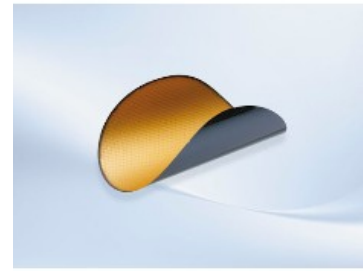


# MOSFET

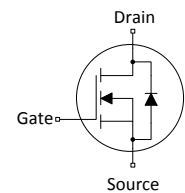
## OptiMOS™3 Power MOS Transistor Chip

- N-channel enhancement mode
- For dynamic characterization refer to the datasheet of IPB011N04N G
- AQL 0.65 for visual inspection according to failure catalogue
- Electrostatic Discharge Sensitive Device according to MIL-STD 883C
- Die bond: soldered or glued
- Backside metallization: NiV system
- Frontside metallization: AlCu system
- Passivation: Nitride + Imide

Power MOS Transistor Chip


**Table 1 Key Performance Parameters**

Parameter	Value	Unit
$V_{(BR)DSS}$	40	V
$R_{DS(on)}$	1.1 <sup>1)</sup>	mΩ
Die size	5.9 x 3.7	mm <sup>2</sup>
Thickness	175	μm



Type / Ordering Code	Package	Marking	Related Links
IPC218N04N3	Chip	not defined	-

## 1 Electrical Characteristics on Wafer Level

at  $T_j = 25^\circ\text{C}$ , unless otherwise specified

**Table 2**

Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Drain-source breakdown voltage	$V_{(BR)DSS}$	40	-	-	V	$V_{GS}=0\text{ V}$ , $I_D=1\text{ mA}$
Gate threshold voltage	$V_{GS(th)}$	2	-	4	V	$V_{DS}=V_{GS}$ , $I_D=200\text{ }\mu\text{A}$
Zero gate voltage drain current	$I_{DSS}$	-	0.1	2	μA	$V_{GS}=0\text{ V}$ , $V_{DS}=40\text{ V}$
Gate-source leakage current	$I_{GSS}$	-	2	200	nA	$V_{GS}=20\text{ V}$ , $V_{DS}=0\text{ V}$
Drain-source on- resistance	$R_{DS(on)}$	-	0.9 <sup>2)</sup>	50 <sup>3)</sup>	mΩ	$V_{GS}=10\text{ V}$ , $I_D=2.0\text{ A}$
Reverse diode forward on-voltage	$V_{SD}$	-	0.86	1.1	V	$V_{GS}=0\text{ V}$ , $I_F=1\text{ A}$
Internal gate resistance	$R_G$	-	1.5	-	Ω	-
Avalanche energy, single pulse	$E_{AS}$	-	-	525 <sup>4)</sup>	mJ	$I_D=50\text{ A}$ , $R_{GS}=25\text{ }\Omega$

<sup>1)</sup> packaged in a PG-TO263-7 (see ref. product)

<sup>2)</sup> typical bare die  $R_{DS(on)}$ ;  $V_{GS}=10\text{ V}$  when used with 4\*500μm Al-wedge double-stitch bonding

<sup>3)</sup> limited by wafer test-equipment

<sup>4)</sup> Wafer tested. For general avalanche capability refer to the datasheet of IPB011N04N G

## 2 Package Outlines

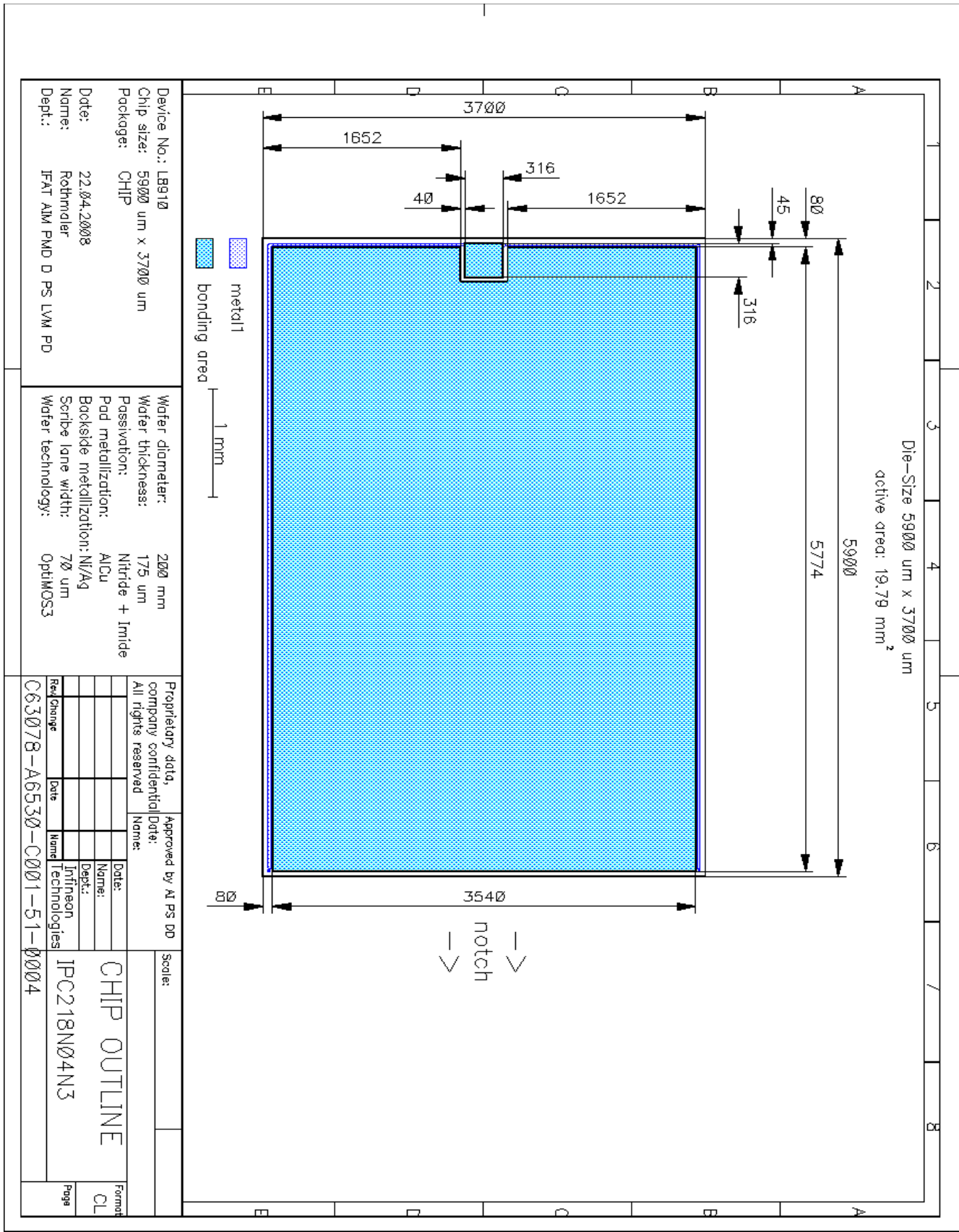


Figure 1 Outline Chip, dimensions in µm

## Revision History

IPC218N04N3

**Revision: 2017-07-17, Rev. 2.6**

Previous Revision

Revision	Date	Subjects (major changes since last revision)
2.5	2014-07-25	Release Final Version
2.6	2017-07-17	Change typical RDS(on)

### Trademarks of Infineon Technologies AG

AURIX™, C166™, CanPAK™, CIPOS™, CoolGaN™, CoolMOS™, CoolSET™, CoolSiC™, CORECONTROL™, CROSSAVE™, DAVE™, DI-POL™, DrBlade™, EasyPIM™, EconoBRIDGE™, EconoDUAL™, EconoPACK™, EconoPIM™, EiceDRIVER™, eupec™, FCOS™, HITFET™, HybridPACK™, Infineon™, ISOFACE™, IsoPACK™, i-Wafer™, MIPAQ™, ModSTACK™, my-d™, NovalithIC™, OmniTune™, OPTIGA™, OptiMOS™, ORIGA™, POWERCODE™, PRIMARION™, PrimePACK™, PrimeSTACK™, PROFET™, PRO-SiL™, RASIC™, REAL3™, ReverSave™, SatRIC™, SIEGET™, SiPMOS™, SmartLEWIS™, SOLID FLASH™, SPOC™, TEMPFET™, thinQ!™, TRENCHSTOP™, TriCore™.

Trademarks updated August 2015

### Other Trademarks

All referenced product or service names and trademarks are the property of their respective owners.

### We Listen to Your Comments

Any information within this document that you feel is wrong, unclear or missing at all? Your feedback will help us to continuously improve the quality of this document. Please send your proposal (including a reference to this document) to:

**erratum@infineon.com**

**Published by**  
**Infineon Technologies AG**  
**81726 München, Germany**  
**© 2017 Infineon Technologies AG**  
**All Rights Reserved.**

### Legal Disclaimer

The information given in this document shall in no event be regarded as a guarantee of conditions or characteristics ("Beschaffenheitsgarantie").

With respect to any examples, hints or any typical values stated herein and/or any information regarding the application of the product, Infineon Technologies hereby disclaims any and all warranties and liabilities of any kind, including without limitation warranties of non-infringement of intellectual property rights of any third party.

In addition, any information given in this document is subject to customer's compliance with its obligations stated in this document and any applicable legal requirements, norms and standards concerning customer's products and any use of the product of Infineon Technologies in customer's applications.

The data contained in this document is exclusively intended for technically trained staff. It is the responsibility of customer's technical departments to evaluate the suitability of the product for the intended application and the completeness of the product information given in this document with respect to such application.

### Information

For further information on technology, delivery terms and conditions and prices please contact your nearest Infineon Technologies Office ([www.infineon.com](http://www.infineon.com)).

### Warnings

Due to technical requirements, components may contain dangerous substances. For information on the types in question, please contact the nearest Infineon Technologies Office.

The Infineon Technologies component described in this Data Sheet may be used in life-support devices or systems and/or automotive, aviation and aerospace applications or systems only with the express written approval of Infineon Technologies, if a failure of such components can reasonably be expected to cause the failure of that life-support, automotive, aviation and aerospace device or system or to affect the safety or effectiveness of that device or system. Life support devices or systems are intended to be implanted in the human body or to support and/or maintain and sustain and/or protect human life. If they fail, it is reasonable to assume that the health of the user or other persons may be endangered.