

Parameter		Symbol	Тур	Max	Units			
Maximum Junction-to-Ambient A	t ≤ 10s	$R_{ ext{ heta}JA}$	34	40	°C/W			
Maximum Junction-to-Ambient A	Steady State	ιν _θ ja	66	80	°C/W			
Maximum Junction-to-Lead ^C	Steady State	$R_{ ext{ heta}JL}$	20	25	°C/W			

Symbol	Parameter	Conditions	Min	Тур	Max	Units
STATIC P	ARAMETERS					
BV _{DSS}	Drain-Source Breakdown Voltage	$I_{\rm D}$ = -250µA, $V_{\rm GS}$ = 0V	-30			V
I _{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -30V, V_{GS} = 0V$			-1	μA
	Zero Gale Voltage Brain Gurrent	$T_J = 55^{\circ}C$			-5	
I _{GSS}	Gate-Body leakage current	$V_{DS} = 0V, V_{GS} = \pm 20V$			±100	nA
V _{GS(th)}	Gate Threshold Voltage	$V_{DS} = V_{GS} I_D = -250 \mu A$	-1.5	-2	-2.5	V
I _{D(ON)}	On state drain current	V _{GS} = -10V, V _{DS} = -5V	-25			А
R _{DS(ON)}	Static Drain-Source On-Resistance	$V_{GS} = -10V, I_{D} = -6.5A$		38	46	mΩ
		T _J =125°C		54	65	1115.2
		V_{GS} = -6V, I_{D} = -5.3A		48	60	mΩ
9 _{FS}	Forward Transconductance	V_{DS} = -5V, I_{D} = -6.5A		11		S
V _{SD}	Diode Forward Voltage	$I_{\rm S}$ = -1A, $V_{\rm GS}$ = 0V		0.77	-1	V
I _S	Maximum Body-Diode Continuous Curr			-3	А	
DYNAMIC	PARAMETERS					
C _{iss}	Input Capacitance			668	830	pF
C _{oss}	Output Capacitance	V _{GS} =0V, V _{DS} =-15V, f=1MHz		126		pF
C _{rss}	Reverse Transfer Capacitance			92		pF
R _g	Gate resistance	V _{GS} =0V, V _{DS} =0V, f=1MHz		6	9	Ω
SWITCHI	NG PARAMETERS					
Q _g (10V)	Total Gate Charge (10V)			12.7	17	nC
Q _g (4.5V)	Total Gate Charge (4.5V)	V _{GS} =-10V, V _{DS} =-15V, I _D =-6.5A		6.4	8.5	nC
Q _{gs}	Gate Source Charge	v_{GS} - 100, v_{DS} - 150, t_{D} - 0.5A		2		nC
Q _{gd}	Gate Drain Charge			4		nC
t _{D(on)}	Turn-On DelayTime			7.7		ns
t _r	Turn-On Rise Time	V _{GS} =-10V, V _{DS} =-15V, R _L =2.3Ω,		6.8		ns
t _{D(off)}	Turn-Off DelayTime	R _{GEN} =3Ω		20		ns
t _f	Turn-Off Fall Time	1		10		ns
t _{rr}	Body Diode Reverse Recovery Time	I _F =-6.5A, dI/dt=100A/μs		22	30	ns
Q _{rr}	Body Diode Reverse Recovery Charge	I _F =-6.5A, dI/dt=100A/μs		15		nC

Electrical Characteristics (T_J=25°C unless otherwise noted)

A: The value of R _{0JA} is measured with the device mounted on 1in ² FR-4 board with 2oz. Copper, in a still air environment with T _A = 25°C. The value in any a given application depends on the user's specific board design. The current rating is based on the t \leq 10s thermal resistance rating.

B: Repetitive rating, pulse width limited by junction temperature.

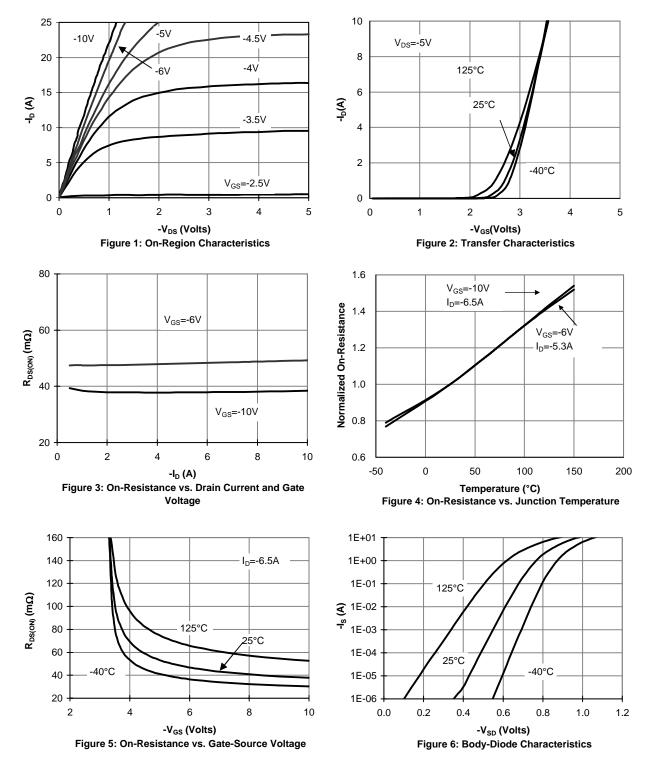
C. The R $_{\rm 0JA}$ is the sum of the thermal impedence from junction to lead R $_{\rm 0JL}$ and lead to ambient.

D. The static characteristics in Figures 1 to 6 are obtained using < 300 μ s pulses, duty cycle 0.5% max.

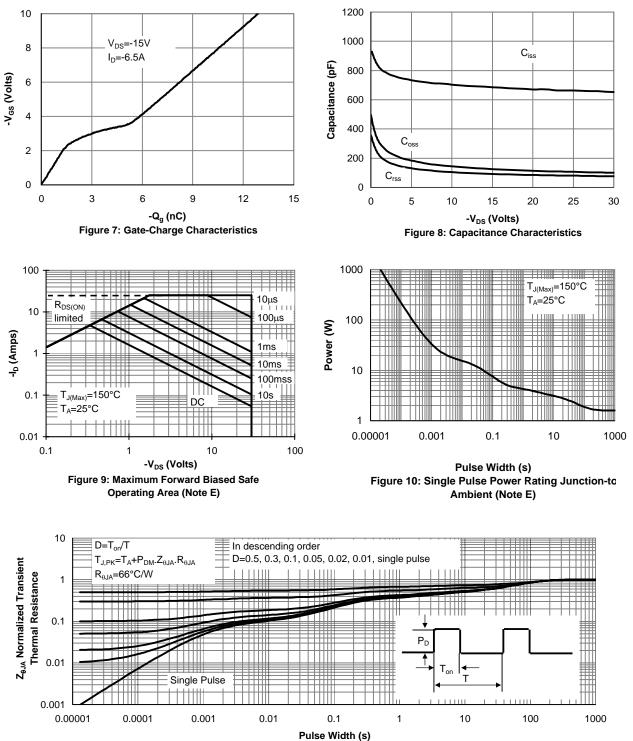
E. These tests are performed with the device mounted on 1 in 2 FR-4 board with 2oz. Copper, in a still air environment with T _A=25°C. The SOA curve provides a single pulse rating.

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TYPICAL ELECTRICAL AND THERMAL CHARACTERISTICS



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Figure 11: Normalized Maximum Transient Thermal Impedance(Note E)