

## OptiMOS™3 Power MOS Transistor Chip

Type	$V_{(BR)DSS}$	$R_{DS(on)}$	Die size	Thickness
IPC302N25N3	250 V	20 mΩ <sup>1)</sup>	6.7 * 4.5 mm <sup>2</sup>	250 µm

### DESCRIPTION

- N-channel enhancement mode
- For additional characteristic and max rating refer to the datasheet of IPP200N25N3 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)
- Package: sawn on foil

### Electrical Characteristics on Wafer Level

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

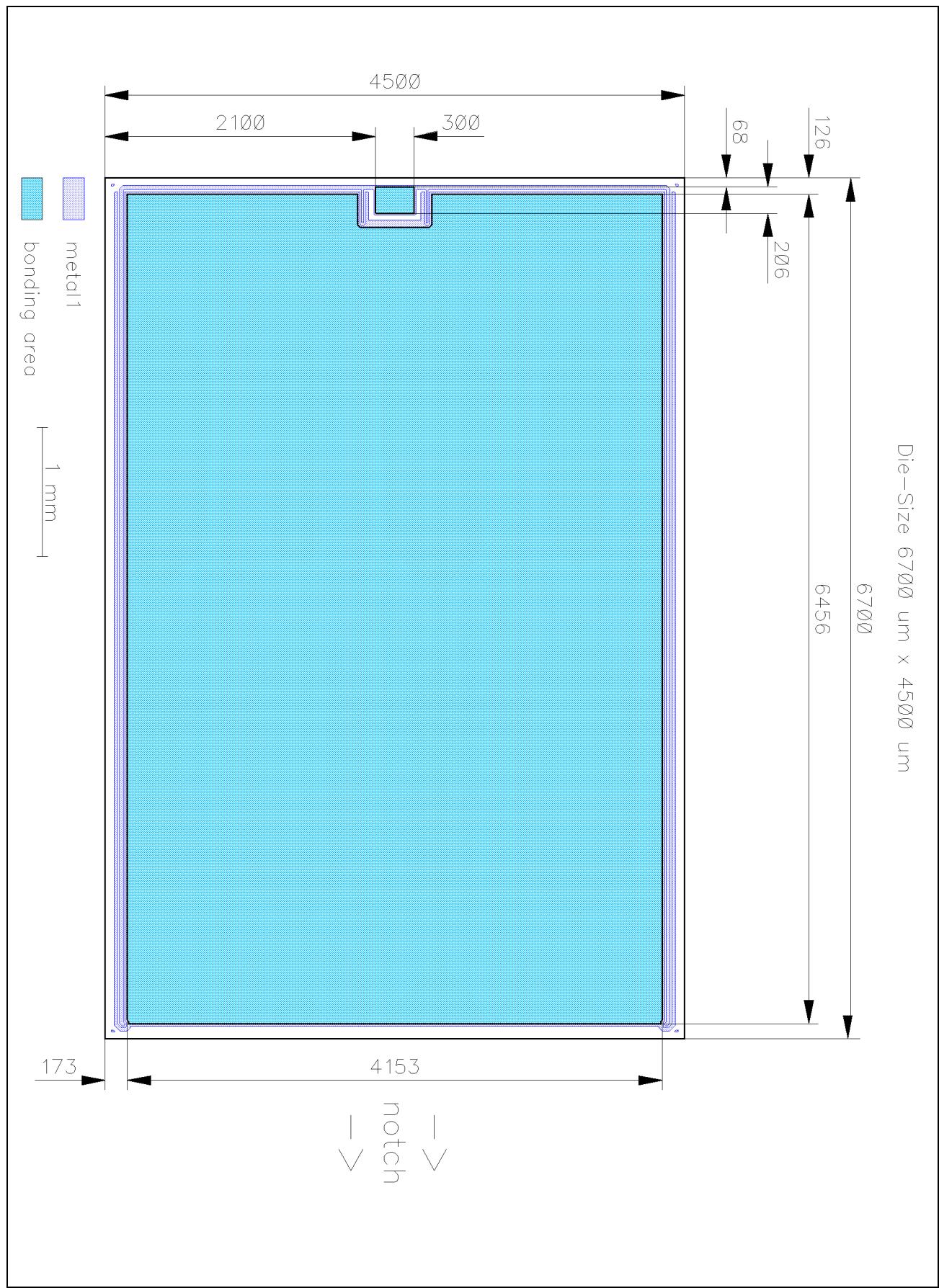
Parameter	Symbol	Value			Unit	Conditions
		min.	typ.	max.		
Drain-source breakdown voltage	$V_{(BR)DSS}$	250	-	-	V	$V_{GS} = 0\text{V}$ $I_D = 1\text{ mA}$
Gate threshold voltage	$V_{GS(\text{th})}$	2	3	4	V	$V_{DS} = V_{GS}$ $I_D = 270\text{ }\mu\text{A}$
Zero gate voltage drain current	$I_{DSS}$	-	0.1	1	$\mu\text{A}$	$V_{GS} = 0\text{V}$ $V_{DS} = 200\text{ V}$
Gate-source leakage current	$I_{GSS}$	-	1	100	nA	$V_{GS} = 20\text{ V}$ $V_{DS} = 0\text{ V}$
Drain-source on-resistance	$R_{DS(\text{on})}$	-	16 <sup>3)</sup>	100 <sup>2)</sup>	$\text{m}\Omega$	$V_{GS} = 10\text{ V}$ $I_D = 2\text{ A}$
Reverse diode forward on-voltage	$V_{SD}$	-	0.7	1.2	V	$V_{GS} = 0\text{ V}$ $I_F = 1\text{ A}$
Avalanche energy, single pulse	$E_{AS}$	-	40 <sup>4)</sup>	-	mJ	$I_D = 30\text{ A}$ , $R_{GS} = 25\text{ }\Omega$

<sup>1)</sup> packaged in a PG-TO220-3 (see ref. product)

<sup>2)</sup> limited by wafer test-equipment

<sup>3)</sup> typical bare die  $R_{DS(\text{on})}$ ;  $V_{GS} = 10\text{ V}$

<sup>4)</sup> Wafer tested. For general avalanche capability refer to the datasheet of IPP200N25N3 G



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