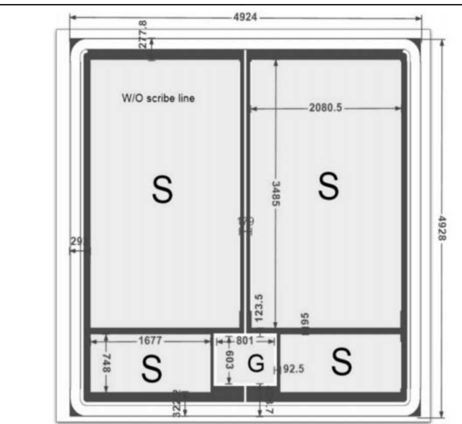
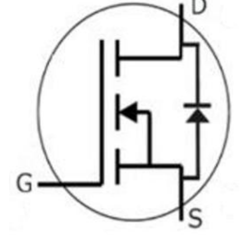
Physical Characteristics

<table>
<tr><td rowspan="2"></td><td colspan="2">Die size：4924 μm x 4928 μm (without scribe line)
Gate pad：801 μm x 603 μm
Gross die / per 6” wafer = 592 pcs</td></tr>
<tr><td>Main characteristics：
V_{DS} = 1200V
$I_D(T_C=25°C)$ = 150A
$R_{DS(on)MAX}$ = 24mΩ@18V</td><td></td></tr>
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Mechanical Data

Parameter	Parameter
Nominal Back Metal Composition, Thickness	Ti- Ni - Ag
Nominal Front Metal Composition, Thickness	Al(4μm)
Wafer Diameter	150mm
Wafer Thickness	175μm±10μm
Scribe line width	80μm

Absolute Maximum Ratings(T_C=25°C,unless otherwise specified)

Parameter	Symbol	Test Condition	Value	Unit
Drain-Source Voltage	V_{DSmax}	V_{GS} = 0V, I_D =100μA	1200	V
Gate-Source Voltage	V_{GSmax}	AC (f > 1 Hz)	-10/+25	V
Gate-Source Voltage	V_{GSOP}	Static	-4/+15 -4/+18	V
Continuous Drain Current	I_D	V_{GS}=15V or 18V ,T_C=25℃	150	A
	I_D	V_{GS}=15V or 18V, T_C=100℃	106	A
Pulsed Drain Current	$I_{D,pulse}$	Pulse with t_p limited by T_{jmax} at 1 ms Pulse with t_p limited by T_{jmax} at 100 μs	343 818	A
Junction Temperature	T_J		-55 ~ +175	℃
Storage Temperature	T_{STG}		-55 ~ +175	℃

Note 1: Assumes a $R_{th(jc)}$ will be less than 0.21 K/W.

Electrical characteristics (T_j=25℃, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	$V_{(BR)DSS}$	V_{GS} = 0V, I_D =100μA	1200			V
Zero gate voltage drain current	I_{DSS}	V_{DS} =1200V,V_{GS} = 0V		1	50	μA
Gate-Source leakage current	I_{GSS}	V_{GS} =15V or 18V, V_{DS} = 0V			250	nA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =23mA		2.9		V
		V_{DS} =V_{GS}, I_D =23mA ,T_J=175℃		2.0		
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =15V, I_D =75A		20		mΩ
		V_{GS} =18V, I_D =75A		16	24	
		V_{GS} =20V, I_D =75A		15		
		V_{GS} =15V, I_D =75A,T_J=175℃		36		
		V_{GS} =18V, I_D =75A,T_J=175℃		34		
		V_{GS} =20V, I_D =75A,T_J=175℃		33		
Transconductance	g_{fs}	V_{DS} =18V, I_D =75A		60		S
		V_{DS} =18V, I_D =75A,T_j = 175℃		42		
Dynamic characteristics						
Input Capacitance	C_{iss}	V_{DS} =1000V,V_{GS} =0V,f =100kHz V_{AC}=25mV		5806		pF
Output Capacitance	C_{oss}			216		
Reverse Transfer Capacitance	C_{rss}			14		
Total Gate Charge	Q_g	V_{DS} =800V, ,I_D =75A V_{GS} =-4V/15V or -4V/18V		247		nC
Gate-Source Charge	Q_{gs}			83		
Gate-Drain Charge	Q_{gd}			77		
Internal Gate Resistance	$R_{G(int)}$	f=1 MHz, V_{AC} = 25mV		0.8		Ω
Source-Drain Diode characteristics						
Diode Forward Current	I_S	V_{GS} =-4V,T_C=25℃		146		A
Diode Forward voltage	V_{SD}	V_{GS} =-4V, I_{SD}=37.5A		3.9		V
		V_{GS} =-4V, I_{SD}=37.5A,T_J=175℃		3.3		
Diode pulse Current	$I_{S,pulse}$	V_{GS} =-4V, pulse width t_p limited by T_{jmax}		297		A