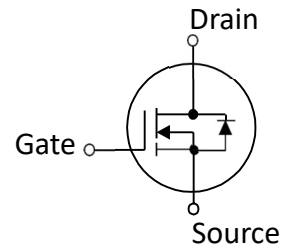
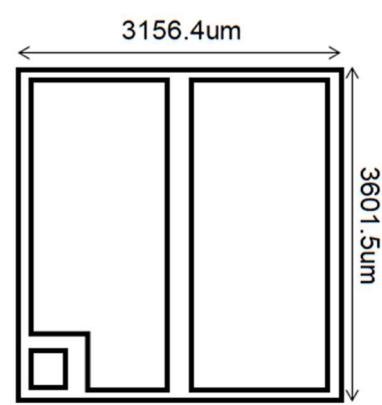


40V, 150A ⁽¹⁾ N-Channel MOSFET

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

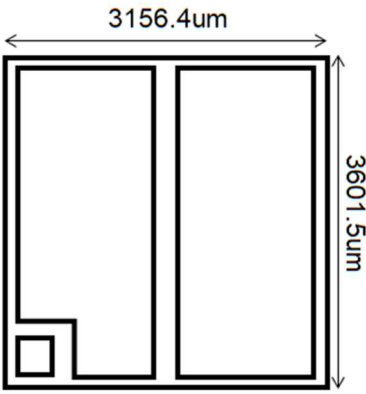
SYMBOL

Electrical Characteristics in C/P Test (T_J at 25 °C)

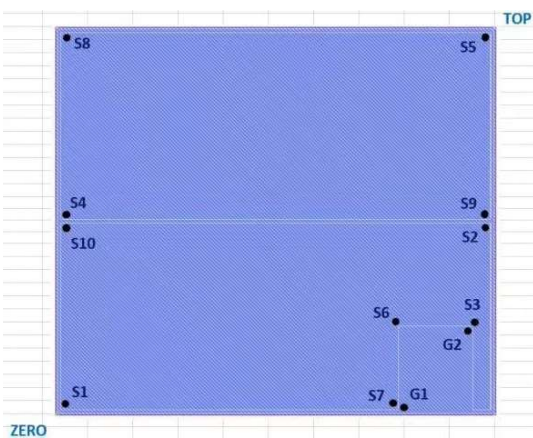
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
V _{(BR)DSS}	Drain-Source Breakdown Voltage	40	—	—	V	V _{GS} = 0V, I _D = 250μA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	0.5	0.74	mΩ	V _{GS} = 10V, I _D = 1A ⁽²⁾
V _{GS(th)}	Gate Threshold Voltage	1.0	—	2.5	V	V _{DS} = V _{GS} , I _D = 250μA
I _{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V _{DS} = 32V, V _{GS} = 0V
I _{GSS}	Gate-to-Source Leakage Current	-100	—	100	nA	V _{DS} = 0V, V _{GS} = ±20V
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max.				

Mechanical Data		Die Drawing
Chip Size	3602 μm X 3156 μm	
Gate Pad Size	600 μm X 700 μm	
Source Pad Size 1	3197 μm X 1205 μm	
Source Pad Size 2	2397 μm X 1205 μm	
Scribe Line Width	60 μm	
Wafer Thickness	150 μm	
Wafer Diameter	200 mm	
Gross Die	2382 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 DFN5*6 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	DFN5*6	
Die Attach Method	Soft solder	
Soft Solder Composition	Pb,Sn,Ag	
Gate Wire Bonding	Cu, 2 mil x1	
Source Wire Bonding	60mil*4mil Al Ribbon (double stitch)	
Molding Compound Manufacturer	G700HF	
Solder Plating Composition	Pure Tin	

Position			Bonding Diagram Top View
	X (um)	Y (um)	
ZERO	0	0	
TOP	3601.55	3156.4	
S1	55.6	55.6	
S2	3545.95	1550.7	
S3	3418.775	740.75	
S4	55.6	1605.7	
S5	3545.95	3100.8	
S6	2791.375	740.75	
S7	2791.375	55.6	
S8	55.6	3100.8	
S9	3545.95	1605.7	
S10	55.6	1550.7	
G1	2907.919	160	
G2	3307.92	560	

Electrical Characteristics in F/P Test (T_J at 25 °C)

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
I _{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V _{DS} =32V, V _{GS} =0V
I _{GSSF}	Gate-to-Source Leakage Current	—	—	100		V _{DS} =0V, V _{GS} =+20V
I _{GSSR}	Gate-to-Source Leakage Current	-100	—	—	nA	V _{DS} =0V, V _{GS} =-20V
BV _{DSS}	Drain-Source Breakdown Voltage	40	—	—	V	V _{GS} =0V, I _D =250μA
BV _{DSS}	Drain-Source Breakdown Voltage	40	—	—	V	V _{GS} =0V, I _D =1mA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	—	1.7	mΩ	V _{GS} =10V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	1.0	—	2.5	V	V _{DS} =V _{GS} , I _D =250μA
V _{SD}	Drain-Source Diode Forward Voltage			1.2	V	V _{GS} = 0V, I _{SD} = 20A
EAS test	IAS				A	V _{DD} =40V, V _{GS} =10V, RG=25ohm, L=0.5mH
T _J , T _{STG}	Operating and Storage Temperature	-55°C to 150°C Max.				

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