

## MOSFET

Metal Oxide Semiconductor Field Effect Transistor

### Bare Die

OptiMOS™3 Power MOS Transistor Chip  
IPC218N06L3

### Data Sheet

Rev. 2.5  
Final

Industrial & Multimarket

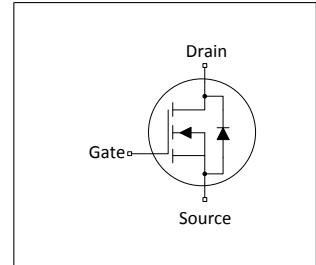
## 1 Description

- N-channel enhancement mode
- For dynamic characterization refer to the datasheet of IPB016N06L3 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
$V_{(BR)DSS}$	60	V
$R_{DS(on)}$	1.6 <sup>1)</sup>	$\text{m}\Omega$
Die size	5.9 x 3.7	$\text{mm}^2$
Thickness	205	$\mu\text{m}$



Type / Ordering Code	Package	Marking	Related Links
IPC218N06L3	Chip	not defined	-

## 2 Electrical Characteristics on Wafer Level

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

**Table 2**

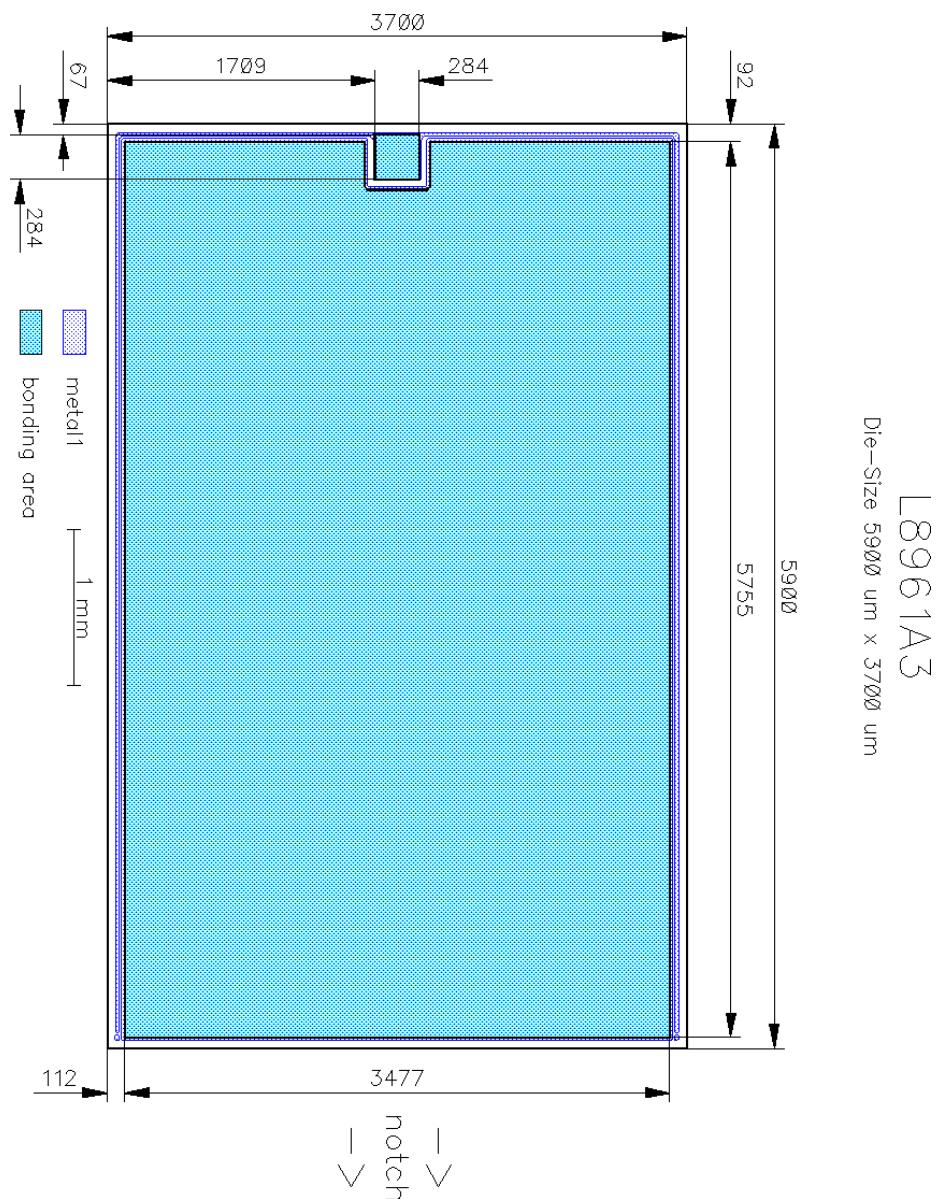
Parameter	Symbol	Values			Unit	Note / Test Condition
		Min.	Typ.	Max.		
Drain-source breakdown voltage	$V_{(BR)DSS}$	60	-	-	V	$V_{GS}=0\text{ V}$ , $I_D=1\text{ mA}$
Gate threshold voltage	$V_{GS(\text{th})}$	1.2	1.7	2.2	V	$V_{DS}=V_{GS}$ , $I_D=196\text{ }\mu\text{A}$
Zero gate voltage drain current	$I_{DSS}$	-	0.1	3	$\mu\text{A}$	$V_{GS}=0\text{ V}$ , $V_{DS}=60\text{ V}$
Gate-source leakage current	$I_{GSS}$	-	1	100	nA	$V_{GS}=20\text{ V}$ , $V_{DS}=0\text{ V}$
Drain-source on- resistance	$R_{DS(\text{on})}$	-	1.2 <sup>2)</sup>	100 <sup>3)</sup>	$\text{m}\Omega$	$V_{GS}=10\text{ V}$ , $I_D=2.0\text{ A}$
Reverse diode forward on-voltage	$V_{SD}$	-	0.7	1.1	V	$V_{GS}=0\text{ V}$ , $I_F=1\text{ A}$
Avalanche energy, single pulse	$E_{AS}$	-	500 <sup>4)</sup>	-	mJ	$I_D = 30\text{ A}$ , $R_{GS} = 25\text{ }\Omega$

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

<sup>2)</sup> typical bare die  $R_{DS(\text{on})}$ 
<sup>3)</sup> limited by wafer test-equipment

<sup>4)</sup> Wafer tested. For general avalanche capability refer to the datasheet of IPB016N06L3 G

### 3 Package Outlines



**Figure 1 Outline Chip, dimensions in  $\mu\text{m}$**

## Revision History

IPC218N06L3

**Revision: 2014-07-25, Rev. 2.5**

Previous Revision

Revision	Date	Subjects (major changes since last revision)
2.5	2014-07-25	Release Final Version

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