
6. The titles of Paras. 2.3, 2.4, 2.5, 2.6 & 2.7 are amended (improved definitions; also for clarification purposes).
7. Para. 2.3, Current Carrying Capacity: The test current condition is amended (better definition).
8. Para. 2.4, Overload Operation: A new Sample column is added to the table for clarification purposes. The Overload



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Current is now defined as being a DC condition. Note 1 is added for clarification purposes.

9. Para. 2.4, Overload Operation: Post-Overload Operation inspection criteria were missing from existing and earlier issues of the spec and have therefore been added.

10. Para. 2.5, Verification of Overload Operation at DC Rated Voltage: Subparagraphs 2.5.1 and 2.5.2 are combined into a single Paragraph under 2.5. A new Sample column is added to the tables for clarification purposes. The Overload Current is now defined as being a DC condition. A new Note 1 is added for clarification purposes and the existing Note 1 is re-numbered Note 2 accordingly. The existing Note 2 (post-Overload Operation at DC Rated Voltage inspection criteria) is amended; it now applies to all Overload Currents, and is no longer a Note.

11. Para. 2.7, Maximum Current Clearing: Test current conditions are added for clarification and consistency purposes. Existing wording is amended (verification that the values given in the table are actually maximum limits).

12. Para. 2.8, Room Temperature Electrical Measurements: Voltage Drop is clarified (by the addition of a new Note 1) as being performed with Test Current: Nominal Current = 143% Rated Current.

13. Para. 2.9, Intermediate and End-point Electrical Measurements: The wording of the second sentence is corrected.

14. Para. 2.9, Intermediate and End-point Electrical Measurements: The sequence of the Test References in the table now matches the sequence given in Chart F4 of Generic 4008.

15. Para. 2.9, Intermediate and End-point Electrical Measurements: A new Note 2, which replaces the existing Characteristics and Limits for Insulation Resistance (part of Thermal Vacuum, Final Measurements), is added.

16. Para. 2.9, Intermediate and End-point Electrical Measurements: The existing Note 1 is actually incorrect / irrelevant and is deleted accordingly. A new Note (Note 3), which applies to the Operating Life Initial Measurements Characteristics (Cold Resistance & Voltage Drop), is added for clarification purposes.

17. Para. 2.10, Burn-in Conditions and Para. 2.11, Operating Life Conditions: The Test Current is clarified as being a DC condition.

18. Appendix A is revised as follows: Items Affected comprise the deviations from the Screening Tests and the deviations from the Qualification and Periodic Tests in two separate sections.

19. Appendix A: A Deviation from Rapid Change of Temperature is added to deviations from Qualification and Periodic Tests (Ref. Point 5 above).

20. Appendix A, deviations from Qualification and Periodic Tests: The vacuum chamber pressure limit is specified in Si unit (Pascal) in addition to torr (for clarification & information).

21. Appendix A, deviations from Screening Tests & deviations from Qualification and Periodic Tests, External Visual Inspection: the terms brown spot and tin particle have a certain ambiguity, and could even be considered confusing. The



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more general but unambiguous terms discoloured areas and metallic particle are used instead.

### Justification:

The proposed changes improve and make necessary corrections to the technical and editorial content of the spec; they also make it fully consistent with the proposed issue of ESCC Generic Specification No. 4008, Issue 4. The proposed formatting changes harmonise the format/layout of this spec with the new ESCC Detail Specification for HCSF type fuses, ESCC 4008/002 (was Draft 185).

### Attachments:

4008001\_draft\_4c.docx

### Modifications:

N/A

### Approval signature:

### Date signed:

2015-07-16