

MOSFET

Metal Oxide Semiconductor Field Effect Transistor

Bare Die

OptiMOS™3 Power MOS Transistor Chip IPC302N15N3

Data Sheet

Rev. 2.5 Final



IPC302N15N3

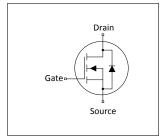
Description 1

- N-channel enhancement mode
- · For additional characterization and max ratings refer to the datasheet of IPB072N15N3 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 (only on edge structure)



Table 1 **Key Performance Parameters**

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Parameter	Value	Unit			
V _{(BR)DSS}	150	V			
R _{DS(on)}	7.2 ¹⁾	mΩ			
Die size	6.7 x 4.5	mm ²			
Thickness	250	μm			









Type / Ordering Code	Package	Marking	Related Links
IPC302N15N3	Chip	not defined	-

2 Electrical Characteristics on Wafer Level at $T_j = 25$ °C, unless otherwise specified

Table 2

Davamatav	Symbol	Values		l lmi4	Note / Took Condition	
Parameter		Min.	Тур.	Max.	Unit	Note / Test Condition
Drain-source breakdown voltage	V _{(BR)DSS}	150	-	-	V	V _{GS} =0 V ,I _D =1 mA
Gate threshold voltage	V _{GS(th)}	2	3	4	V	V _{DS} =V _{GS} , I _D =270 μA
Zero gate voltage drain current	I _{DSS}	-	0.1	1	μΑ	V _{GS} =0 V ,V _{DS} =120 V
Gate-source leakage current	I _{GSS}	-	1	100	nA	V _{GS} =20 V ,V _{DS} =0 V
Drain-source on- resistance	R _{DS(on)}	-	4.9 ²⁾	100 ³⁾	mΩ	V _{GS} =10 V ,I _D =2.0 A
Reverse diode forward on-voltage	V _{SD}	-	1.0	1.2	V	V _{GS} =0 V ,I _F =1A
Avalanche energy, single pulse	E AS	-	45 ⁴⁾	-	mJ	I_D =30 A, R_{GS} =25 Ω

 $^{^{1)}}$ packaged in a P-TO263-3 (see ref. product) typical bare die $R_{\rm DS(on)};\ V_{\rm GS}{=}10\ {\rm V}$

³⁾ limited by wafer test-equipment

⁴⁾ Wafer tested. For general avalanche capability refer to the datasheet of IPB072N15N3 G



3 Package Outlines

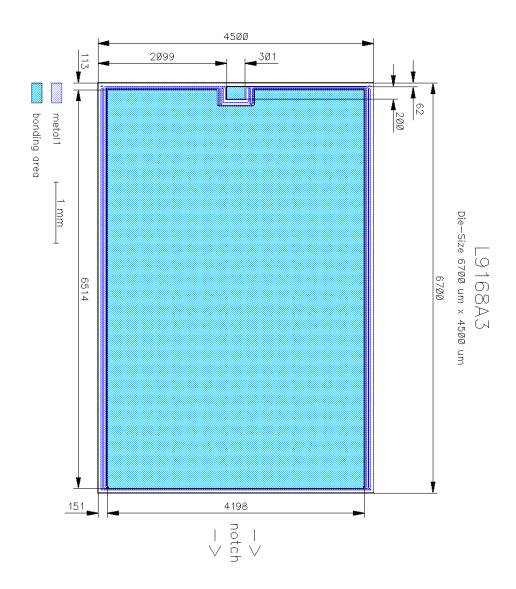


Figure 1 Outline Chip, dimensions in µm



OptiMOS™3 Power MOS Transistor Chip

IPC302N15N3

Revision History

IPC302N15N3

Revision: 2014-07-23, Rev. 2.5

Previous Revision

Revision	Date	Subjects (major changes since last revision)	
2.5	2014-07-23	Release Final Version	

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