DOCUMENT CHANGE REQUEST

DCR number 1035	Changes required for: General	Originator: Steve Jeffery	
Date: 2016/11/14	Date sent: 2016/09/19	Organisation: ESCC Executive	
Status: IMPLEMENTED			

Title:	Diodes Microwave Silicon Pin Planar, based on types BXY43C and BXY44K		
Number:	5513/030	Issue:	4

Other documents affected:

Page:

Total reformat/re-write of ESCC Detail Specification 5513/030 issue 4 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 5513/030 issue 5 is based on other converted ESCC Detail Specifications (see attached for proposed 5513/030 issue 5).

The technical content of ESCC 5513/030 issue 5 remains closely based on the original ESCC 5513/030 issue 4 except as detailed herein.

Paragraph:

All.

Original wording:

See original ESCC 5513/030 Issue 4.

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 5513/030 issue 5.

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) Title page, Based on Type: PLANAR is deleted as the type of die construction is irrelevant / not required for ESCC Detail Specifications.

3) Para. 1.7 Handling Precautions: Last sentence amended (addition of the standard phrase per ESCC Basic Specification No. 23800).

4) Table 1(b) Maximum Ratings, Junction Temperature Characteristics: the maximum rating is corrected to +150 to be consistent with Figure 1.

5) Table 1(b) Thermal Resistance: the condition IF = 1.0mA is removed (as IF current condition is considered to be irrelevant w.r.t. thermal resistance).

6) Figure 1 is replaced by Para. 1.5 (PD, Rth(j-c), Note 1).

7) Paras 4.2.1(a), 4.2.2(a), (d) and (e), 4.2.3(a), 4.2.4(e) and (f) & 4.2.5(d) and (e): Deviations are made redundant by the latest Generic 5010 and hence are deleted.

8) Paras 4.2.2(b) and 4.2.4(a): Die Shear requirement and condition is not a deviation, therefore the details are included in a new para Die Shear as part of Section 2 REQUIREMENTS.

9) Para 4.3.3 Terminal Strength: Force shall be 1.5N rather than 1.22N, to be consistent with ESCC 5512/020.

10) Para 4.4.1: lid and sealing ring are added to description of the case.

11) Para 4.5.1: item (a) is deleted as terminal identification marking is not required / unnecessary.

12) Para. 4.5.3: Testing Level (B or C, as applicable) is deleted.

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

14) Figure 4 is deleted (as such generalised figures do not serve any real purpose with regards to the Detail Specification). The details given in Figure 4, Notes 2, 3 & 4 are included in a new Note to Room Temperature Electrical Measurements Charge Carrier Lifetime Characteristic.

15) Table 4 Note 1: 3 is deleted as there are no such requirements in the latest ESCC Generic 5010.

16) Table 5(a) Note 1: Reference to Note 1 is correctly assigned to the VR conditions (was incorrectly assigned to the Burn-in ambient temperature condition). Room temperature is now specified (Tamb = +25 +/-3°C for the purposes of completeness and consistency).

17) Table 5(b) Conditions for Power Burn-in and Operating Life Tests: Ambient Temperature Characteristics are irrelevant

and are therefore deleted. Power Dissipation Conditions are amended in order to be consistent with Maximum Ratings and device characteristics. Because of the changes above, the wording of Note 1 is simplified to Tcase shall be adjusted to attain the specified Tj.

18) Figures 5(a) and 5(b) are deleted as they do not have any meaningful purpose with regard to the required content of the specification.

19) Para 4.9, Radiation Testing: para is deleted as radiation testing is not applicable to this spec.

20) New Appendix A added (applicable specific deviations for Infineon):
Deviations on Dimension Check, Bond Strength, optional Pre-Burn-in, Temperature Cycling, Assembly Capability Subgroup tests, Final Customer Source Inspection and Additional Documentation and Wafer Lot Acceptance Data are 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:

2016-11-14