

# Product / Process Change Notification



N° 2018-041-A

Dear Customer,

Please find attached our INFINEON Technologies PCN:

## Implementation of 300 mm wafer diameter and capacity extension for 650V TRENCHSTOP™ 5 products in discrete packages

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 **18-September 2019**.
- 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 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. Wolfgang Eder  
Management Board: Dr. Reinhard Ploss (CEO), Dr. Helmut Gassel, Jochen Hanebeck, Dr. Sven Schneider  
Registered Office: Neubiberg  
Commercial Register: München HRB 126492

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► **Products affected:** Please refer to attached affected product list 1\_cip18041\_a

► **Detailed Change Information:**

**Subject:** Implementation of 300mm wafer diameter

**Reason:** To ensure continuous deliveries to our customers, the fabrication for above mentioned products requires a capacity extension

<b>Description:</b>	<b><u>Old</u></b>	<b><u>New</u></b>
<b>Wafer diameter</b>	200mm	200mm <b>and</b> 300mm
<b>Wafer production &amp; test site</b>	Infineon Technologies Austria AG, Villach, Austria	<u>200mm:</u> Infineon Technologies Austria AG, Villach, Austria <b>and</b> <u>300mm:</u> Infineon Technologies AG, Dresden, Germany

► **Product Identification:** Internal traceability assured via basic type, lot code and development code.  
External traceability:  
Product Barcode Label / Lot code

► **Impact of Change:** No impact on reliability as proven via product and technology qualification.  
  
Processes are optimized to meet identical product performance according to already applied Infineon specifications.

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## ► Attachments:

Affected product list 1\_cip18041\_a  
Qualification report 2\_cip18041\_a

## ► Time Schedule:

- |                               |   |
|-------------------------------|---|
| ■ Final qualification report: | available                                     |
| ■ First samples available:    | on request                                    |
| ■ Intended start of delivery: | 15-November-2019 or upon approval of customer |

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



Sales name	SP number	OPN	Package
IGB15N65S5	SP001502560	IGB15N65S5ATMA1	PG-TO263-3
IGB20N65S5	SP001502564	IGB20N65S5ATMA1	PG-TO263-3
IGB50N65H5	SP001509614	IGB50N65H5ATMA1	PG-TO263-3
IGB50N65S5	SP001502566	IGB50N65S5ATMA1	PG-TO263-3
IGP20N65F5	SP001132998	IGP20N65F5XKSA1	PG-TO220-3
IGP20N65H5	SP001133070	IGP20N65H5XKSA1	PG-TO220-3
IGP30N65F5	SP001133080	IGP30N65F5XKSA1	PG-TO220-3
IGP30N65H5	SP001037772	IGP30N65H5XKSA1	PG-TO220-3
IGP40N65F5	SP000973422	IGP40N65F5XKSA1	PG-TO220-3
IGP40N65H5	SP001001738	IGP40N65H5XKSA1	PG-TO220-3
IGW30N65L5	SP001174472	IGW30N65L5XKSA1	PG-TO247-3
IGW40N65F5	SP000973424	IGW40N65F5FKSA1	PG-TO247-3
IGW40N65H5	SP001001742	IGW40N65H5FKSA1	PG-TO247-3
IGW50N65F5	SP000973426	IGW50N65F5FKSA1	PG-TO247-3
IGW50N65H5	SP001001744	IGW50N65H5FKSA1	PG-TO247-3
IGW75N65H5	SP001257936	IGW75N65H5XKSA1	PG-TO247-3
IGZ100N65H5	SP001160058	IGZ100N65H5XKSA1	PG-TO247-4
IGZ50N65H5	SP001160052	IGZ50N65H5XKSA1	PG-TO247-4
IGZ75N65H5	SP001160054	IGZ75N65H5XKSA1	PG-TO247-4
IHW20N65R5	SP001133100	IHW20N65R5XKSA1	PG-TO247-3
IHW30N65R5	SP001273470	IHW30N65R5XKSA1	PG-TO247-3
IHW40N65R5	SP001133102	IHW40N65R5XKSA1	PG-TO247-3
IHW40N65R5S	SP001421036	IHW40N65R5SXKSA1	PG-TO247-3
IHW50N65R5	SP001133104	IHW50N65R5XKSA1	PG-TO247-3
IKA08N65F5	SP000973414	IKA08N65F5XKSA1	PG-TO220-3
IKA08N65H5	SP001001722	IKA08N65H5XKSA1	PG-TO220-3
IKA15N65F5	SP000973416	IKA15N65F5XKSA1	PG-TO220-3
IKA15N65H5	SP001001724	IKA15N65H5XKSA1	PG-TO220-3
IKB15N65EH5	SP001502570	IKB15N65EH5ATMA1	PG-TO263-3
IKB20N65EH5	SP001502642	IKB20N65EH5ATMA1	PG-TO263-3
IKB30N65EH5	SP001502648	IKB30N65EH5ATMA1	PG-TO263-3
IKB30N65ES5	SP001502572	IKB30N65ES5ATMA1	PG-TO263-3
IKB40N65EF5	SP001509612	IKB40N65EF5ATMA1	PG-TO263-3
IKB40N65EH5	SP001502650	IKB40N65EH5ATMA1	PG-TO263-3
IKB40N65ES5	SP001502574	IKB40N65ES5ATMA1	PG-TO263-3
IKP08N65F5	SP000973408	IKP08N65F5XKSA1	PG-TO220-3
IKP08N65H5	SP001001716	IKP08N65H5XKSA1	PG-TO220-3
IKP15N65F5	SP000973410	IKP15N65F5XKSA1	PG-TO220-3
IKP15N65H5	SP001001718	IKP15N65H5XKSA1	PG-TO220-3
IKP20N65F5	SP001133076	IKP20N65F5XKSA1	PG-TO220-3
IKP20N65H5	SP001133078	IKP20N65H5XKSA1	PG-TO220-3
IKP28N65ES5	SP002655502	IKP28N65ES5XKSA1	PG-TO220-3
IKP30N65F5	SP001133082	IKP30N65F5XKSA1	PG-TO220-3
IKP30N65H5	SP001133084	IKP30N65H5XKSA1	PG-TO220-3
IKP39N65ES5	SP002882512	IKP39N65ES5XKSA1	PG-TO220-3



Sales name	SP number	OPN	Package
IKP40N65F5	SP000973412	IKP40N65F5XKSA1	PG-TQ220-3
IKP40N65H5	SP001001720	IKP40N65H5XKSA1	PG-TQ220-3
IKP40N65H5	SP001811632	IKP40N65H5XKSA2	PG-TQ220-3
IKW30N65EL5	SP001178080	IKW30N65EL5XKSA1	PG-TQ247-3
IKW30N65ES5	SP001319678	IKW30N65ES5XKSA1	PG-TQ247-3
IKW30N65H5	SP001204194	IKW30N65H5XKSA1	PG-TQ247-3
IKW30N65NL5	SP001174466	IKW30N65NL5XKSA1	PG-TQ247-3
IKW30N65WR5	SP001273472	IKW30N65WR5XKSA1	PG-TQ247-3
IKW40N65ES5	SP001319680	IKW40N65ES5XKSA1	PG-TQ247-3
IKW40N65F5	SP000973418	IKW40N65F5FKSA1	PG-TQ247-3
IKW40N65H5	SP001001730	IKW40N65H5FKSA1	PG-TQ247-3
IKW40N65WR5	SP001174974	IKW40N65WR5XKSA1	PG-TQ247-3
IKW50N65EH5	SP001257944	IKW50N65EH5XKSA1	PG-TQ247-3
IKW50N65ES5	SP001319682	IKW50N65ES5XKSA1	PG-TQ247-3
IKW50N65F5	SP000973420	IKW50N65F5FKSA1	PG-TQ247-3
IKW50N65H5	SP001001734	IKW50N65H5FKSA1	PG-TQ247-3
IKW50N65WR5	SP001215522	IKW50N65WR5XKSA1	PG-TQ247-3
IKW75N65EH5	SP001257948	IKW75N65EH5XKSA1	PG-TQ247-3
IKW75N65EL5	SP001174464	IKW75N65EL5XKSA1	PG-TQ247-3
IKW75N65ES5	SP001319684	IKW75N65ES5XKSA1	PG-TQ247-3
IKZ50N65EH5	SP001160038	IKZ50N65EH5XKSA1	PG-TQ247-4
IKZ50N65ES5	SP001636074	IKZ50N65ES5XKSA1	PG-TQ247-4
IKZ50N65NH5	SP001160042	IKZ50N65NH5XKSA1	PG-TQ247-4
IKZ75N65EH5	SP001160046	IKZ75N65EH5XKSA1	PG-TQ247-4
IKZ75N65EL5	SP001174456	IKZ75N65EL5XKSA1	PG-TQ247-4
IKZ75N65ES5	SP001602592	IKZ75N65ES5XKSA1	PG-TQ247-4
IKZ75N65NH5	SP001160050	IKZ75N65NH5XKSA1	PG-TQ247-4
IKZA75N65EH5	SP001707872	IKZA75N65EH5XKSA1	PG-TQ247-4
IKZA75N65ES5	SP001707876	IKZA75N65ES5XKSA1	PG-TQ247-4

PCN-2018-041-A

Date: 2019-07-30

## Implementation of 300 mm wafer diameter and capacity extension for 650V TRENCHSTOP™ 5 products in discrete packages

### Reason for choosing the following test vehicles:

IKW75N65EL5	1. wafer lot, chip by chip assembly, Low VCEsat, PG-TO247-3, TFME
IGZ100N65H5	2. wafer lot, single chip assembly, double stich wire bond, High Speed, PG-TO247-4, TFME
IHW40N65RS5	3. wafer lot, single chip assembly, Reverse Conducting, PG-TO247-3, ASE
IKA15N65F5	4. wafer lot, chip by chip assembly, Fast, PG-TO220-3_FP, TFME
IKB40N65ES5	5. wafer lot, chip by chip assembly, Soft, PG-TO263-3_SMD, MEL
IKP30N65H5	6. wafer lot, chip by chip assembly, High Speed, PG-TO220-3, MEL

**Scope of qualification:** All 650 V TRENCHSTOP™ 5 products with IGBT's from 300 mm wafer fab Dresden (diode chips from 200 mm wafer fab Villach), covering all packages, all assembly and technology variants

**Assessment of Q-Results:** Pass

Stress test	Abbreviation	Test conditions	Readout	IKW75N65EL5	IGZ100N65H5	IHW40N65RS5	IKA15N65F5	IKB40N65ES5	IKP30N65H5
				Fails / Stressed	Fails / Stressed	Fails / Stressed	Fails / Stressed	Fails / Stressed	Fails / Stressed
<b>MSL Preconditioning</b> JESD22-A113	PC	MSL 1	0 h	Not applicable	Not applicable	Not applicable	Not applicable	0 / 539	Not applicable
<b>High Temperature Storage Life</b> JESD22-A103	HTSL	With preconditioning for SMD devices Ta = 175 °C	1000 h	Covered by HTRB	0 / 77	0 / 77	Covered by HTRB	Covered by HTRB	Covered by HTRB
<b>Temperature Cycling</b> JESD22-A104	TC	With preconditioning for SMD devices Tmin = -55 °C Tmax = 150 °C	1000 c	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>Unbiased Temperature/Humidity</b> JESD22-A118	UHAST	With preconditioning for SMD devices Ta = 130 °C RH = 85 %	96 h	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>Autoclave</b> JESD22-A102	AC	With preconditioning for SMD devices Ta = 121 °C RH = 100 %	96 h	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>High Humidity High Temp. Reverse Bias</b> JESD22-A101	H3TRB	With preconditioning for SMD devices Ta = 85 °C RH = 85 % VCE = 80 V	1000 h	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>High Temperature Reverse Bias</b> JESD22-A108	HTRB	With preconditioning for SMD devices Tj = 175 °C VCE = 520 V	1000 h	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>High Temperature Gate stress</b> JESD22-A108	HTGS	With preconditioning for SMD devices Ta = 175 °C VGE = ±20 V	1000 h	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>Intermittent Operational Life Test</b> MIL-STD 750/Meth.1037	IOL	With preconditioning for SMD devices Delta T = 100 K n = 10000 cyc	10000 c	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77	0 / 77
<b>Electrostatic Discharge Human Body Model</b> ANSI/ESDA/JEDEC JS-001	ESD HBM	Ta = 25 °C		Class 2 2 kV to < 4 kV	Class 2 2 kV to < 4 kV	Class 2 2 kV to < 4 kV	Class 1C 1 kV to < 2 kV	Class 2 2 kV to < 4 kV	Class 2 2 kV to < 4 kV
<b>Electrostatic Discharge Charged Device Model</b> ANSI/ESDA/JEDEC JS-002	ESD CDM	Ta = 25 °C		Class C3 ≥ 1000 V	Class C3 ≥ 1000 V	Class C3 ≥ 1000 V	Class C3 ≥ 1000 V	Class C3 ≥ 1000 V	Class C3 ≥ 1000 V

# Product / Process Change Notification



**CUSTOMER APPROVAL FORM**

**N° 2018-041-A**

**issued on 2019-08-07**

**Implementation of 300 mm wafer diameter and capacity extension for 650V  
TRENCHSTOP™ 5 products in discrete packages**

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:

## Please return to your Sales partner:

Company: Infineon Technologies

Name:

Address/Location :

E-mail:

Telephone: