DOCUMENT CHANGE REQUEST

DCR number 1022	Changes required for: General	Originator: Steve Jeffery
Date: 2016/11/17	Date sent: 2016/08/12	Organisation: ESCC Executive
Status: IMPLEMENTED		

Title:	Transistors, Microwave, Small Signal, Silicon, Bipolar, based on Type BFY640B + BFY650B		
Number:	5611/010	Issue:	2

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 5611/010 issue 2 as part of the ongoing conversion of legacy ESA/SCC specifications to the ESCC format, as well as reflecting changes resulting from the conversion of ESCC Generic Specification No. 5010.

The layout, format and general content of 5611/010 issue 3 is based on other converted ESCC Detail Specifications (see attached for proposed 5611/010 issue 3).

The technical content of ESCC 5611/010 issue 3 remains closely based on the original ESCC 5611/010 issue 2 except as detailed herein.

Paragraph:

All.

Original wording:

See original ESCC 5611/010 Issue 2.

Proposed wording:

Total reformat of this Detail Specification (from the range of various ESCC Detail Specifications, 5xxx/xxx, for microwave discrete semiconductors under Generic Specification No. 5010) as part of the ongoing conversion to the ESCC format.

See below for summary of changes, also see attached the proposed 5611/010 issue 3.

Note: known support for active procurement against this specification includes the following Manufacturers:
• Infineon Technologies AG.

Summary of changes to the current format, layout and content is as follows:

1) 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.

Specific amendments include:

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2) Table 1(b) Maximum Ratings, Operating Temperature Range Characteristic: The remark Tamb is changed to TS in order to be consistent with other Maximum Ratings.

3) Figure 1 is replaced by Para. 1.5 (Ptot, Rth(j-s), Note 2).

4) Figure 3: note added that lid is connected to emitter terminal.

5) Paras 4.2.2(a), (b) and (c) & 4.2.3(a) and (b) & 4.2.4(a) & 4.2.5(a) and (b): Deviations are made redundant by the latest Generic 5010 and hence are deleted.

6) Paras 4.2.4(e) & 4.2.5(f), Appendix A: deviation on the option to allow the use of specific rejects for Qual & MoQ testing is moved to appendix A for Infineon (as these deviations are considered only applicable to Infineon).

7) Para 4.3.3, Terminal Strength: new force (as confirmed by manufacturer Infineon, and applicable to all specs which include Variants in Micro-X package) of 2.23N instead of 2.2N.

8) Para 4.3.4, Appendix A: Bond Strength is moved to Appendix A for Infineon (as this specifies deviations to the ESCC Generic (& MIL) requirements as applied specifically by Infineon).

9) Para 4.3.5, Appendix A: Die Shear is re-worded, with the test conditions moved to Appendix A for Infineon (as this specifies deviations to the ESCC Generic (& MIL) requirements as applied specifically by Infineon).

10) Para 4.4.1: metal lid is added to description of the case.

11) Para 4.4.2: Lead material typographic error corrected to G (i.e. G2 instead of D2).

12) Para 4.5.1: requirement for ESD labelling is removed (as it is already covered by ESCC Basic spec No. 20600).

13) Table 2 Nos. 17, 18 & 19, Note 7: the Noise Figure and Output Power limits are specified for each Variant in this table (not Type Variants table). Note 7 is deleted accordingly.

14) Table 3: tests are to be performed on a sample basis (5 components) in line with the default condition in ESCC Generic 5010.

15) Table 5(a) Conditions for High Temperature Reverse Bias Burn-in: Characteristic (and Symbol) Case Temperature, Tcase replaced by the more appropriate Soldering Point Temperature, TS.

16) Table 5(b) Conditions for Power Burn-in and Operating Life Tests: Characteristic (and Symbol) Ambient Temperature, Tamb replaced by the more appropriate Soldering Point Temperature, TS. Ambient Temperature Conditions are replaced with the applicable minimum Soldering Point Temperatures. Power Dissipation Conditions are replaced with the appropriate test condition, i.e. < or = Ptot given in Maximum Ratings. Because of the changes above, the wording of Note 2 is amended to take account of the adjustment of TS and/or Ptot to attain the specified Tj.

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17) Para 4.9 is deleted as radiation testing is not applicable to this spec.

18) Appendix A (for Infineon): Deviation on Radiographic Inspection is amended to be in-line with the Charts of the latest Generic. As before, Radiographic Inspection per 20900 cannot be performed properly (the package construction prevents it) and therefore the Internal Visual Inspection performed during Chart F2 shall include verification of the length, height and shape of the wire bonding.
Deviation on Para 8.2.3(e) is amended to apply to Final Customer Source Inspection (instead of LA3 which no longer applies in Generic 5010).
New deviation on Temperature Cycling is added at Manufacturer Infineon's request.

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. 5010.

See also change details above for justification for specific items.

Note: All changes in this DCR have been agreed with the one ESCC qualified supporting Manufacturer Infineon Technologies AG.

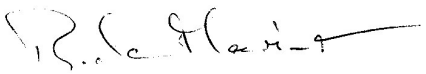
Attachments:

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Modifications:

N/A

Approval signature:



Date signed:

2016-11-17