

ELECTRICAL CHARACTERISTICS ($T_{\text{case}} = 25^{\circ}\text{C}$ unless otherwise stated)

Parameter		Test Conditions		Min.	Typ.	Max.	Unit
STATIC ELECTRICAL RATINGS							
BV _{DSS}	Drain – Source Breakdown Voltage	V _{GS} = 0V	I _D = 1mA	400			V
ΔBV _{DSS} ΔT _J	Temperature Coefficient of Breakdown Voltage	Reference to 25°C I _D = 1mA			0.46		V/°C
R _{DS(on)}	Static Drain – Source On–State Resistance	V _{GS} = 10V	I _D = 9.0A			0.300	Ω
		V _{GS} = 10V	I _D = 14A			0.400	
V _{GS(th)}	Gate Threshold Voltage	V _{DS} = V _{GS}	I _D = 250μA	2.0		4.0	V
g _{fs}	Forward Transconductance	V _{DS} ≥ 15V	I _{DS} = 9.0A	6.0			S (Ω)
I _{DSS}	Zero Gate Voltage Drain Current	V _{GS} = 0V	V _{DS} = 320V T _J = 125°C			25 250	μA
I _{GSS}	Gate – Source Leakage Forward	V _{GS} = +20V				+100	nA
I _{GSS}	Gate – Source Leakage Reverse	V _{GS} = –20V				–100	
DYNAMIC CHARACTERISTICS							
C _{iss}	Input Capacitance	V _{GS} = 0V			2660		pF
C _{oss}	Output Capacitance	V _{DS} = 25V			680		
C _{rss}	Reverse Transfer Capacitance	f = 1MHz			250		
Q _g	Total Gate Charge	V _{GS} = 10V		52		110	nC
Q _{gs}	Gate – Source Charge	I _D = 14A		5.0		18	
Q _{gd}	Gate – Drain (“Miller”) Charge	V _{DS} = 200V		25		65	
t _{d(on)}	Turn–On Delay Time	V _{DD} = 200V				35	ns
t _r	Rise Time	I _D = 14A				190	
t _{d(off)}	Turn–Off Delay Time	R _G = 2.35Ω				170	
t _f	Fall Time					130	
SOURCE – DRAIN DIODE CHARACTERISTICS							
I _S	Continuous Source Current					14	A
I _{SM}	Pulse Source Current ²					56	
V _{SD}	Diode Forward Voltage ¹	I _S = 28A	T _J = 25°C			1.7	V
		V _{GS} = 0					
t _{rr}	Reverse Recovery Time	I _F = 28A	T _J = 25°C			1200	ns
Q _{rr}	Reverse Recovery Charge ¹	d _i / d _t ≤ 100A/μs V _{DD} ≤ 50V				250	μC
t _{on}	Forward Turn–On Time			Negligible			
PACKAGE CHARACTERISTICS							
L _D + L _S	Total Inductance (measured from the centre of drain pad to center of source pad)				6.1		nH
THERMAL CHARACTERISTICS							
R _{thJC}	Thermal Resistance Junction – Case					0.83	°C/W
R _{thJA}	Thermal Resistance Junction – Ambient (Typical socket mount)					30	

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