

Product / Process Change Notification



N° 2008-123-A

PL=52

Improved reliability and soldering robustness for IGBT & Diode products assembled in package PG-TO263 at IFX Malacca

Attached you find the process change notification PCN-N° 2008-123-A.
Please forward this information to all affected customers as soon as possible.

If we receive no response to the contrary until 14th October 2008 at the latest we assume, that your customers have been informed and are in agreement with our outlined intentions.

JEDEC STANDARD "JESD46-C" stipulates: "Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change."

For PCN sample ordering, please use the Infineon Sample Request (ISaR) tool, and include the PCN number as reference. Please note that the sample availability date indicated in the PCN is only valid for lead products.

Complete customer information, e.g.: product list, Customer Info Package is available on the Infineon intranet at:

http://goto.infineon.com/ci_docs/

Please address any questions on this issue to PCN author:

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Dear Customer,

Please find attached our INFINEON Technologies PCN:

Improved reliability and soldering robustness for IGBT & Diode products assembled in package PG-TO263 at IFX Malacca

Important information for your attention:

- Please respond to this PCN by indicating your decision on the approval form, sign it and return to your sales partner before **14th October 2008**.
- Infineon aligns with the widely-recognized JEDEC STANDARD "JESD46-C", which stipulates: "Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change."

Your prompt reply will help Infineon Technologies to assure a smooth and well executed transition. If Infineon does not hear from your side by the due date, we will assume your full acceptance to this proposed change and its implementation.

Your attention and response to this matter is greatly appreciated.

Disclaimer:

If we do not receive any response by the date in the PCN below we consider this as the acceptance of the PCN. After the last order date as stated herein, purchase orders related to the unchanged product(s) cannot be accepted.

In case the customer rejects this PCN this PCN shall be considered a product discontinuation notice (PD).

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- SUBJECT OF CHANGE:** Change in imide material in order to improve reliability and soldering robustness of the devices.
- PRODUCTS AFFECTED:** Products, assembled in package PG-TO263-3 at Infineon Technologies (Malaysia) Sdn. Bhd., Malacca as listed per sales code in attachment 1_cip08123_a.
- REASON OF CHANGE:** Increased soldering peak temperature from 245°C to 260°C (exceeding IPC/JEDEC J-STD-020C).
Improved reliability (full 1000h qualification passed with MSL1/260°C precon, refer to Final Qualification Report 2_cip08123_a)
- DESCRIPTION OF CHANGE:**
- | | <u>OLD</u> | <u>NEW</u> |
|----------------------------|---|---|
| ■ Imide material | Durimide 7020 | Durimide 7520 |
| ■ Chip passivation concept | Chip passivation concept depends on product

For details, kindly refer to affected product list, attachment 1_cip08123_a. | Standardized passivation concept:
40nm Nitride + 10µm Imide |
- PRODUCT IDENTIFICATION:** Internal traceability ensured via baunumber, lotnumber and date code.
External traceability ensured via barcode label on reel and packing box. For an illustration, kindly refer to attachment 3_cip08123_a
- TIME SCHEDULE:**
- Final qualification report: Kindly refer to attachment 2_cip08123_a
 - First samples available: On request with a lead time of 8 weeks from customer sample order till sample delivery
 - Start of delivery: From beginning of December 2008
 - Last order date of unchanged product: 1st March 2009
 - Last delivery date of unchanged product: 30th August 2009

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ASSESSMENT:

- Adaptation of soldering conditions to the technical standard
- No change in electrical performance

DOCUMENTATION:

- | | |
|--------------|--|
| 1_cip08123_a | List of affected products and changes in passivation concept |
| 2_cip08123_a | Final Qualification Report |
| 3_cip08123_a | Customer information package:
Illustration of identification of products with changed peak soldering temperature by barcode label |

List of affected products 1_cip08123_a


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Legend

- 1) Already standardized to 40 nm Nitride + 10 µm Imide
- 2) Change from 20 µm Imide to standardized passivation concept of 40 nm Nitride + 10 µm Imide

Sales name	Product category	Change in Chip Passivation Concept	
		IGBT chip	Diode chip
BUP212 E3045A	Single IGBT product	No ¹⁾	-
BUP213 E3045A	Single IGBT product	No ¹⁾	-
SGB02N120	Single IGBT product	No ¹⁾	-
SGB02N60	Single IGBT product	No ¹⁾	-
SGB04N60	Single IGBT product	No ¹⁾	-
SGB06N60	Single IGBT product	No ¹⁾	-
SGB07N120	Single IGBT product	No ¹⁾	-
SGB10N60A	Single IGBT product	No ¹⁾	-
SGB15N120	Single IGBT product	No ¹⁾	-
SGB15N60	Single IGBT product	No ¹⁾	-
SGB15N60 E3261	Single IGBT product	No ¹⁾	-
SGB15N60HS	Single IGBT product	No ¹⁾	-
SGB20N60	Single IGBT product	No ¹⁾	-
SGB30N60	Single IGBT product	No ¹⁾	-
IGB15N60T	Single IGBT product	Yes ²⁾	-
IGB30N60T	Single IGBT product	Yes ²⁾	-
IGB50N60T	Single IGBT product	Yes ²⁾	-
IDB04E120	Single diode product	-	Yes ²⁾
IDB06E60	Single diode product	-	Yes ²⁾
IDB09E120	Single diode product	-	Yes ²⁾
IDB09E60	Single diode product	-	Yes ²⁾
IDB12E120	Single diode product	-	Yes ²⁾
IDB15E60	Single diode product	-	Yes ²⁾
IDB18E120	Single diode product	-	Yes ²⁾
IDB23E60	Single diode product	-	Yes ²⁾
IDB30E120	Single diode product	-	Yes ²⁾
IDB30E60	Single diode product	-	Yes ²⁾
IDB45E60	Single diode product	-	Yes ²⁾
IKB06N60T	Dual chip product	Yes ²⁾	Yes ²⁾
IKB10N60T	Dual chip product	Yes ²⁾	Yes ²⁾

List of affected products 1_cip08123_a

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- 1) Already standardized to 40 nm Nitride + 10 µm Imide
- 2) Change from 20 µm Imide to standardized passivation concept of 40 nm Nitride + 10 µm Imide

Sales name	Product category	Change in Chip Passivation Concept	
		IGBT chip	Diode chip
IKB15N60T	Dual chip product	Yes ²⁾	Yes ²⁾
IKB20N60T	Dual chip product	Yes ²⁾	Yes ²⁾
SKB02N120	Dual chip product	No ¹⁾	Yes ²⁾
SKB02N60	Dual chip product	No ¹⁾	Yes ²⁾
SKB02N60 E3266	Dual chip product	No ¹⁾	Yes ²⁾
SKB04N60	Dual chip product	No ¹⁾	Yes ²⁾
SKB06N60	Dual chip product	No ¹⁾	Yes ²⁾
SKB06N60HS	Dual chip product	No ¹⁾	Yes ²⁾
SKB10N60A	Dual chip product	No ¹⁾	Yes ²⁾
SKB15N60	Dual chip product	No ¹⁾	Yes ²⁾
SKB15N60 E8151	Dual chip product	No ¹⁾	Yes ²⁾
SKB15N60HS	Dual chip product	No ¹⁾	Yes ²⁾