IPC313N10N3R

OptiMOS™3 Power MOS Transistor Chip

Type	$V_{(BR)DSS}$	$R_{DS(on)}$	Die size	Thickness
IPC313N10N3R	100 V	2.7 mΩ[1)]	6 * 5.2 mm²	220 µm

DESCRIPTION

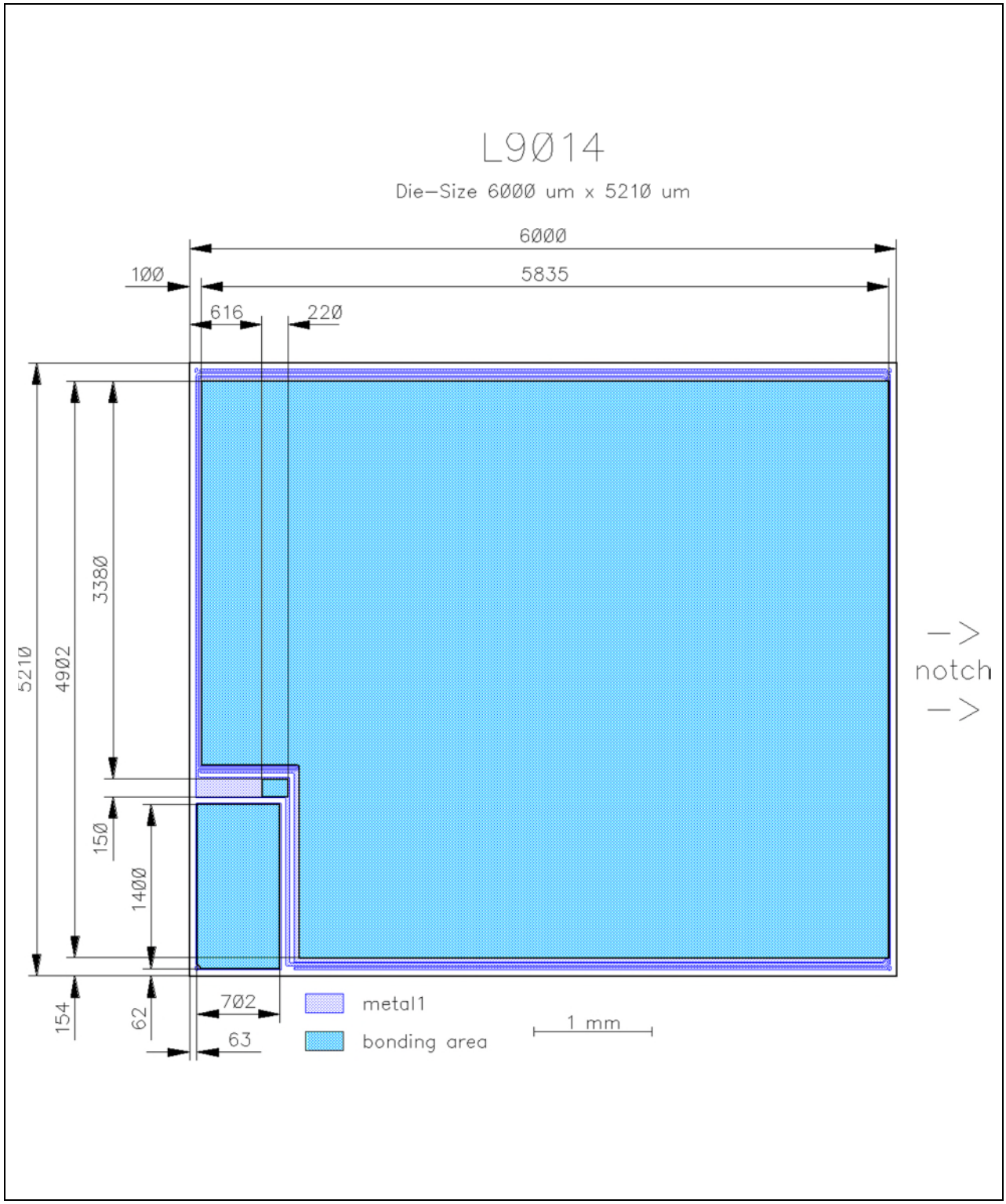
- N-channel enhancement mode
- For dynamic characterization refer to the datasheet of IPB027N10N3 G[2)]
- AQL 0.65 for visual inspection according to failure catalogue
- Electrostatic Discharge Sensitive Device according to JEDEC
- Die bond: soldered or glued
- Backside metallization: NiV system
- Frontside metallization: AlCu system
- Passivation: nitride (only on edge structure)

Electrical Characteristics on Wafer Level

at T_j = 25 °C, unless otherwise specified.

Parameter	Symbol	Value			Unit	Conditions
		min.	typ.	max.		
Drain-source breakdown voltage	$V_{(BR)DSS}$	100	-	-	V	V_{GS} = 0V I_D = 1 mA
Gate threshold voltage	$V_{GS(th)}$	2	2.7	3.5	V	V_{DS} = V_{GS} I_D = 275 µA
Zero gate voltage drain current	I_{DSS}	-	0.1	1	µA	V_{GS} = 0V V_{DS} = 100 V
Gate-source leakage current	I_{GSS}	-	1	100	nA	V_{GS} = 20 V V_{DS} = 0 V
Drain-source on-resistance	$R_{DS(on)}$	-	1.9 [3)]	100 [4)]	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= 1 A
Internal gate resistance	R_G	-	8	-	Ω	
Avalanche energy, single pulse	E_{AS}	-	45 [5)]	-	mJ	I_D= 30 A, R_{GS}=25 Ω

Chip-Layout:



[1] packaged in a P-TO263-3 (see ref. product)

[2] IPB027N10N3 G dynamic characterization does not include the internal added R_G

[3] typical bare die $R_{DS(on)}$; V_{GS}=10V

[4] limited by wafer test-equipment

[5] Wafer tested. For general avalanche capability refer to the datasheet of IPB027N10N3 G

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