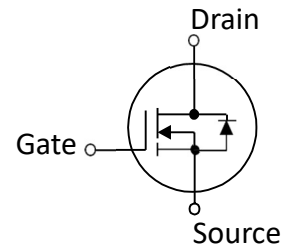


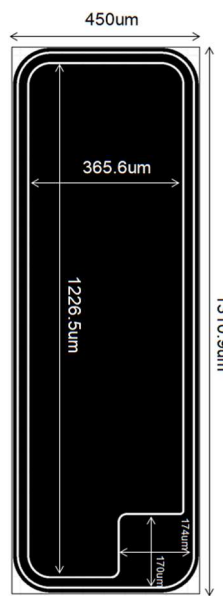
30V, 8A ⁽¹⁾ N-Channel MOSFET

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

SYMBOL

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

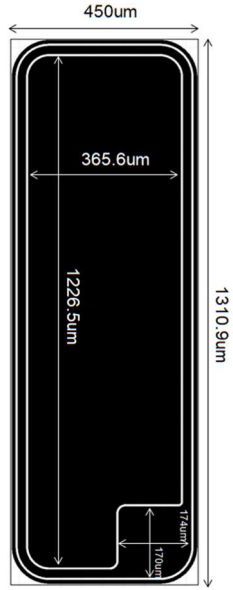
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
V _{(BR)DSS}	Drain-Source Breakdown Voltage	30	—	—	V	V _{GS} = 0V, I _D = 250μA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	17.4	22.5	mΩ	V _{GS} = 10V, I _D = 1A ⁽²⁾
V _{GS(th)}	Gate Threshold Voltage	1	—	2.5	V	V _{DS} = V _{GS} , I _D = 250μA
I _{DSS}	Drain-to-Source Leakage Current	—	—	1	μA	V _{DS} = 30V, 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	450 μm X 1311 μm	
Gate Pad Size	174 μm X 170 μm	
Source Pad Size	365 μm X 1227 μm	
Scribe Line Width	60 μm	
Wafer Thickness	125 μm	
Wafer Diameter	200 mm	
Gross Die	41305 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 SOP-8 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	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	1310.9	450	
S1	52.2	52.2	
S2	1107.05	397.8	
S3	1258.7	242.85	
G1	1133.05	268.85	
G2	1283.7	422.8	

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	$V_{DS} = 30V, V_{GS} = 0V$
I_{GSSF}	Gate-to-Source Leakage Current	—	—	100	nA	$V_{DS} = 0V, V_{GS} = +20V$
I_{GSSR}	Gate-to-Source Leakage Current	-100	—	—	nA	$V_{DS} = 0V, V_{GS} = -20V$
BV_{DSS}	Drain-Source Breakdown Voltage	30	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
BV_{DSS}	Drain-Source Breakdown Voltage	30	—	—	V	$V_{GS} = 0V, I_D = 1mA$
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	—	26	m Ω	$V_{GS} = 10V, I_D = 8A$
$V_{GS(th)}$	Gate Threshold Voltage	1	—	2.5	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
V_{SD}	Drain-Source Diode Forward Voltage			1.1	V	$V_{GS} = 0V, I_{SD} = 8A$
I_{AS}	Avalanche Current				A	$V_{DD} = 30V, V_{GS} = 10V, R_G = 25\Omega, L = 0.5mH$
T_J, T_{STG}	Operating and Storage Temperature	-55°C to 150°C Max.				

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