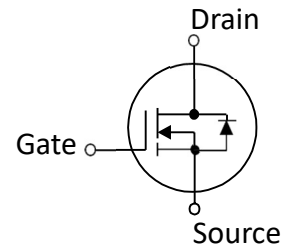


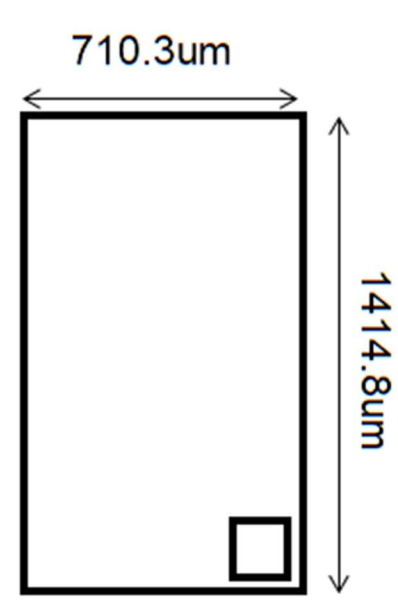
**40V, 10A <sup>(1)</sup> N-Channel MOSFET**

- 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)**

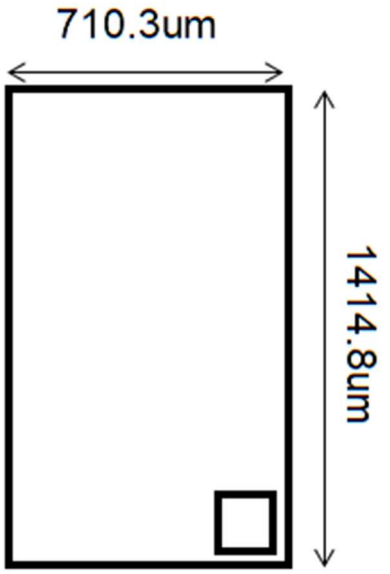
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
V <sub>(BR)DSS</sub>	Drain-Source Breakdown Voltage	40	—	—	V	V <sub>GS</sub> = 0V, I <sub>D</sub> = 250μA
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	7	11	mΩ	V <sub>GS</sub> = 10V, I <sub>D</sub> = 1A <sup>(2)</sup>
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	11	16	mΩ	V <sub>GS</sub> = 4.5V, I <sub>D</sub> = 1A <sup>(2)</sup>
V <sub>GS(th)</sub>	Gate Threshold Voltage	1.0	—	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> = 40V, 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.				

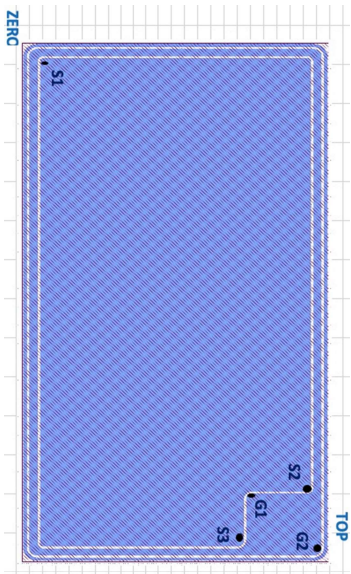
**Mechanical Data**
**Die Drawing**

Chip Size	1415 μm X 711 μm	
Gate Pad Size	170 μm X 174 μm	
Source Pad Size	1332 μm X 627 μm	
Scribe Line Width	60 μm	
Wafer Thickness	150 μm	
Wafer Diameter	200 mm	
Gross Die	25394 EA	
Source Metallization	Al-Cu (4μm typical)	
Drain Metallization	Ti-Ni-Ag	
Passivation	N/A	
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 TOP-8 package. Actual performance may degrade when assembled.

(2) Pulse Width  $t_p = < 1$  mS, Duty Cycle  $< 2\%$ .

Specific Assembly Information Bill of Material (BOM)		Die Drawing
Package Type	SOP-8	
Die Attach Method	Soft solder	
Soft Solder Composition	Pb,Sn,Ag	
Gate Wire Bonding	Cu, 2 mil x1	
Source Wire Bonding	Cu, 2 mil x8	
Molding Compound Manufacturer	G700HF	
Solder Plating Composition	Pure Tin	

Position			Bonding Diagram Top View
	X (um)	Y (um)	
ZERO	0	0	
TOP	1414.8	710.3	
S1	41.6	41.6	
S2	1222.4	668.7	
S3	1373.2	513.55	
G1	1228.4	519.75	
G2	1398.2	693.7	

<b>Electrical Characteristics in F/P 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> =40V, 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	40	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	40	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =1mA
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	—	13	mΩ	V <sub>GS</sub> =10V, I <sub>D</sub> =10A
V <sub>GS(th)</sub>	Gate Threshold Voltage	1.0	—	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			1.2	V	V <sub>GS</sub> = 0V, I <sub>SD</sub> = 10A
EAS test	IAS				A	VDD=40V,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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