

Product/process change notification

PCN N° 2021-183-A

Dear customer,

Please find attached our Infineon Technologies AG PCN:

Datasheet Change for Adjustment of Clamp Diode Characterization

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 **2021-12-20**
- 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 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.

On 16 April 2020, Infineon acquired Cypress.
We are now in the process of merging and consolidating our tools and processes for PCN, Information Notes, Errata and Product Discontinuance.
For further details, please visit our website:
<https://www.infineon.com/cms/en/about-infineon/company/cypress-acquisition/>

Infineon Technologies AG
Postal Address Headquarters: Am Campeon 1-15, D-85579 Neubiberg, Phone +49 (0)89 234-0
Chairman of the Supervisory Board: Dr. Wolfgang Eder
Management Board: Dr. Reinhard Ploss (CEO), Dr. Helmut Gassel, Jochen Hanebeck, Constanze Hufenbecher, Dr. Sven Schneider
Registered Office: Neubiberg
Commercial Register: München HRB 126492

Product/process change notification

PCN N° 2021-183-A

► **Products affected**

Please refer to attached affected product list 1_cip21183_A

► **Detailed change information**

Subject

Datasheet change for adjustment of clamp diode characterization

Reason

Reflect a pertinent “state of the art” specification for clamp diodes in datasheet to ease application design for customers

Description

<u>Old</u>	<u>New</u>
<ul style="list-style-type: none"> ■ Specification of clamp diode leakage current 	<ul style="list-style-type: none"> ■ Specification of clamp diode voltage
<ul style="list-style-type: none"> ■ datasheet revisions 	<ul style="list-style-type: none"> ■ datasheet revision
IGOT60R070D1 E8237: rev 2.0 IGOT60R070D1: rev 2.13 IGO60R070D1: rev 2.12 IGT60R070D1: rev 2.13 IGLD60R070D1: rev 2.12 IGLD60R190D1: rev 2.11 IGT40R070D1: rev 2.0	IGOT60R070D1 E8237: rev 2.1 IGOT60R070D1: rev 2.14 IGO60R070D1: rev 2.13 IGT60R070D1: rev 2.14 IGLD60R070D1: rev 2.13 IGLD60R190D1: rev 2.12 IGT40R070D1: rev 2.1

► **Product identification**

No change of marking, identification via Baunumber, Lotnumber, date code.

► **Impact of change**

No change in product / process
 No application relevant impact expected
 Potential increase of gate circuit power consumption in case of operation beyond specified minimum clamp voltage of ESD diode

Product/process change notification

PCN N° 2021-183-A

► Attachments

Affected product list	:	1_cip21183_a
Final qualification report	:	2_cip21183_a
Data sheets:		3_cip21183_a

► Time schedule

■ Final qualification report	available
■ First samples available	on request
■ Intended start of delivery	2021-12-01

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



Reason for choosing the following test vehicles:
 IGOT60R070D1 Lead product in the scope of PCN
 IGLD60R070D1 Same chip size and technology as lead product
 Scope of qualification:
 To qualify the 600V GaN product for change of wafer production location
 Assessment of Q-Results:
 Pass

Stress test	Abbreviation	Test conditions	Readout	IGOT60R070D1	IGOT60R070D1	IGOT60R070D1	IGLD60R070D1	IGLD60R070D1	IGLD60R070D1
				fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed	fails / stressed
MSL Preconditioning JESD22-A113	PC	(192 h @ 30°C / 60% r.h.) 3x reflow at 245 °C	0h	MSL3	MSL3	MSL3	MSL3	MSL3	MSL3
High Temperature Storage Life JESD22-A103	HTSL	Ta = 150 °C	1000 h	0 / 80	0 / 80	0 / 80			
Humidity Bias (Highly Accelerated Temperature and Humidity Stress) JESD22-A110	HAST	with preconditioning 130 °C / 85 % r.h. VDS = 480 V	96 h	0 / 80	0 / 80	0 / 80			
Temperature Cycling JESD22-A104	TC	with preconditioning -55 to 150°C	1000 x	0 / 77	0 / 77	0 / 77			
Unbiased Temperature/Humidity JESD22-A118	UHAST	with preconditioning 130 °C / 85 % r.h.	192 h	0 / 80	0 / 80	0 / 80			
High Temperature Reverse Bias JESD22-A108	HTRB	with preconditioning Ta = 150 °C VDS = 600 V	1000 h				0 / 80	0 / 80	0 / 80
Negative High Temperature Gate stress JESD22-A108	HTGS	with preconditioning Ta = 150 °C VGS = -10 V	1000 h	0 / 77	0 / 77	0 / 77			
Positive High Temperature Gate stress JESD22-A108	HTGF	with preconditioning Ta = 150 °C IG = 50 mA	1000 h	0 / 80	0 / 80	0 / 80			
Intermitted Operational Life Test MIL-STD-750/Method 1037	IDL	Delta T = 100 K n = 10000 eye	15000 x	0 / 80	0 / 80	0 / 80			
Low Temperature Reverse Bias JESD22 A108 (Q101)	LTRB	with preconditioning Ta = 0 °C VDS = 480 V	1000 h	0 / 77					
Positive Low Temperature Gate stress JESD22 A108	LTGF	with preconditioning Ta = 0 °C IG = 50 mA	1000 h	0 / 77					
Negative Low Temperature Gate stress JESD22 A108	LTGS	with preconditioning Ta = 0 °C VDS = 0 V / VGS = -10 V	1000 h	0 / 77					
Positive High Humidity High Temperature Gate Stress	P_H3TGS	with preconditioning Ta = 85 °C / 85 % r.h. VDS = 0 V / IG = 50 mA	1000 h	0 / 77					
Negative High Humidity High Temperature Gate Stress	N_H3TGS	with preconditioning Ta = 85 °C / 85 % r.h. VDS = 0 V / VGS = -10 V	1000 h	0 / 77					
Dynamic HTRB	D-HTRB	Ta = 150 °C VDS = 480 V / 10 kHz	1000 h	0 / 77					
Dynamic Gate Current Bias	DGCB	Ta = 150 °C ID = 4 A peak (50 ns, 500 kHz)	1000 h	0 / 18					
Electrostatic Discharge Human Body Model ANSI/ESDA/JEDEC JS-001	ESD-HBM	Ta = 25°C		Class 2: 2000 to < 4000 V					
Electrostatic Discharge Charged Device Model ANSI/ESDA/JEDEC JS-002	ESD-CDM	Ta = 25°C		Class C3: >=1000 V					

PCN N° 2021-183-A

Datasheet Change for Adjustment of Clamp Diode Characterization

Sales name	SP number	OPN	Package
IGLD60R070D1	SP001705420	IGLD60R070D1AUMA1	PG-LSON-8
IGLD60R070D1	SP005557209	IGLD60R070D1AUMA3	PG-LSON-8
IGLD60R190D1	SP001705426	IGLD60R190D1AUMA1	PG-LSON-8
IGLD60R190D1	SP005557217	IGLD60R190D1AUMA3	PG-LSON-8
IGO60R070D1	SP005557222	IGO60R070D1AUMA2	PG-DSO-20
IGOT60R070D1	SP001505772	IGOT60R070D1AUMA1	PG-DSO-20
IGOT60R070D1	SP005557207	IGOT60R070D1AUMA3	PG-DSO-20
IGOT60R070D1 E8237	SP005423176	IGOT60R070D1E8237AUMA1	PG-DSO-20
IGT40R070D1	SP001998280	IGT40R070D1ATMA1	PG-HSOF-8
IGT60R070D1	SP001300364	IGT60R070D1ATMA1	PG-HSOF-8
IGT60R070D1	SP004308606	IGT60R070D1ATMA2	PG-HSOF-8
IGT60R070D1	SP005557216	IGT60R070D1ATMA4	PG-HSOF-8
IGT60R190D1	SP005557226	IGT60R190D1ATMA1	PG-HSOF-8