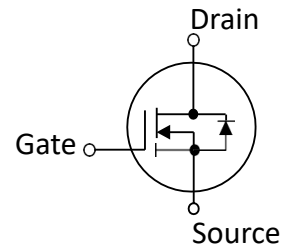


30V N-Channel MOSFET

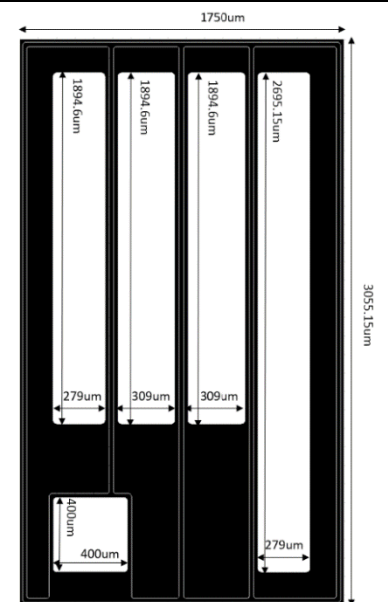
- Advanced Split Gate Device Design and Processes
- High Reliability Capability
- Sampled CP Probing and Inking

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	30	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	0.89	1.15	m Ω	$V_{GS} = 10V, I_D = 1A^{(1)}$
$R_{DS(ON)}$	Static Drain-Source On-Resistance	—	1.1	1.4	m Ω	$V_{GS} = 4.5V, I_D = 1A^{(1)}$
$V_{GS(th)}$	Gate Threshold Voltage	1	—	2.5	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
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	$V_{DS} = 0V, V_{GS} = \pm 16V$
T_J, T_{STG}	Operating and Storage Temperature	-55°C to 150°C Max.				

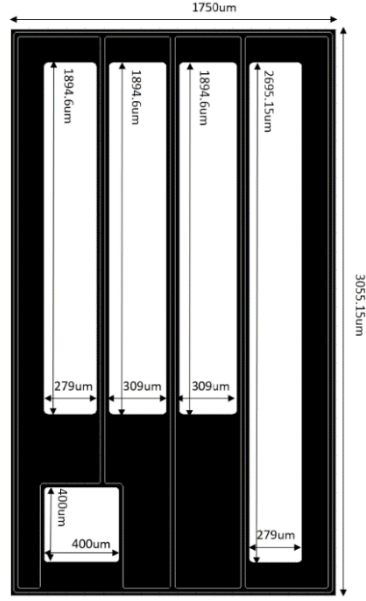
Mechanical Data


Chip Size ⁽²⁾	3055 μm X 1750 μm
Gate Pad Size	400 μm X 400 μm
Source Pad Size	2695 μm X 279 μm 1895 μm X 309 μm 1895 μm X 309 μm 1895 μm X 279 μm
Scribe Line Width	60 μm
Wafer Thickness	100 μm
Wafer Diameter	200 mm
Gross Die	5071 EA
Source Metallization	Ti-NiV-Ag / 1-3-1.5kA
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 \pm 3°C

Die Drawing


(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, 2 mil x 20	
Molding Compound Manufacturer	G700HF	
Solder Plating Composition	Pure Tin	

Position			Bonding Diagram Top View
	X (μm)	Y (μm)	
ZERO	0	0	
TOP	3055.15	1750	
S1	180	180	
S2	2074.6	459	
S3	180	530.27	
S4	2074.6	839.27	
S5	180	910.54	
S6	2074.6	1219.54	
S7	180	1290.81	
S8	2875.15	1570	
G1	2474.6	180.775	
G2	2874.6	580.775	

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} =+16V
I _{GSSR}	Gate-to-Source Leakage Current	-100	—	—	nA	V _{DS} =0V, V _{GS} =-16V
BV _{DSS}	Drain-Source Breakdown Voltage	30	—	—	V	V _{GS} =0V, I _D =250μA
BV _{DSS}	Drain-Source Breakdown Voltage	30	—	—	V	V _{GS} =0V, I _D =1mA
R _{DS(ON)}	Static Drain-Source On-Resistance	—	—	2	mΩ	V _{GS} =10V, I _D =20A
R _{DS(ON)}	Static Drain-Source On-Resistance	—	—	3	mΩ	V _{GS} =4.5V, I _D =20A
V _{GS(th)}	Gate Threshold Voltage	1	—	2.5	V	V _{DS} =V _{GS} , I _D =250μA
V _{SD}	Body Diode Forward Voltage	—	—	1.2	V	V _{GS} =0V, I _{SD} =20A
I _{AS}	Avalanche Current				A	V _{DD} =30V, V _{GS} =10V, R _G =25Ω, L=0.1mH
T _J , T _{STG}	Operating and Storage Temperature	-55	—	150	°C	

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