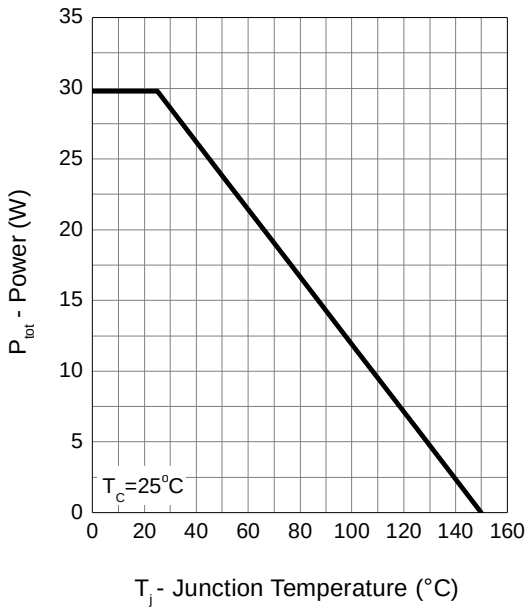
Electrical Characteristics (T_A= 25°C unless otherwise noted)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Static Characteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V, I_{DS}=-250μA	-30	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} =-24V, V_{GS}=0V	-	-	-1	μA
		Tj=85°C	-	-	-30	
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} =V_{GS}, I_{DS}=-250μA	-1.0	-1.5	-2.0	V
I_{GSS}	Gate Leakage Current	V_{GS}=±25V, V_{DS}=0V	-	-	±100	nA
$R_{DS(ON)}$ [c]	Drain-Source On-state Resistance	V_{GS}=-10V, I_{DS}=-16A	-	16	21	mΩ
		V_{GS}=-4.5V, I_{DS}=-8A	-	22	32	
Body Diode Characteristics						
V_{SD} [c]	Diode Forward Voltage	I_{SD}=-1A, V_{GS}=0V	-	-0.7	-1.0	V
t_{rr} [d]	Reverse Recovery Time	I_{DS}=-16A, dI_{SD}/dt=100A/μs	-	18	-	ns
Qrr [d]	Reverse Recovery Charge		-	9	-	nC
Dynamic Characteristics						
R_G	Gate Resistance	F=1MHz,V_{GS}=0V	-	4	-	Ω
C_{iss}	Input Capacitance	V_{GS}=0V, V_{DS} =-15V, Frequency=1.0MHz	-	1080	-	pF
C_{oss}	Output Capacitance		-	220	-	
C_{rss}	Reverse transfer capacitance		-	170	-	
$t_{d(ON)}$	Turn-on delay Time	VGS=-10V ,VDS=-15V RG=6Ω, ID=−1A,R_L=15Ω	-	11.2	-	nS
t_r	Turn-on rise Time		-	10.6	-	
$t_{d(OFF)}$	Turn-off delay Time		-	37	-	
t_f	Turn-off rise Time		-	50	-	
Gate Charge Characteristics						
Q_g	Total Gate Charge	V_{DS} =-15V, V_{GS}=-10V, I_{DS}=-16A	-	20	-	nC
Q_{gs}	Gate-Source Charge		-	1.1	-	
Q_{gd}	Gate-Drain Charge		-	7.7	-	

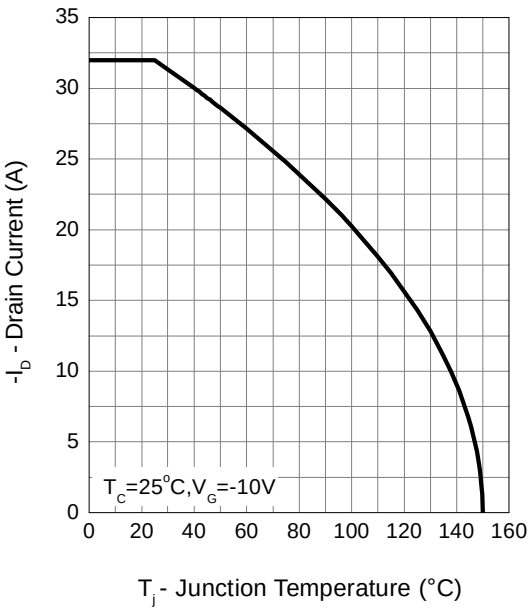
Note c：Pulse test ; pulse width≤300μs, duty cycle≤2%.
Note d：Guaranteed by design, not subject to production testing.

Typical Characteristics

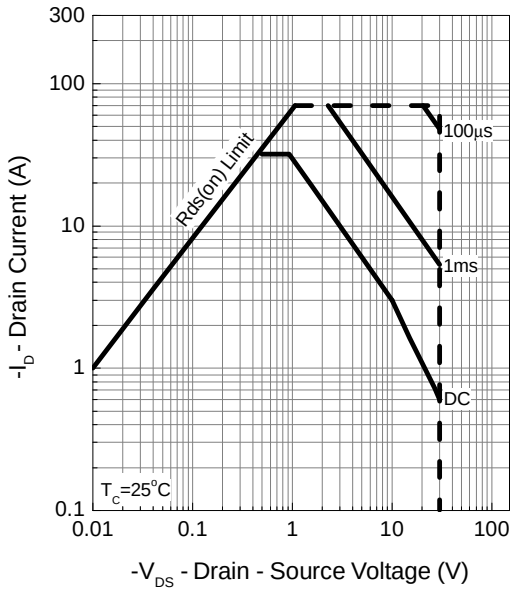
Power Dissipation



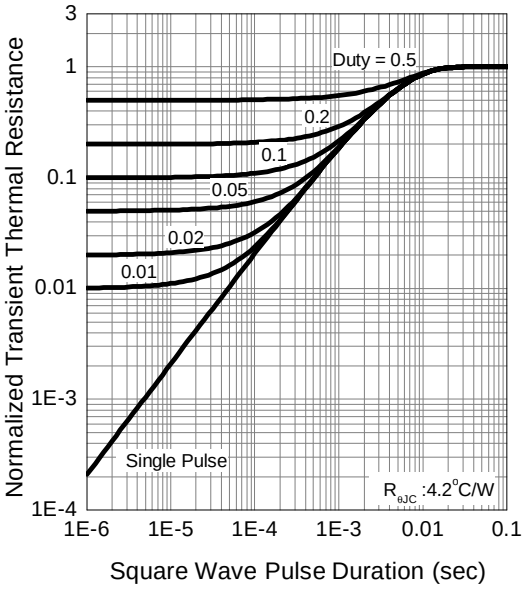
Drain Current



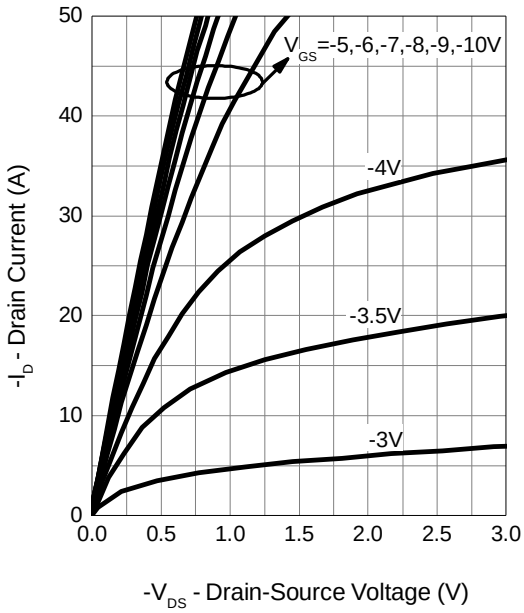
Safe Operation Area



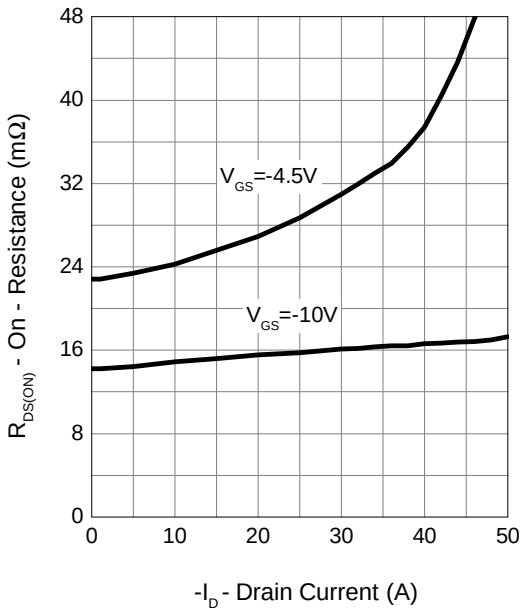
Thermal Transient Impedance



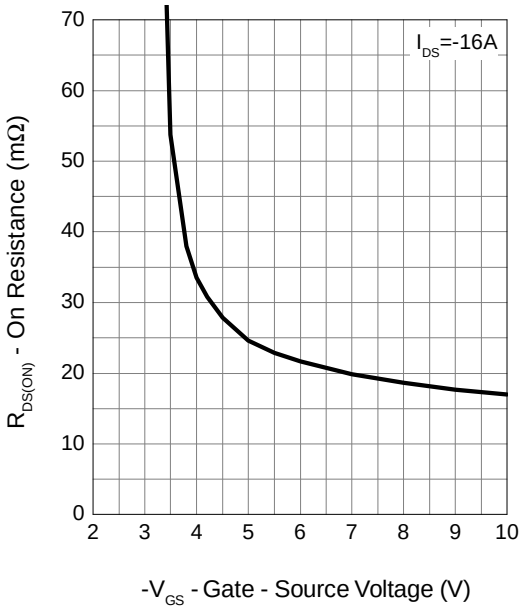
Output Characteristics



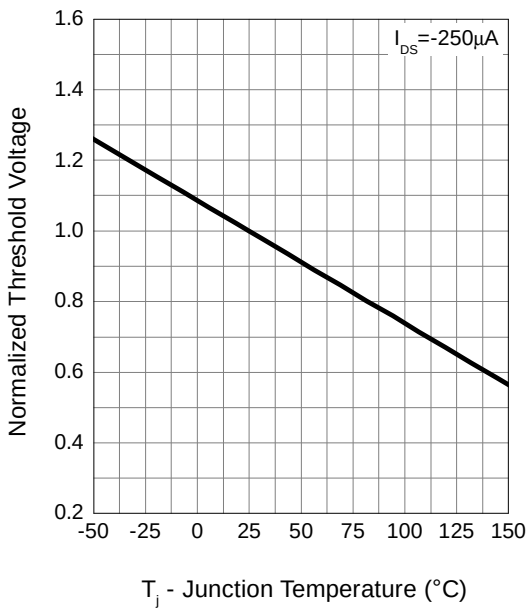
Drain-Source On Resistance



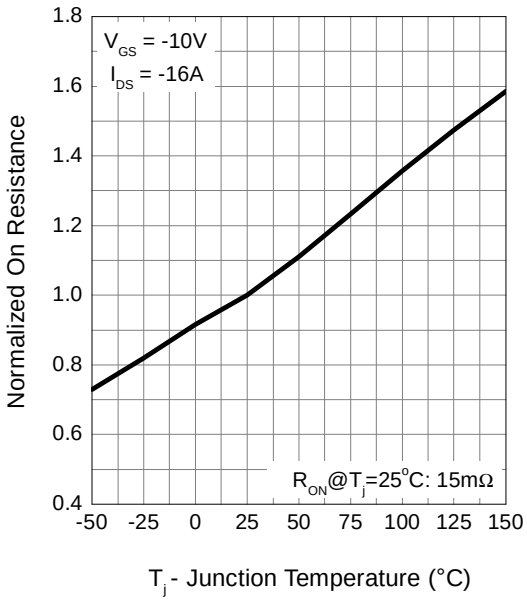
Gate-Source On Resistance



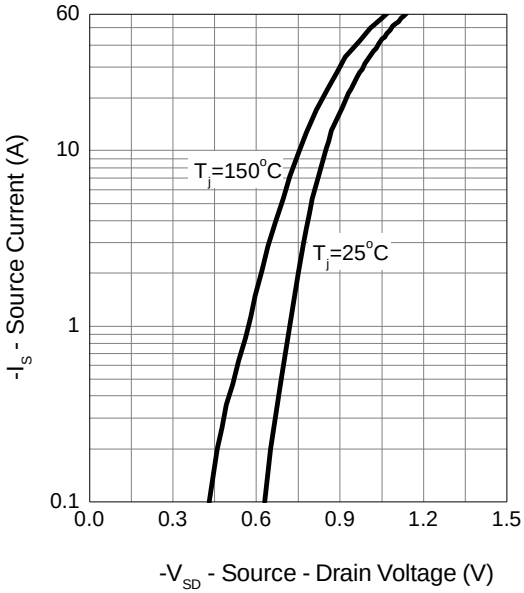
Gate Threshold Voltage



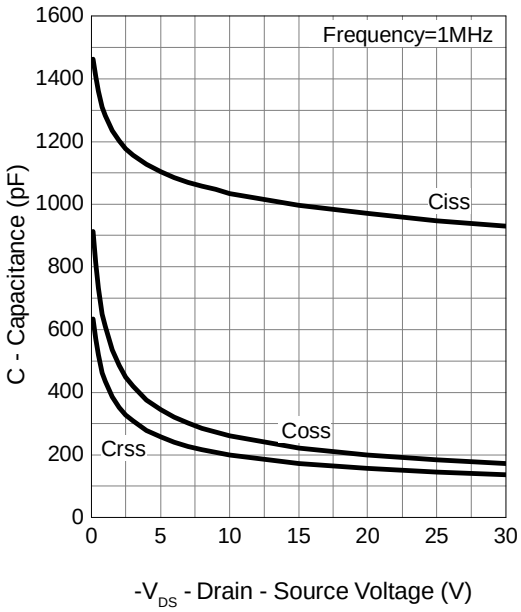
Drain-Source On Resistance



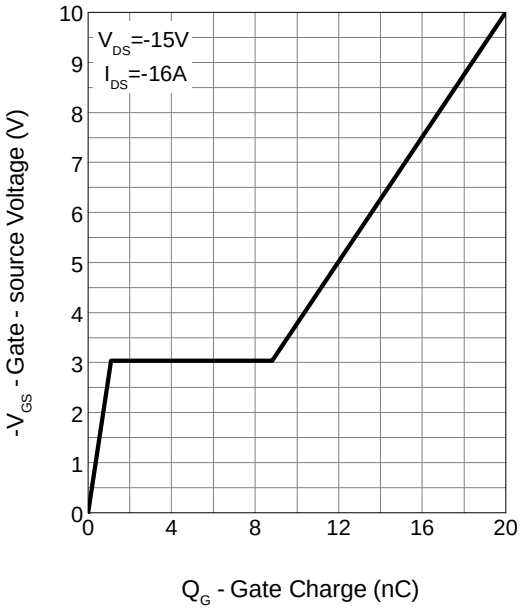
Source-Drain Diode Forward



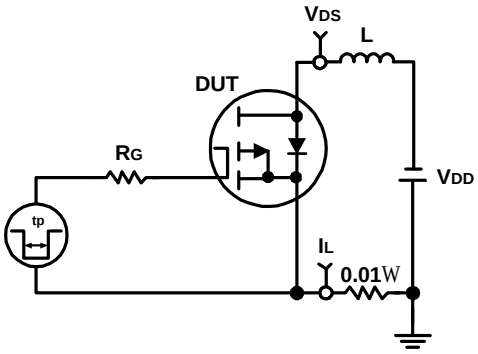
Capacitance

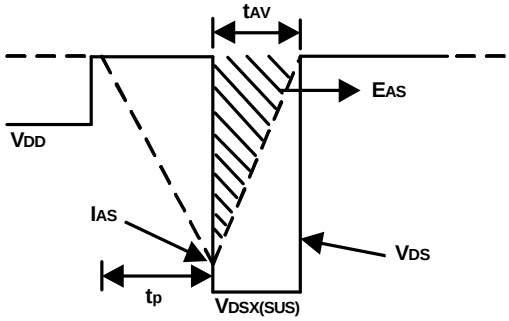


Gate Charge

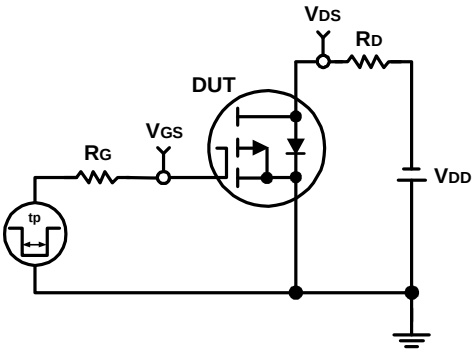


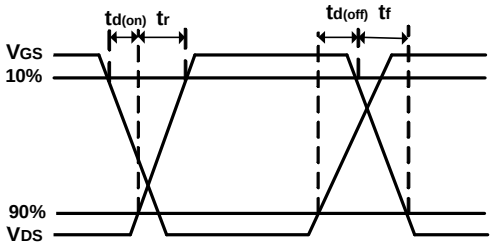
Avalanche Test Circuit and Waveforms





Switching Time Test Circuit and Waveforms





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