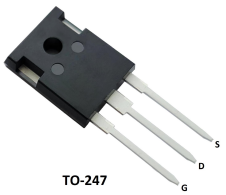
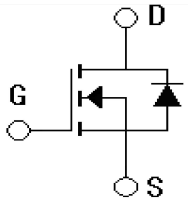
Features

- V_{DS}=200V,I_D=200A
  $R_{DS(on)}$=10mΩ
- High density cell design for ultra low Rdson
- 100% avalanche tested
- Low gate charge



Applications

- High Efficiency Synchronous Rectification in SMPS
- Uninterruptible Power Supply
- High Speed Power Switching
- Hard Switched And High Frequency Circuits



Absolute Ratings (Tc=25℃)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DSS}	200	V
Gate-Source Voltage	V_{GSS}	±30	V
Drain Current-continuous	I_D	200	A
Drain Current-pulse	I_{DM}	800	A
Single Pulsed Avalanche Energy	E_{AS}	750	mJ
Maximum Power Dissipation	PD TC=25℃ Derate above 25℃	350	W
Operating Temperature Range	T_J	-55~+175	℃
Storage Temperature Range	T_{STG}	-55~+150	℃

Electrical Characteristics(T_{CASE}=25℃ unless otherwise specified)

Parameter	Symbol	Tests conditions	Min	Typ	Max	Units
Drain-Source Voltage	BV_{DSS}	I_D=250μA,V_{GS}=0V	200	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=V_{DSS},V_{GS}=0V	-	-	25	μA
Gate-Body Leakage Current	I_{GSS}	V_{GS}=±30V，V_{DS}=0V	-	-	±100	nA

On-Characteristics						
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS},I_D=250μA	2.5	-	5	V
Static Drain-Source On-Resistance	$R_{DS(ON)}$	V_{GS}=10V,I_D=100A	-	10	-	mΩ
Forward Transconductance	g_{fs}	V_{DS}=50V,I_D=100A(1)	150	-	-	S
Gate Input Resistance	Rg		-	1	-	Ω
Dynamic Characteristics						
Input capacitance	C_{iss}	V_{DS}=25V, V_{GS}=0V, f=1.0MHZ	-	10.5	-	nF
Output capacitance	C_{oss}		-	760	-	pF
Reverse transfer capacitance	C_{rss}		-	150	-	pF

Electrical Characteristics(T_{CASE}=25℃ unless otherwise specified)

Parameter	Symbol	Tests conditions	Min	Typ	Max	Units
Switching-Characteristics						
Turn-On delay time	$t_{d(on)}$	V_{DS}=100V,I_D=100A, V_{GS}=10V,Rg=2.7Ω	-	41	-	ns
Turn-On rise time	t_r		-	105	-	ns
Turn-Off delay time	$t_{d(Off)}$		-	64	-	ns
Turn-Off rise time	t_f		-	74	-	ns
Total Gate Charge	Q_g	V_{DS}=100V,I_D=100A, V_{GS}=10V	-	150	-	nC
Gate-Source charge	Q_{gs}		-	52	-	nC
Gate-Drain charge	Q_{gd}		-	51	-	nC
Drain-Source Diode Characteristics and Maximum Ratings						
Maximum Continuous Drain-Source Diode Forward Curret	V_{SD}	V_{GS}=0V,I_S=100A(1)	-	-	1.2	V
Diode Forward Current	I_S	TC=25℃	-	-	200	A
Reverse recovery time	Trr	I_S=100A, dI/dT=100A/μS VR=100V,VGS=0V	-	125	-	nS
Reverse recovery charge	Qrr		-	620	-	μC
Reverse recovery Current	Irm		-	8.7	-	A

Thermal Characteristic

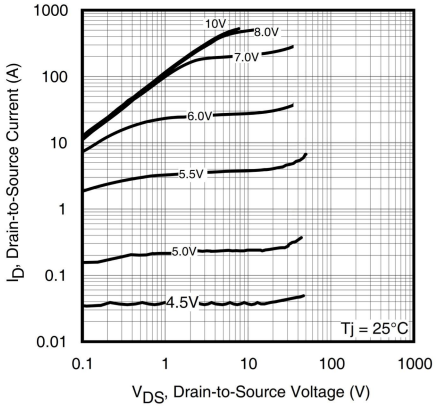
Parameter	Symbol	Value	Unit
Thermal Resistance,junction to Case	R_{th}(j-C)	0.43	℃/W
Thermal Resistance,junction to Ambient	R_{th}(j-A)	40	℃/W

Notes:

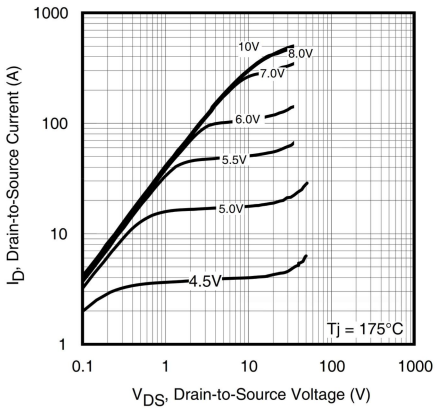
1. Pulse Test：Pulse Width ≤300μs,Duty Cycle≤2%

Electrical Characteristics

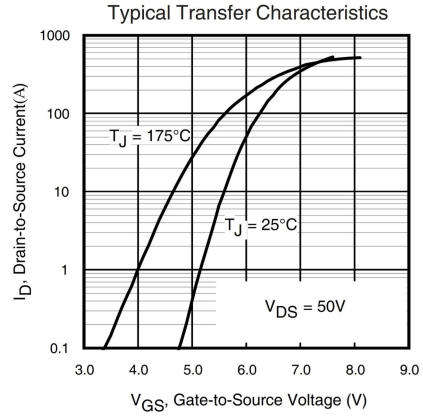
Typical Output Characteristics



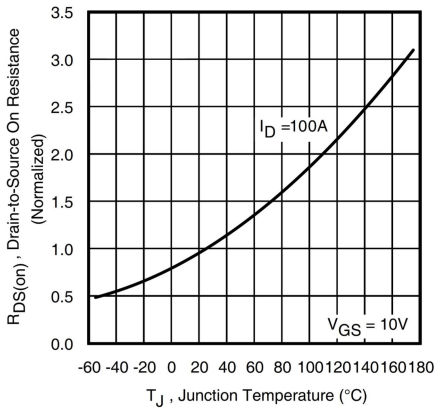
Typical Output Characteristics



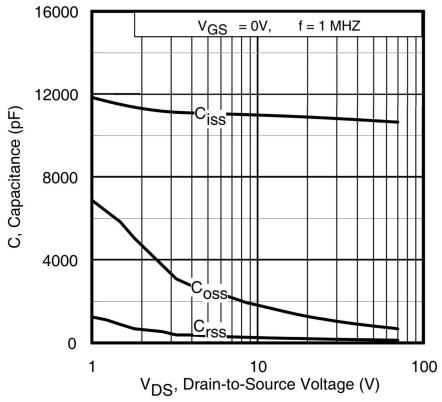
Typical Transfer Characteristics



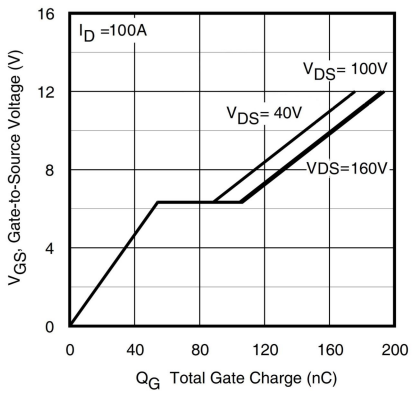
Normalized On-Resistance vs. Temperature



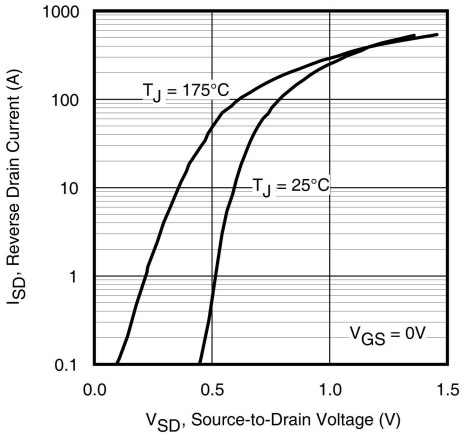
Typical Capacitance vs. Drain-to-Source Voltage



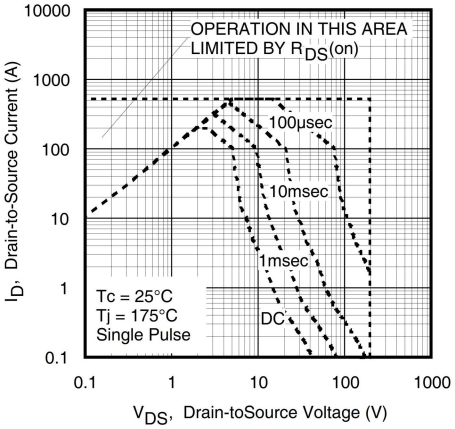
Typical Gate Charge vs. Gate-to-Source Voltage



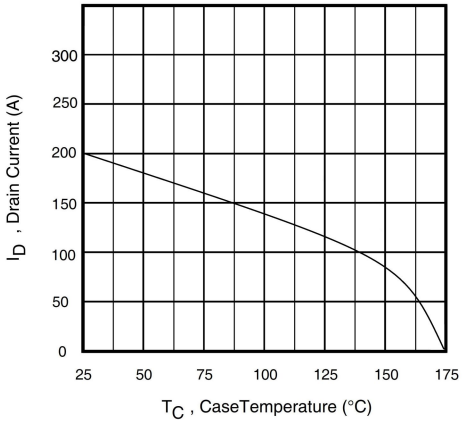
Typical Source-Drain Diode Forward Voltage



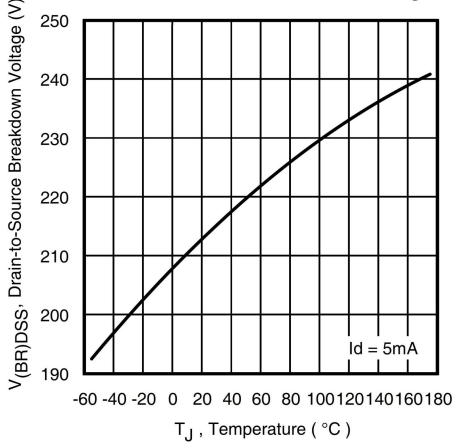
Maximum Safe Operating Area



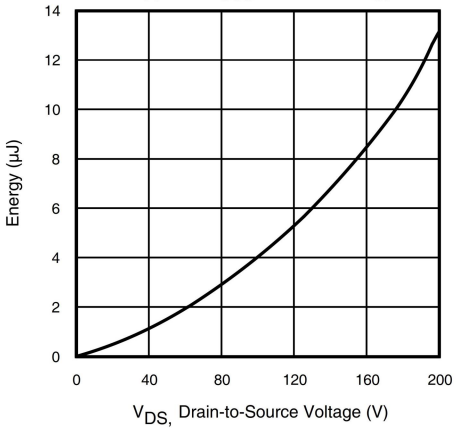
Maximum Drain Current vs. Case Temperature



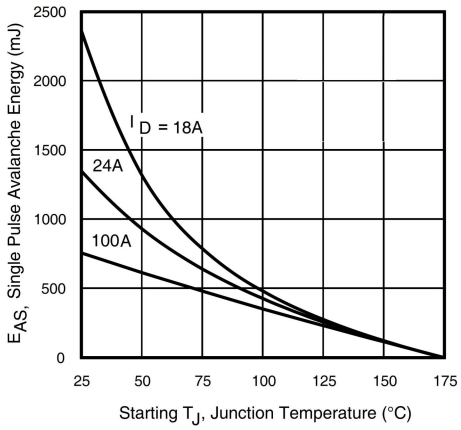
Drain-to-Source Breakdown Voltage



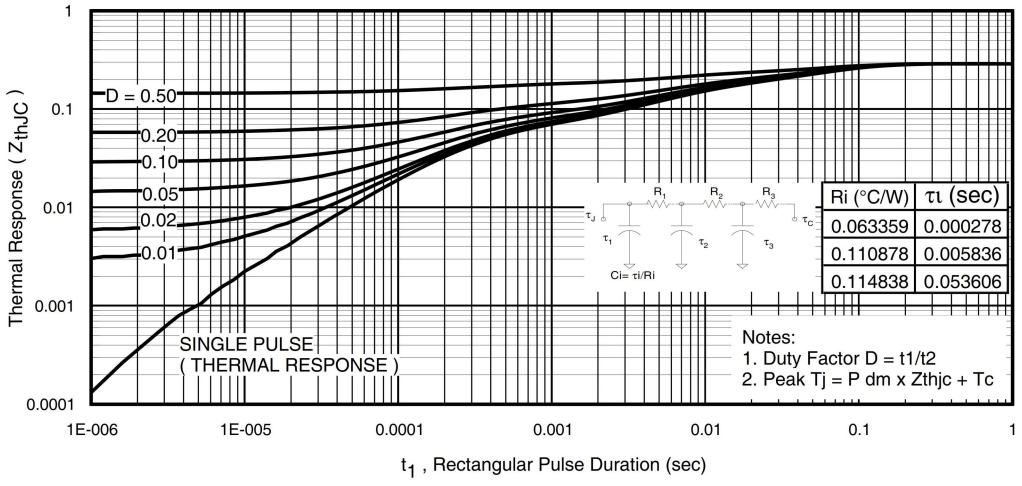
Typical C_{OSS} Stored Energy



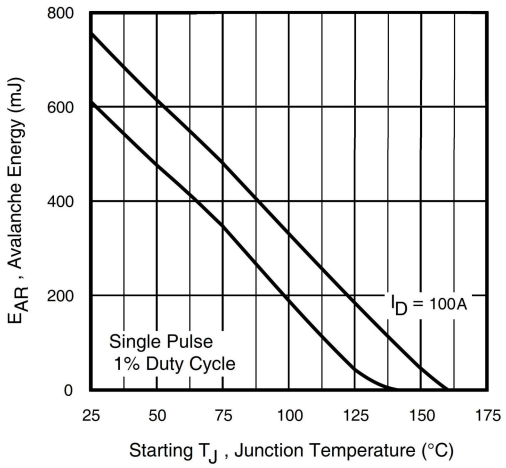
Maximum Avalanche Energy Vs. DrainCurrent



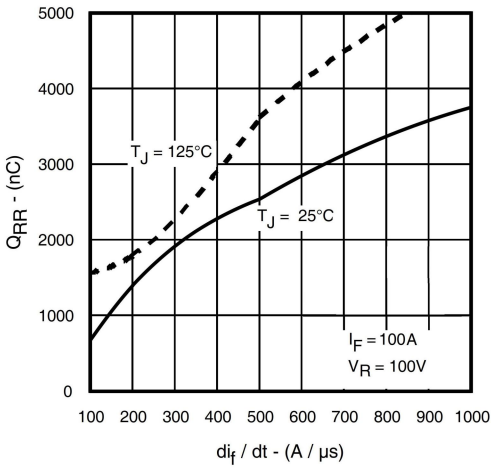
Maximum Effective Transient Thermal Impedance, Junction-to-Case



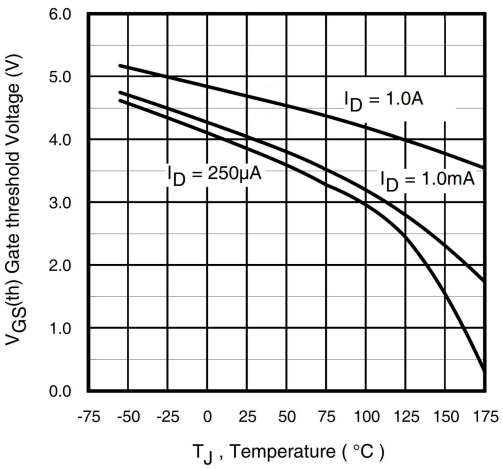
Maximum Avalanche Energy vs. Temperature



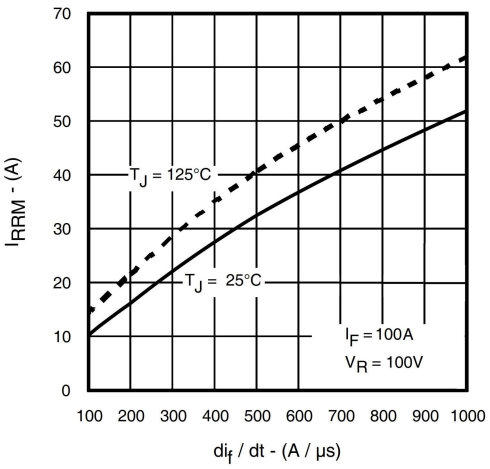
Typical Stored Charge vs. dif/dt



Threshold Voltage Vs. Temperature



Typical Recovery Current vs. dif/dt



Package Mechanical DATA