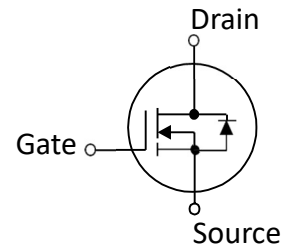
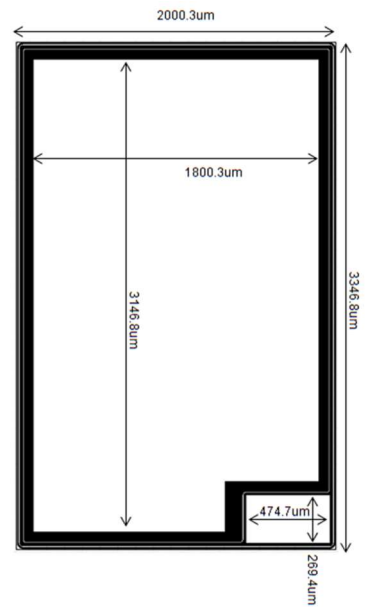


**45V, 195A <sup>(1)</sup> N-Channel MOSFET**

- Proprietary Trench Gate Device Design and Processes
- High Reliability Capability
- Sampled CP Probing and Inking

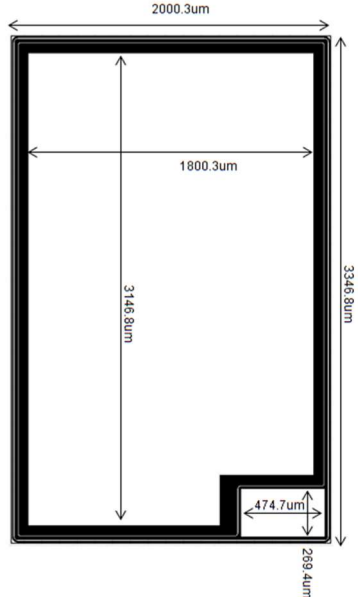
**SYMBOL**

**Electrical Characteristics in C/P Test (T<sub>J</sub> at 25 °C)**

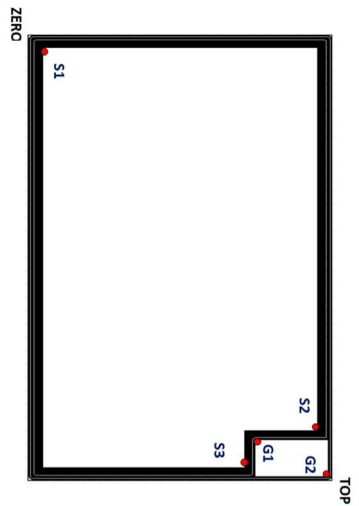
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	45	—	—	V	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	1.1	1.3	mΩ	V <sub>GS</sub> = 10V, I <sub>D</sub> = 1A <sup>(2)</sup>
V <sub>GS(th)</sub>	Gate Threshold Voltage	1	—	2.5	V	V <sub>DS</sub> = V <sub>GS</sub> , I <sub>D</sub> = 250μA
I <sub>DSS</sub>	Drain-to-Source Leakage Current	—	—	1	μA	V <sub>DS</sub> = 36V, V <sub>GS</sub> = 0V
I <sub>GSS</sub>	Gate-to-Source Leakage Current	-100	—	100	nA	V <sub>DS</sub> = 0V, V <sub>GS</sub> = ±20V
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature	-55°C to 150°C Max.				

Mechanical Data		Die Drawing
Chip Size	2000 μm X 3347 μm	
Gate Pad Size	475 μm X 270 μm	
Source Pad Size	1800 μm X 3147 μm	
Scribe Line Width	60 μm	
Wafer Thickness	100 μm	
Wafer Diameter	200 mm	
Gross Die	4037 EA	
Source Metallization	Ni 2-4um / Pd 2k-3kA / Au 200-500A	
Drain Metallization	Ti-Ni-Ag	
Passivation	Polyimide	
Recommended Storage Environment	Store in original container, in dry nitrogen, 6 months at ambient temperature of 23°C ± 3°C	

(1) This characteristic assumes the die is assembled in DFN5\*6 package. Actual performance may degrade when assembled.

(2) Pulse Width tp = < 1 mS, Duty Cycle < 2%.

Specific Assembly Information Bill of Material (BOM)		Die Drawing
Package Type	DFN5*6	
Die Attach Method	Soft solder	
Soft Solder Composition	Pb,Sn,Ag	
Gate Wire Bonding	Cu, 2 mil x1	
Source Wire Bonding	Clip	
Molding Compound Manufacturer	G700HF	
Solder Plating Composition	Pure Tin	

Position			Bonding Diagram Top View
	X (um)	Y (um)	
ZERO	0	0	
TOP	3346.8	2000.3	
S1	100	100	
S2	2970	1900.3	
S3	3246.8	1420	
G1	3045.13	1495.75	
G2	3314.53	1970.45	

<b>Electrical Characteristics in F/T Test (T<sub>J</sub> at 25 °C)</b>						
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
I <sub>DSS</sub>	Drain-to-Source Leakage Current	—	—	1	μA	V <sub>DS</sub> =36V, V <sub>GS</sub> =0V
I <sub>GSSF</sub>	Gate-to-Source Leakage Current	—	—	100	nA	V <sub>DS</sub> =0V, V <sub>GS</sub> =+20V
I <sub>GSSR</sub>	Gate-to-Source Leakage Current	-100	—	—	nA	V <sub>DS</sub> =0V, V <sub>GS</sub> =-20V
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	45	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	45	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =1mA
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	—	2.6	mΩ	V <sub>GS</sub> =10V, I <sub>D</sub> =20A
V <sub>GS(th)</sub>	Gate Threshold Voltage	1	—	2.5	V	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA
V <sub>SD</sub>	Drain-Source Diode Forward Voltage			1.1	V	V <sub>GS</sub> = 0V, I <sub>SD</sub> = 20A
EAS test	IAS				A	VDD=45V, Vgs=10V, RG=25ohm, L=0.5mH
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature	-55°C to 150°C Max.				

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