

Product/process change notification

PCN N° 2021-005-A1

Dear customer,

Please find attached our Infineon Technologies AG PCN:

Change of wafer production location from Panasonic to Infineon Technologies Austria AG, Villach, Austria coupled with final test location change from Infineon Technologies Batam P.T., Batam, Indonesia to Infineon Technologies (Malaysia) Sdn. Bhd., Melaka, Malaysia for CoolGaN™ 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 **2021-09-06**
- 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

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► **Products affected** Please refer to attached affected product list 1_cip21005_A1

► **Detailed change information**

Subject Change of wafer production location from Panasonic to Infineon Technologies Austria AG, Villach, Austria coupled with final test location change from Infineon Technologies Batam P.T., Batam, Indonesia to Infineon Technologies (Malaysia) Sdn. Bhd., Melaka, Malaysia for CoolGaN™ products.

Reason End of life notification from PANASONIC for Gallium Nitride bare die supply to Infineon (PD_157_21).
Introduction of Infineon's In-house Gallium Nitride technology as well as correction of life time weakness in soft switching for 400V & 600V CoolGaN™ products (Errata sheet: 10230A).
Consolidation of Infineon CoolGaN™ products test locations.

Description

Wafer Production Location
**More details can be found in attachment Affected product list*

<u>Old</u>	<u>New</u>
<ul style="list-style-type: none"> ■ Panasonic Corporation 	<ul style="list-style-type: none"> ■ Infineon Technologies Austria AG, Villach, Austria

Final Test Location DSO Package
**More details can be found in attachment Affected product list*

<ul style="list-style-type: none"> ■ Infineon Technologies Batam P.T., Batam, Indonesia 	<ul style="list-style-type: none"> ■ Infineon Technologies (Malaysia) Sdn. Bhd., Melaka, Malaysia
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Update on data sheet characteristics

	<ul style="list-style-type: none"> ■ Minor Change
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► **Product identification** Internal traceability: assured via Baunumber and datecode.
External traceability: Product Barcode Label, SP number, OPN number.

► **Impact of change** Correction of life time weakness in soft switching for 400V & 600V CoolGaN™ products (Errata sheet: 10230AERRA)

► **Attachments**

1_cip21005_A1	affected product list
2_cip21005_A1	final qualification report

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► Time schedule

■ Final qualification report	available
■ First samples available	on request
■ Intended start of delivery	October 2021

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

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Date: 2021-07-22

Title Change of wafer production location from Panasonic to Infineon Technologies Austria AG, Villach, Austria coupled with final test location change from Infineon Technologies Batam P.T., Batam, Indonesia to Infineon Technologies (Malaysia) Sdn. Bhd., Melaka, Malaysia for CoolGaN™ products

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			
Intermittent Operational Life Test MIL-STD 750/Meth.1037	IDL	Delta T = 100 K n = 10000 cyc	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					

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Sales name	SP number_Old (Panasonic)	SP number_New (Infineon)	OPN_Old Panasonic	OPN_New Infineon	Package	FE location_Old	FE location_New	BE test location_Old	BE test location_New	Affected by FE change	Affected by BE change
IGOT60R070D1	SP001505772	SP005557207	IGOT60R070D1AUMA1	IGOT60R070D1AUMA3	PG-DSO-20	Panasonic	Infineon Technologies	N.A	N.A	x	
IGO60R070D1	SP001300362	SP005557222	IGO60R070D1AUMA1	IGO60R070D1AUMA2	PG-DSO-20	Panasonic	Infineon Technologies	N.A	N.A	x	
IGLD60R070D1	SP001705420	SP005557209	IGLD60R070D1AUMA1	IGLD60R070D1AUMA3	PG-LSON-8	Panasonic	Infineon Technologies	N.A	N.A	x	
IGLD60R190D1	SP001705426	SP005557217	IGLD60R190D1AUMA1	IGLD60R190D1AUMA3	PG-LSON-8	Panasonic	Infineon Technologies	N.A	N.A	x	
IGT60R070D1	SP001300364	SP005557216	IGT60R070D1ATMA1	IGT60R070D1ATMA4	PG-HSOF-8	Panasonic	Infineon Technologies	N.A	N.A	x	
IGOT60R070D1	SP001505772	No Change	IGOT60R070D1AUMA1	No Change	PG-DSO-20	N.A	N.A	Infineon Technologies Batam	Infineon Technologies Malaysia		x
IGO60R070D1	SP001300362	No Change	IGO60R070D1AUMA1	No Change	PG-DSO-20	N.A	N.A	Infineon Technologies Batam	Infineon Technologies Malaysia		x