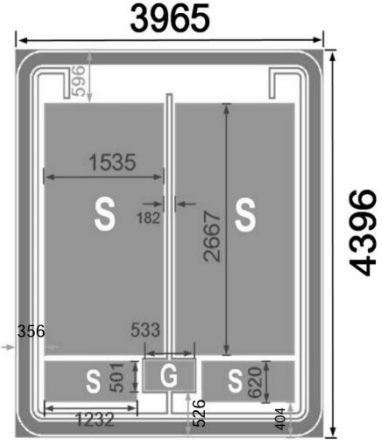
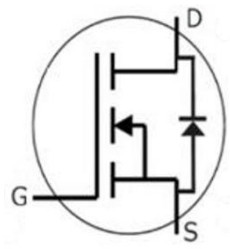


Physical Characteristics

	Die size: 3965 μm x 4396 μm (without scribe line) Gate pad: 533 μm x 501 μm Gross die / per 6" wafer = 818 pcs	
	Main characteristics: $V_{DS} = 1200\text{V}$ $I_D(T_C=25^\circ\text{C}) = 90\text{A}$ $R_{DS(on)MAX} = 42\text{m}\Omega@18\text{V}$	

Mechanical Data

Parameter	Parameter
Nominal Back Metal Composition, Thickness	Ti- Ni - Ag
Nominal Front Metal Composition, Thickness	Al(4 μm)
Wafer Diameter	150mm
Wafer Thickness	175 $\mu\text{m} \pm 10\mu\text{m}$
Scribe line width	80 μm

Absolute Maximum Ratings ($T_C=25^\circ\text{C}$, unless otherwise specified)

Parameter	Symbol	Test Condition	Value	Unit
Drain-Source Voltage	V_{DSmax}	$V_{GS} = 0\text{V}, I_D = 100\mu\text{A}$	1200	V
Gate-Source Voltage	V_{GSmax}	AC ($f > 1\text{Hz}$)	-10/+25	V
Gate-Source Voltage	V_{GSOP}	Static	-4/+18	V
Continuous Drain Current	I_D	$V_{GS}=18\text{V}, T_C=25^\circ\text{C}$	90	A
	I_D	$V_{GS}=18\text{V}, T_C=100^\circ\text{C}$	63	A
Pulsed Drain Current	$I_{D,pulse}$	Pulse with t_p limited by T_{jmax} at 1 ms	175	A
		Pulse with t_p limited by T_{jmax} at 100 μs	426	A
Junction Temperature	T_J		-55 ~ +175	$^\circ\text{C}$
Storage Temperature	T_{STG}		-55 ~ +175	$^\circ\text{C}$

Note 1: Assumes a $R_{th(jc)}$ will be less than 0.29 K/W.

Electrical characteristics (T_j=25°C, 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} = 18V, V _{DS} = 0V			250	nA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 12mA		3.0		V
		V _{DS} = V _{GS} , I _D = 12mA, T _J = 175°C		2.0		
Drain-source on-resistance	R _{DS(on)}	V _{GS} = 18V, I _D = 40A		28	42	V
		V _{GS} = 20V, I _D = 40A		25		
		V _{GS} = 18V, I _D = 40A, T _J = 175°C		50		
		V _{GS} = 20V, I _D = 40A, T _J = 175°C		48		
Transconductance	g _{fs}	V _{DS} = 18V, I _D = 40A		38		S
		V _{DS} = 18V, I _D = 40A, T _J = 175°C		24		
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} = 1000V, V _{GS} = 0V, f = 1MHz V _{AC} = 25mV		3290		pF
Output Capacitance	C _{oss}			124		
Reverse Transfer Capacitance	C _{rss}			7.8		
Total Gate Charge	Q _g	V _{DS} = 800V, V _{GS} = -4V/18V, I _D = 40A		137		nC
Gate-Source Charge	Q _{gs}			42		
Gate-Drain Charge	Q _{gd}			48		
Internal Gate Resistance	R _{G(int)}	f = 1 MHz, V _{AC} = 25mV		1		Ω
Source-Drain Diode characteristics						
Diode Forward Current	I _S	V _{GS} = -4V, T _C = 25°C		97		A
Diode Forward voltage	V _{SD}	V _{GS} = -4V, I _{SD} = 20A		3.8		V
		V _{GS} = -4V, I _{SD} = 20A, T _J = 175°C		3.3		
Diode pulse Current	I _{S,pulse}	V _{GS} = -4V, pulse width t _p limited by T _{jmax}		175		A