

MOSFET

Metal Oxide Semiconductor Field Effect Transistor

Bare Die

OptiMOS™3 Power MOS Transistor Chip IPC022N03L3

Data Sheet

Rev. 2.5 Final

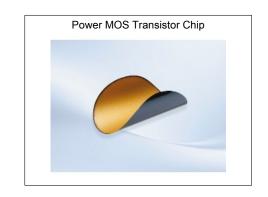


IPC022N03L3

Description 1

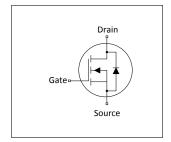
- N-channel enhancement mode
- For dynamic characterization refer to the datasheet of IPD075N03L G
- AQL 0.65 for visual inspection according to failure catalogue
- Electrostatic Discharge Sensitive Device according to MIL-STD 883C
- Die bond: soldered or glued
- · Sawn on foil

- Backside metallization: NiV system • Frontside metallization: AlCu system
- Passivation: Nitride + Imide



Key Performance Parameters			
Value	Unit		
30	V		
	Value		

$V_{(BR)DSS}$	30	V
R _{DS(on)}	7.5 ¹⁾	mΩ
Die size	2.1 x 1.05	mm ²
Thickness	175	μm









Type / Ordering Code	Package	Marking	Related Links
IPC022N03L3	Chip	not defined	-

Electrical Characteristics on Wafer Level

at $T_i = 25$ °C, unless otherwise specified

Table 2

Double of the state of the stat	O. was boat		Values		1114	Nata / Tank Oam distant
Parameter	Symbol	Min.	Тур.	Max.	Unit	Note / Test Condition
Drain-source breakdown voltage	V _{(BR)DSS}	30	-	-	V	V _{GS} =0 V ,I _D =1 mA
Gate threshold voltage	$V_{\rm GS(th)}$	1	-	2.2	V	V _{DS} =V _{GS} , I _D =250 μA
Zero gate voltage drain current	I _{DSS}	-	0.1	1	μA	V _{GS} =0 V ,V _{DS} =30 V
Gate-source leakage current	I _{GSS}	-	10	100	nA	V _{GS} =20 V ,V _{DS} =0 V
Drain-source on- resistance	R _{DS(on)}	-	5.3 ²⁾	50 ³⁾	mΩ	V _{GS} =10 V ,I _D =2.0 A
Reverse diode forward on-voltage	V _{SD}	-	0.75	1.1	V	V _{GS} =0 V ,I _F =1A
Internal gate resistance	R _G	-	1.3	-	Ω	-
Avalanche energy, single pulse	E AS	-	50 ⁴⁾	-	mJ	I _D =12 A, R _{GS} =25 Ω

¹⁾ packaged in a PG-TO252-3 (see ref. product)

²⁾ typical bare die $R_{DS(on)}$; V_{GS} =10 V when used with 1x400 μ m Al-bond wire

³⁾ limited by wafer test-equipment

⁴⁾ Wafer tested. For general avalanche capability refer to the datasheet of IPD075N03L G



3 Package Outlines

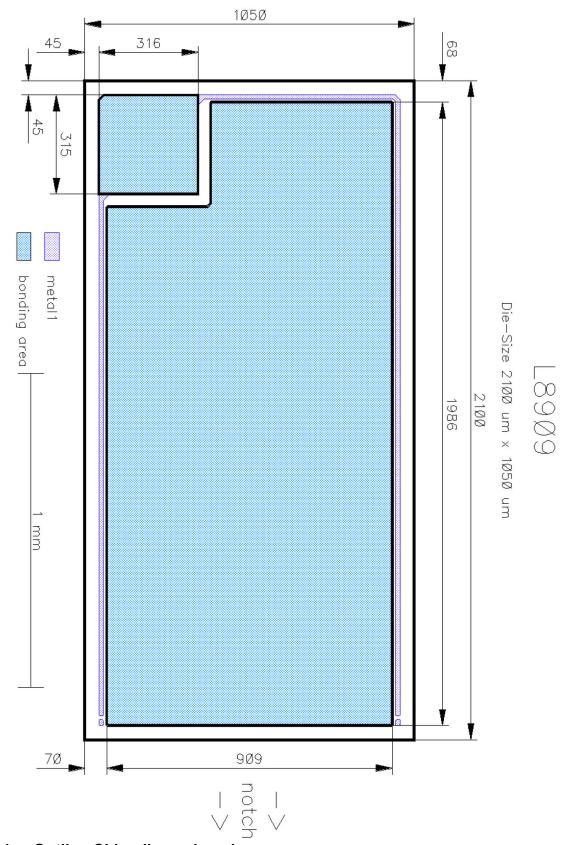


Figure 1 Outline Chip, dimensions in µm



OptiMOS™3 Power MOS Transistor Chip

IPC022N03L3

Revision History

IPC022N03L3

Revision: 2014-07-25, Rev. 2.5

Previous Revision

1 10110001	Troviduo Novicion					
Revision	Date	Subjects (major changes since last revision)				
2.5	2014-07-25	Release of Final Version				

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