

Product/process change notification

PCN N° 2022-056-A1 **update**

- Updated information marked in **BLUE TYPE**
- Original PCN N° 2022-056-A dated 2023-04-21

Dear customer,

The previous PCN 2022-056-A has been updated.

Introduction of Infineon Technologies (Kulim) Sdn. Bhd as an additional wafer production site for IGBT3 600V Trenchstop™ Reverse Conducting (RCD2) chip in CIPOS™ products.

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 **2023-06-08**
- Infineon aligns with the widely recognized JEDEC STANDARD “**JESD46**“, which stipulates: **“Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change.”**

Your prompt reply will help Infineon Technologies AG 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.

Infineon Technologies AG

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Chairman of the Supervisory Board Dr. Herbert Diess

Management Board Jochen Hanebeck (CEO), Constanze Hufenbecher, Dr. Sven Schneider, Andreas Urschitz, Dr. Rutger Wijburg

Registered office Neubiberg Commercial register Amtsgericht München HRB 126492

Product/process change notification

PCN N° 2022-056-A1 **update**

► Products affected

Please refer to attached affected product list
 “PCN_2022-056- A_[customer-no].pdf”
[Additional products affected](#)

► Detailed change information

Subject

Introduction of an additional FE wafer site production.

Reason

Capacity extension and implementation of a 2nd source.

Description

**Wafer production and test
site for RCD2 600V**

Old

- Infineon Technologies Austria AG, Villach

New

- Infineon Technologies (Kulim) Sdn. Bhd., Kulim and
- Infineon Technologies Austria AG, Villach

► Product identification

Traceability assured via lot code and development code.

► Impact of change

No impact on electrical performance. Quality and reliability verified by qualification. There is no change in form, fit and function. Updated datasheet will be available either on www.infineon.com or at your local sales office.

► Attachments

“PCN_2022-056-A1_[customer-no].pdf” affected product list and Qualification report

► Time schedule

- | | |
|------------------------------|--|
| ■ Final qualification report | available |
| ■ First samples available | on request |
| ■ Intended start of delivery | 2023-07-30 or earlier on customer demand |

If you have any questions, please do not hesitate to contact your local sales office.

RESTRICTED

Qualification Test Report



PCN No: 2022-056-A

Date: 2023-04-18

Title: Introduction of Infineon Technologies (Kulim) Sdn. Bhd as an additional wafer production site for IGBT3 600V Trenchstop™ Reverse Conducting (RCD2) chip in CIPOS™ products

Reason for choosing the following test vehicles:

IM110A-026H, IM241-S6S1J 1A, Small IGBT RCD2 chip group
 IM110A-046H, IM523-S6A, IM241-L6S1B 3~6A, Middle IGBT RCD2 chip group
 IM523-X6A, IM323-L6G 12A, Large IGBT RCD2 chip group

Scope of qualification:

PL59 IPM products with IGBT3 600V RC-D2 from Kulim

All IM111xx-0x6H series (iMOTION™)
 All IM523-x6A series (CIPOS™ Mini)
 All IM323-L6Gx series (CIPOS™ Tiny)
 All IM241-x6xxxx series (CIPOS™ Micro)

Assessment of Q-Results:

All reliability tests including IPI, and ESD tests passed qualification required for Tx9 of RCD2 KUL transfer

Stress test	Abbreviation	Test conditions	Readout	IM323-L6G (Lot1,2,3)	IM241-L6S1B (Lot1)	IM241-L6S1B (Lot2)	IM241-S6S1J (Lot3)	IM523-S6A (Lot1)	IM523-S6A (Lot2)	IM523-X6A (Lot3)	IMI110A-026H (Lot1)	IMI110A-026H (Lot2)	IMI110A-046H (Lot3)
				fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed
Solder Heat Resistance JESD22-B106	SHR	solder dip at 260°C (for Snob) for 10 sec or 270°C (for Pb free) for 7 sec		N/A	0 / 22	0 / 22	0 / 22	N/A	N/A	N/A	0 / 22	0 / 22	0 / 22
Temperature Cycling JESD22-A104	TC	with preconditioning Ta = -40°C ~ 125°C	PC 200 x 500 x 1000 x	N/A 0 / 66 0 / 66 0 / 66	0 / 22 N/A 0 / 22 0 / 22	0 / 22 N/A 0 / 22 0 / 22	0 / 22 N/A 0 / 22 0 / 22	N/A 0 / 22 0 / 22 0 / 22	N/A 0 / 22 0 / 22 0 / 22	N/A 0 / 22 0 / 22 0 / 22	0 / 45 N/A 0 / 45 0 / 45	0 / 45 N/A 0 / 45 0 / 45	0 / 45 N/A 0 / 45 0 / 45
Unbiased Temperature/Humidity JESD22-A118	UHASt	with preconditioning Ta = 130°C, RH = 85%	PC 96 h	N/A 0 / 66	0 / 22 0 / 22	0 / 22 0 / 22	0 / 22 0 / 22	N/A 0 / 22	N/A 0 / 22	N/A 0 / 22	0 / 45 0 / 45	0 / 45 0 / 45	0 / 45 0 / 45
High Temperature Storage JESD22-A103	HTS	Ta = 125 °C	168 h 500 h 1000 h	0 / 66 0 / 66 0 / 66	N/A 0 / 22 0 / 22	N/A 0 / 22 0 / 22	N/A 0 / 22 0 / 22	0 / 22 0 / 22 0 / 22	0 / 22 0 / 22 0 / 22	0 / 22 0 / 22 0 / 22	N/A 0 / 45 0 / 45	N/A 0 / 45 0 / 45	N/A 0 / 45 0 / 45
High Voltage High Humidity, High Temperature Reverse Bias - Low Side JESD22-A101	HV-THB_LS	with preconditioning Ta = 85°C RH = 85% VCE =480 V *380V(for IM323 & IM523)	PC 168 h 500 h 1000 h	N/A 0 / 33 0 / 33 0 / 33	0 / 11 0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	0 / 23 0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23 0 / 23

High Voltage High Humidity, High Temperature Reverse Bias - High Side JESD22-A101	HV-THB_HS	with preconditioning Ta = 85°C RH = 85% VCE =480 V *380V(for IM323 & IM523)	PC 168 h 500 h 1000 h	N/A 0 / 33 0 / 33 0 / 33	0 / 11 0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	N/A 0 / 11 0 / 11 0 / 11	0 / 23 0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23 0 / 23
High Temperature Reverse Bias - Low Side JESD22-A108	HTRB_LS	Tjmax <=150°C VCE = 480 V	168 h 500 h 1000 h	0 / 33 0 / 33 0 / 33	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23
High Temperature Reverse Bias - High Side JESD22-A108	HTRB_HS	Tjmax <=150°C VCE = 480 V	168 h 500 h 1000 h	0 / 33 0 / 33 0 / 33	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 11 0 / 11 0 / 11	0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23	0 / 23 0 / 23 0 / 23
Intermittent Operational Life MIL-STD-750 Method 1037	IOL	with preconditioning Delta Tj = 100 °C	PC 5000 x 10000 x	N/A 0 / 36 0 / 36	0 / 12 0 / 12 0 / 12	0 / 12 0 / 12 0 / 12	0 / 12 0 / 12 0 / 12	N/A 0 / 12 0 / 12	N/A 0 / 12 0 / 12	N/A 0 / 12 0 / 12	N/A N/A N/A	N/A N/A N/A	0 / 24 0 / 24 0 / 24
ESD Characterization - HBM ANSI/ESDA/JEDEC JS-001-2017	ESD HBM	Pulse interval = 1sec(Domain), 10sec(Matrix), 0.3sec(I/O) Discharge option = Yes Polarity = +/-	2000V 2250V 2500V 3000V	0 / 27 0 / 27 0 / 27 0 / 27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
ESD Characterization - CDM ANSI/ESDA/JEDEC JS-002-2018	ESD CDM	3x pulses	500V 750V 1000V	0 / 9 0 / 9 0 / 9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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Introduction of an additional wafer production site at Infineon Technologies (Kulim) Sdn. Bhd., Kulim, Malaysia for IGBT3 600V RCD2 IPM products.;



Affected products sold to FUTURE ELECTRONICS LTD. (4049887)

Sales name	SP number	OPN	Package	Customer part number
IM241-M6S1J	SP005426935	IM241M6S1JAUMA1	PG-DIP-23	IM241M6S1JAUMA1

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Introduction of an additional wafer production site at Infineon Technologies (Kulim) Sdn. Bhd., Kulim, Malaysia for IGBT3 600V RCD2 IPM products.;



Affected products sold to FUTURE ELECTRONICS INC. (4000624)

Sales name	SP number	OPN	Package	Customer part number
IM241-L6T2B	SP005426929	IM241L6T2BAKMA1	PG-DIP-23	IM241L6T2BAKMA1

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Customer approval form

Introduction of Infineon Technologies (Kulim) Sdn. Bhd as an additional wafer production site for IGBT3 600V Trenchstop™ Reverse Conducting (RCD2) chip in CIPOS™ products.

☐ Please list product(s) affected in your application(s):

Please check the appropriate box below:

☐ We agree with this proposed change and its schedule.

☐ We have objections:

☐ We need more information:

☐ We need samples:

Sender

Company:

Name:

Address/location:

E-Mail:

Telephone:

Signature

Date:

Product/process change notification

PCN N° 2022-056-A1

Please return to your sales partner:

Company: Infineon Technologies AG

Name:

Address/Location :

E-mail:

Telephone: