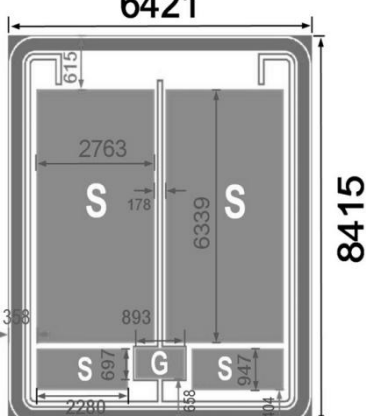
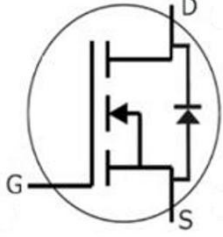


Physical Characteristics

	Die size: 6421 μm x 8415 μm (without scribe line) Gate pad: 893 μm x 697 μm Gross die / per 6" wafer = 250 pcs	
	Main characteristics: $V_{DS} = 750\text{V}$ $I_D(T_C=25^\circ\text{C}) = 355\text{A}$ $R_{DS(on)MAX} = 8\text{m}\Omega@18\text{V}$	

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_{DS}	$V_{GS} = 0\text{V}$, $I_D = 100\mu\text{A}$	750	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	$V_{GS} = 18\text{V}$, $T_C=25^\circ\text{C}$	355	A
	I_D	$V_{GS} = 18\text{V}$, $T_C=100^\circ\text{C}$	251	
Pulsed Drain Current	$I_{D,pulse}$	Pulse with t_p limited by T_{jmax}	655	A
Junction Temperature	T_J		-55~ +175	$^\circ\text{C}$
Storage Temperature	T_{STG}		-55~ +175	$^\circ\text{C}$

Note 1: Assumes a $R_{\theta(jc)}$ will be less than 0.18 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	750			V
Zero gate voltage drain current	I _{DSS}	V _{DS} =750V,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 =80mA		2.8		V
		V _{DS} =V _{GS} , I _D =80mA,T _j = 175°C		1.9		
Drain-source on-resistance	R _{DS(on)}	V _{GS} =18V, I _D =120A		5	8	mΩ
		V _{GS} =18V, I _D =120A,T _j = 175°C		7		
Transconductance	g _{fs}	V _{DS} =18V, I _D =120A		86		S
		V _{DS} =18V, I _D =120A,T _j = 175°C		74		
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} =600V,V _{GS} =0V,f =100KHz V _{AC} = 25mV		16854		pF
Output Capacitance	C _{oss}			958		
Reverse Transfer Capacitance	C _{rss}			76		
Total Gate Charge	Q _g	V _{DS} =400V,I _D =120A V _{GS} =-4V/18V		582		nC
Gate-Source Charge	Q _{gs}			284		
Gate-Drain Charge	Q _{gd}			143		
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°C		184		A
Diode Forward voltage	V _{SD}	V _{GS} =-4V, I _{SD} = 60A		4.1		V
		V _{GS} =-4V, I _{SD} = 60A,T _J =175°C		3.5		V
Diode Pulse Current	I _{S,pulse}	V _{GS} = -4V, pulse width t _p limited by T _{imax}		655		A

Note: The electrical characteristics are the test results of the chip using TO-247AB packaging.