

Physical Characteristics

[illegible]

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_{DS}	$V_{GS} = 0V, I_D = 100\mu A$	750	V
Gate-Source Voltage	V_{GSmax}	AC (f > 1 Hz)	-10/+25	V
Gate-Source Voltage	V_{GSOP}	Static	-4/+18	V
Continuous Drain Current	I_D	$V_{GS} = 18V, T_C = 25^\circ C$	189	A
	I_D	$V_{GS} = 18V, T_C = 100^\circ C$	133	
Pulsed Drain Current	$I_{D,pulse}$	Pulse with t_p limited by T_{jmax}	356	A
Junction Temperature	T_J		-55~ +175	$^\circ C$
Storage Temperature	T_{STG}		-55~ +175	$^\circ C$

Note 1: Assumes a $R_{th(jc)}$ will be less than 0.26 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 =36mA		2.8		V
		V _{DS} =V _{GS} , I _D =36mA,T _j = 175℃		2.0		
Drain-source on-resistance	R _{DS(on)}	V _{GS} =18V, I _D =80A		11	15	mΩ
		V _{GS} =18V, I _D =80A,T _j = 175℃		14		
Transconductance	g _{fs}	V _{DS} =18V, I _D =80A		60		S
		V _{DS} =18V, I _D =80A,T _j = 175℃		54		
Dynamic characteristics						
Input Capacitance	C _{iss}	V _{DS} =600V,V _{GS} =0V,f =1MHz V _{AC} = 25mV		5670		pF
Output Capacitance	C _{oss}			383		
Reverse Transfer Capacitance	C _{rss}			37		
Total Gate Charge	Q _g	V _{DS} =400V,I _D =80A V _{GS} =-4V/18V		235		nC
Gate-Source Charge	Q _{gs}			84		
Gate-Drain Charge	Q _{gd}			62		
Internal Gate Resistance	R _{G(int)}	f=1 MHz, V _{AC} =25mV		1.2		Ω
Source-Drain Diode characteristics						
Diode Forward Current	I _S	V _{GS} =-4V,T _C =25℃		130		A
Diode Forward voltage	V _{SD}	V _{GS} =-4V, I _{SD} = 40A		3.9		V
		V _{GS} =-4V, I _{SD} = 40A,T _J =175℃		3.4		V
Diode Pulse Current	I _{S,pulse}	V _{GS} = -4V, pulse width t _p limited by T _{imax}		356		A

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