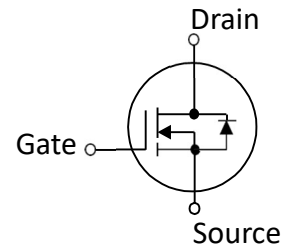


**25V N-Channel MOSFET**

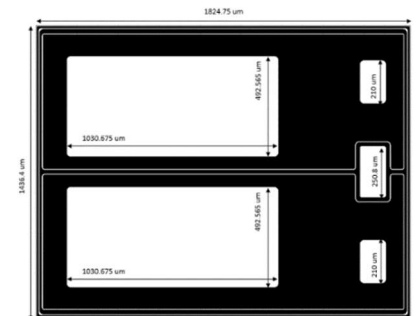
- Advanced Split Gate Device Design and Processes
- High Reliability Capability
- Sampled CP Probing

**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	25	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	3	3.8	m $\Omega$	$V_{GS} = 5V, I_D = 1A^{(1)}$
$V_{GS(th)}$	Gate Threshold Voltage	1	—	2.3	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
$I_{DSS}$	Drain-to-Source Leakage Current	—	—	1	$\mu A$	$V_{DS} = 25V, V_{GS} = 0V$
$I_{GSS}$	Gate-to-Source Leakage Current	-100	—	100	nA	$V_{DS} = 0V, V_{GS} = \pm 12V$
$T_J, T_{STG}$	Operating and Storage Temperature	-55°C to 150°C Max.				

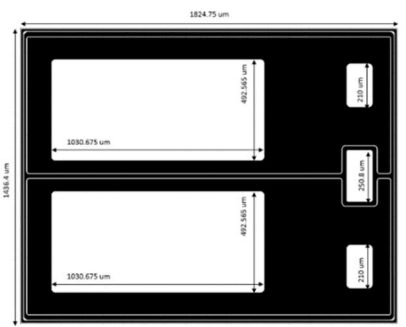
**Mechanical Data**
**Die Drawing**


Chip Size <sup>(2)</sup>	1825 $\mu m$ X 1436 $\mu m$
Gate Pad Size	250 $\mu m$ X 125 $\mu m$
Source Pad Size (1)	1031 $\mu m$ X 493 $\mu m$ 1031 $\mu m$ X 493 $\mu m$
Source Pad Size (2)	210 $\mu m$ X 125 $\mu m$ 210 $\mu m$ X 125 $\mu m$
Scribe Line Width	60 $\mu m$
Wafer Thickness	100 $\mu m$
Wafer Diameter	200 mm
Gross Die	10162 EA
Source Metallization	Ti-NiV-Ag / 1-3-1.5kA
Drain Metallization	Ti-Ni-Ag
Passivation	Polymide
Recommended Storage Environment	Store in original container, in dry nitrogen, 6 months at ambient temperature of 23°C $\pm$ 3°C



(1) Pulse Width  $t_p = < 1$  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 x 1	
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	1824.75	1436.4	
S1	150	150	
S2	1180.675	642.565	
S3	150	793.835	
S4	1180.675	1286.4	
S5	1580.675	171.2	
S6	1705.675	381.2	
S7	1580.675	1055.2	
S8	1705.675	1265.2	
G1	1580.675	592.8	
G2	1705.675	843.6	

<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> =25V, 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> =+12V
I <sub>GSSR</sub>	Gate-to-Source Leakage Current	-100	—	—	nA	V <sub>DS</sub> =0V, V <sub>GS</sub> =-12V
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	25	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =250μA
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	25	—	—	V	V <sub>GS</sub> =0V, I <sub>D</sub> =1mA
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	—	—	4.1	mΩ	V <sub>GS</sub> =5V, I <sub>D</sub> =20A
V <sub>GS(th)</sub>	Gate Threshold Voltage	1	—	2.3	V	V <sub>DS</sub> =V <sub>GS</sub> , I <sub>D</sub> =250μA
V <sub>SD</sub>	Body Diode Forward Voltage	—	—	1.2	V	V <sub>GS</sub> =0V, I <sub>SD</sub> =20A
I <sub>AS</sub>	Avalanche Current				A	V <sub>DD</sub> =25V, V <sub>GS</sub> =10V, R <sub>G</sub> =25Ω, L=0.1mH
T <sub>J</sub> , T <sub>STG</sub>	Operating and Storage Temperature	-55	—	150	°C	

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