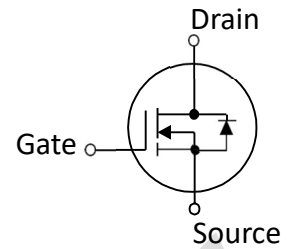
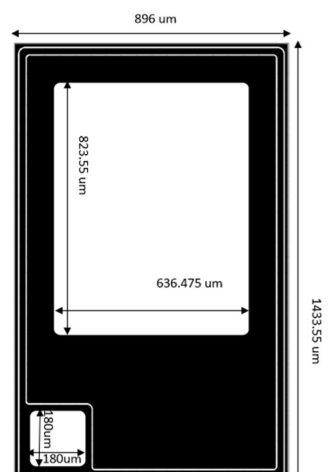


30V N-Channel MOSFET

- Advanced Split Gate Device Design and Processes
- High Reliability Capability
- Sampled CP Probing

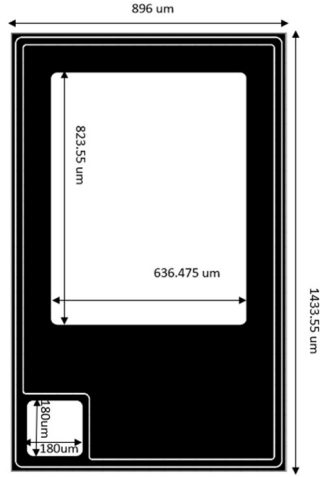
SYMBOL

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

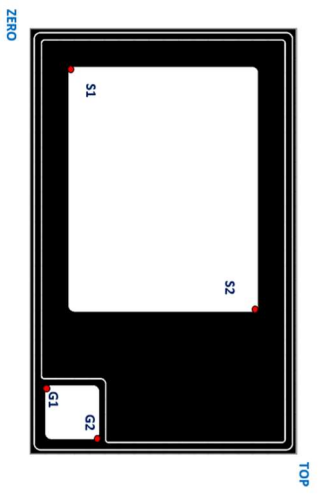
Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Condition
V _{(BR)DSS}	Drain-Source Breakdown Voltage	30	—	—	V	V _{GS} = 0V, I _D = 250μA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	5.3	6.7	mΩ	V _{GS} = 10V, I _D = 1A(1)
R _{DS(ON)}	Static Drain-Source On-Resistance	—	6.1	7.7	mΩ	V _{GS} = 4.5V, I _D = 1A(1)
V _{GS(th)}	Gate Threshold Voltage	1	—	3	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 ⁽²⁾	1433 μm X 896 μm	
Gate Pad Size	180 μm X 180 μm	
Source Pad Size	823 X 636 μm	
Scribe Line Width	60 μm	
Wafer Thickness	100 μm	
Wafer Diameter	200 mm	
Gross Die	20239 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) Pulse Width tp = < 1 mS, Duty Cycle < 2%.

(2) Chip size not include scribe line.

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	Cu clip	
Molding Compound Manufacturer	G700HF	
Solder Plating Composition	Pure Tin	

Position			Bonding Diagram Top View
	X (μm)	Y (μm)	
ZERO	0	0	
TOP	1433.55	896.475	
S1	130	130	
S2	953.55	766.475	
G1	1203	51.7	
G2	1383	231.4	

Electrical Characteristics in F/T 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	—	—	7.5	m Ω	$V_{GS} = 10V, I_D = 12A$
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	—	12	m Ω	$V_{GS} = 4.5V, I_D = 10A$
$V_{GS(th)}$	Gate Threshold Voltage	1	—	3	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
V_{SD}	Body Diode Forward Voltage	—	—	1.2	V	$V_{GS} = 0V, I_{SD} = 12A$
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	—	150	$^{\circ}C$	

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