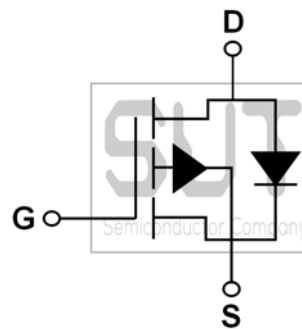
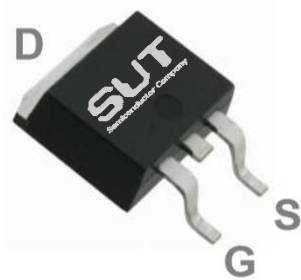


P-Channel 100-V_(D-S) MOSFET

PRODUCT SUMMARY		
B _{VDSS} (V)	R _{DS(on)} (mΩ)(MAX)	I _D (A)
-100	45@V _{GS} =-10V	-30

TO252 Pin Configuration



ABSOLUTE MAXIMUM RATINGS(T_C=25°C UNLESS OTHERWISE NOTED)

Parameter	Symbol	Rating	Units
Drain-Source Voltage	V _{DS}	-100	V
Gate-Source Voltage	V _{GS}	±20	V
Drain Current-Continuous (T _C =25°C)	I _D	-30	A
Drain Current-Continuous (T _C =100°C)		-19	A
Drain Current-Pulsed ¹	I _{DM}	-120	A
Single Pulse Avalanche Energy ²	EAS	180	mJ
Single Pulse Avalanche Current ²	IAS	-60	A
Power Dissipation (T _C =25°C)	P _D	102	W
Power Dissipation-Derate above 25°C		0.82	W/°C
Storage Temperature Range	T _{STG}	-55 to 150	°C
Operating Junction Temperature Range	T _J	-55 to 150	°C

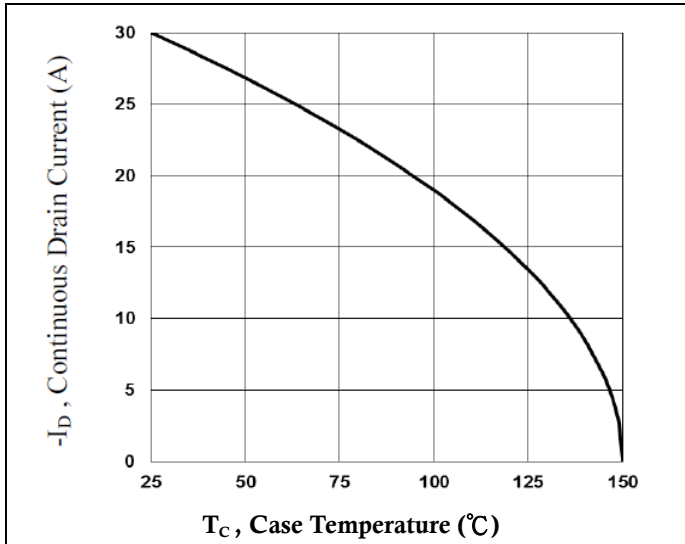
THERMAL CHARACTERISTICS

Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction to ambient	R _{θJA}	---	62	°C/W
Thermal Resistance Junction to Case	R _{θJC}	---	1.22	°C/W

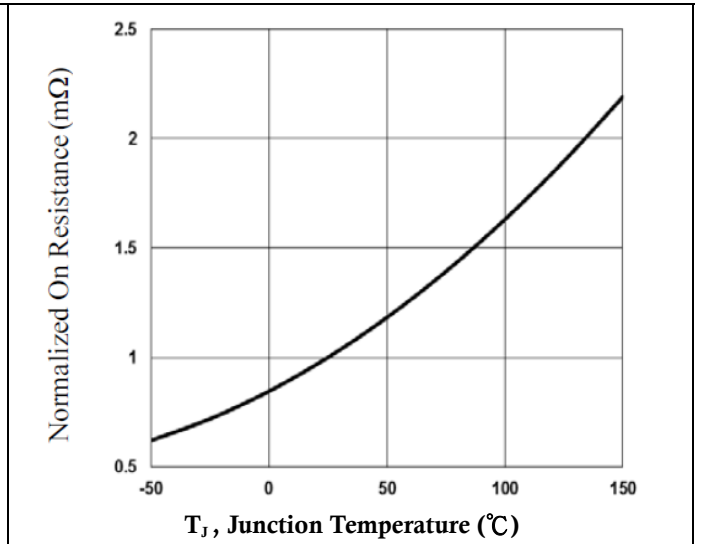
ELECTRICAL CHARACTERISTICS (T _J =25°C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Off Characteristics						
Drain-Source Breakdown Voltage	BV _{DSS}	V _{GS} =0V, I _D =-250uA	-100	---	---	V
Drain-Source Leakage Current	I _{DSS}	V _{GS} =0V, V _{DS} =-100V, T _J =25°C	---	---	-1	uA
		V _{GS} =0V, V _{DS} =-80V, T _J =85°C	---	---	-10	uA
Gate-Source Leakage Current	I _{GSS}	V _{GS} =±20V, V _{DS} =0V	---	---	±100	nA
On Characteristics						
Static Drain-Source On-Resistance	R _{DS(ON)}	V _{GS} =-10V, I _D =-15A	---	36	45	mΩ
		V _{GS} =-4.5V, I _D =-10A	---	40	55	mΩ
Gate Threshold Voltage	V _{GS(th)}	V _{GS} =V _{DS} , I _D =-250uA	-1.2	---	-2.5	V
Forward Transconductance	g _{fs}	V _{DS} =-10V, I _D =-5A	---	22	---	S
Dynamic and Switching Characteristics						
Total Gate Charge ^{3, 4}	Q _g	V _{GS} =-10V, V _{DS} =-50V, I _D =-10A	---	98	150	nC
Gate-Source Charge ^{3, 4}	Q _{gs}		---	16.2	30	
Gate-Drain Charge ^{3, 4}	Q _{gd}		---	13.8	26	
Turn-On Delay Time ^{3, 4}	T _{d(on)}	V _{GS} =-10V, V _{DD} =-50V, R _G =25Ω, I _D =-5A	---	58	105	ns
Rise Time ^{3, 4}	T _r		---	24	50	
Turn-Off Delay Time ^{3, 4}	T _{d(off)}		---	215	450	
Fall Time ^{3, 4}	T _f		---	94	180	
Input Capacitance	C _{iss}	V _{GS} =0V, V _{DS} =-25V, F=1MHz	---	6315	9000	pF
Output Capacitance	C _{oss}		---	220	330	
Reverse Transfer Capacitance	C _{rss}		---	50	100	
Drain-Source Diode Characteristics and Maximum Ratings						
Continuous Source Current	I _S	V _G =V _D =0V, Force Current	---	---	-30	A
Pulsed Source Current	I _{SM}		---	---	-60	A
Diode Forward Voltage	V _{SD}	V _{GS} =0V, I _S =-1A, T _J =25°C	---	---	-1.0	V

Note :

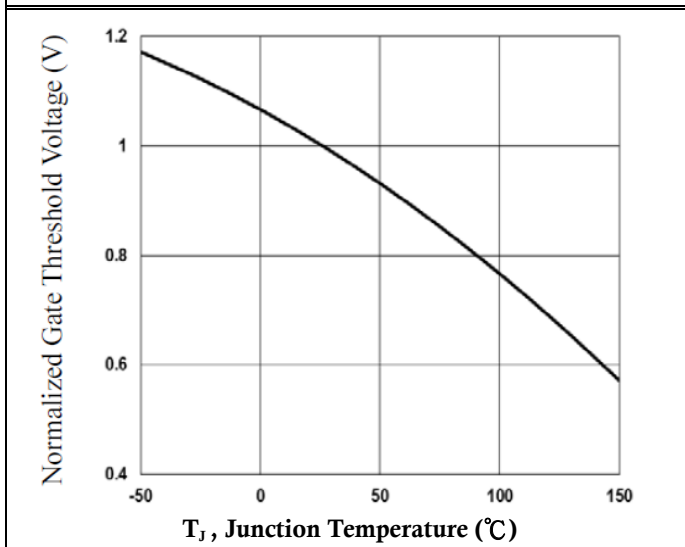
1. Repetitive Rating : Pulsed width limited by maximum junction temperature.
2. V_{GS}=-10V, V_{DD}=-50V, L=0.1mH, I_{AS}=-60A, R_G=25Ω, Starting T_J=25°C.
3. The data tested by pulsed, pulse width ≤ 300us, duty cycle ≤ 2%.
4. Essentially independent of operating temperature.



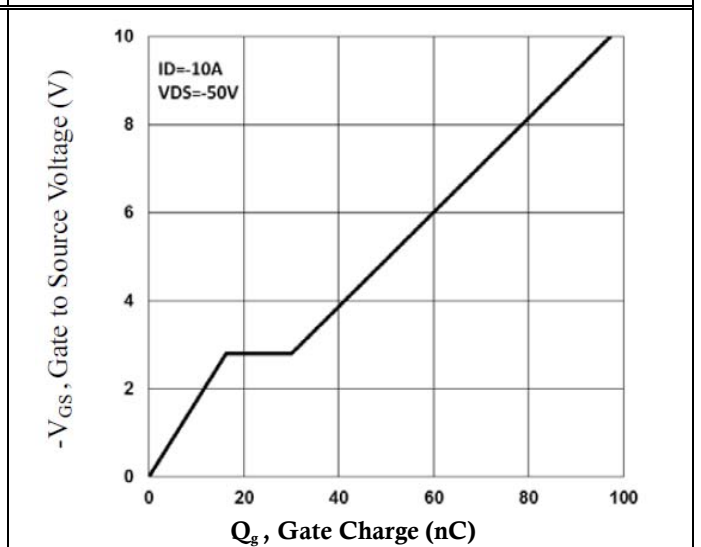
Continuous Drain Current vs. T_C



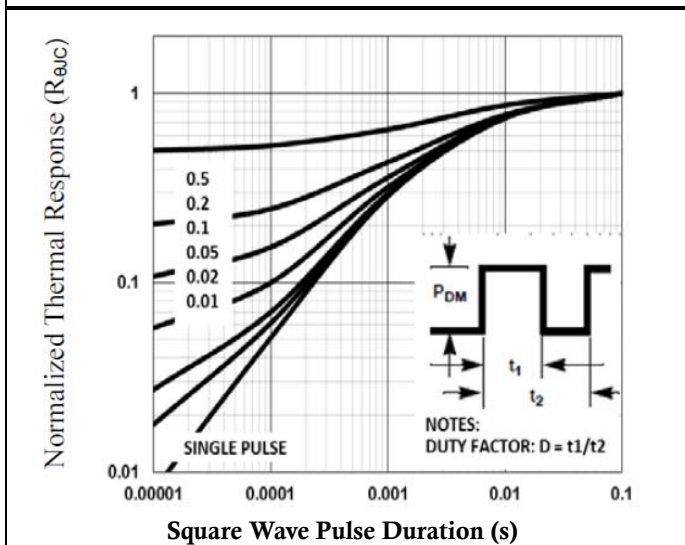
Normalized $R_{DS(ON)}$ vs. T_J



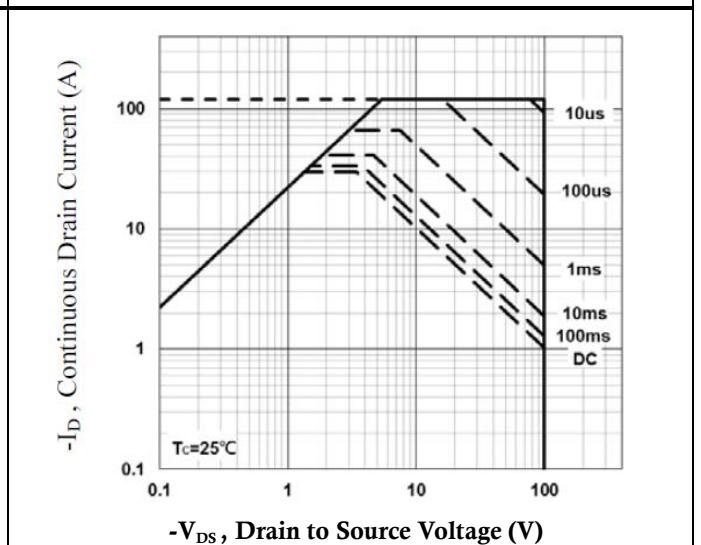
Normalized V_{th} vs. T_J



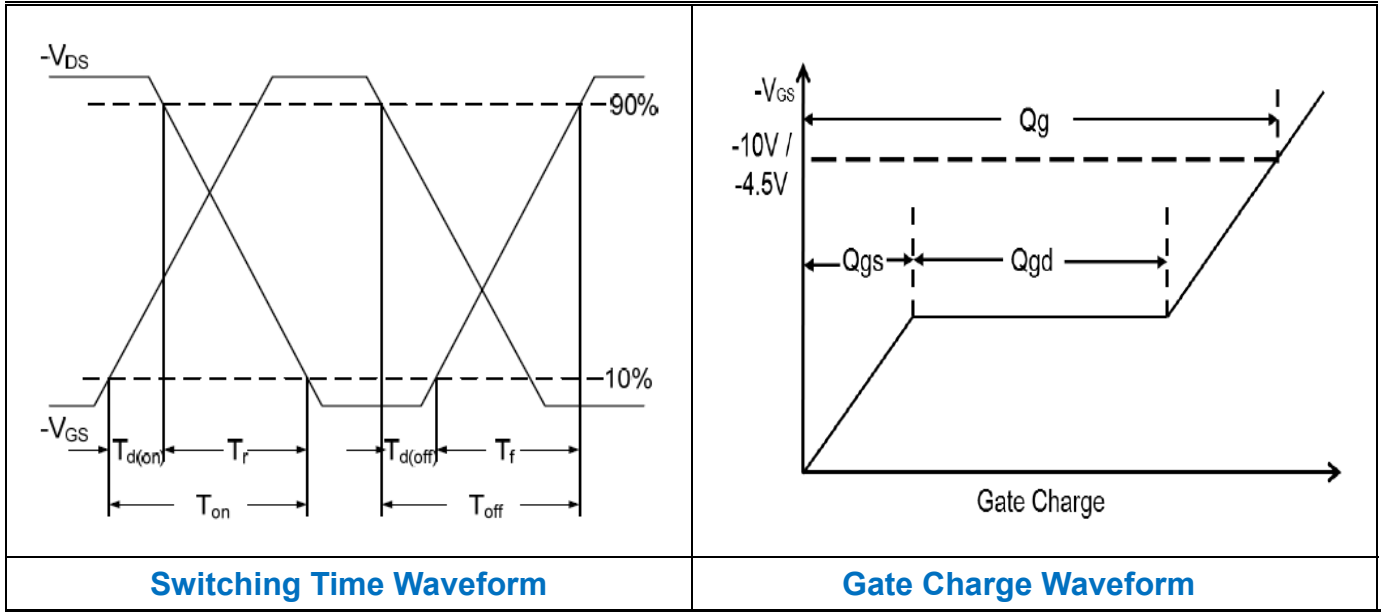
Gate Charge Waveform



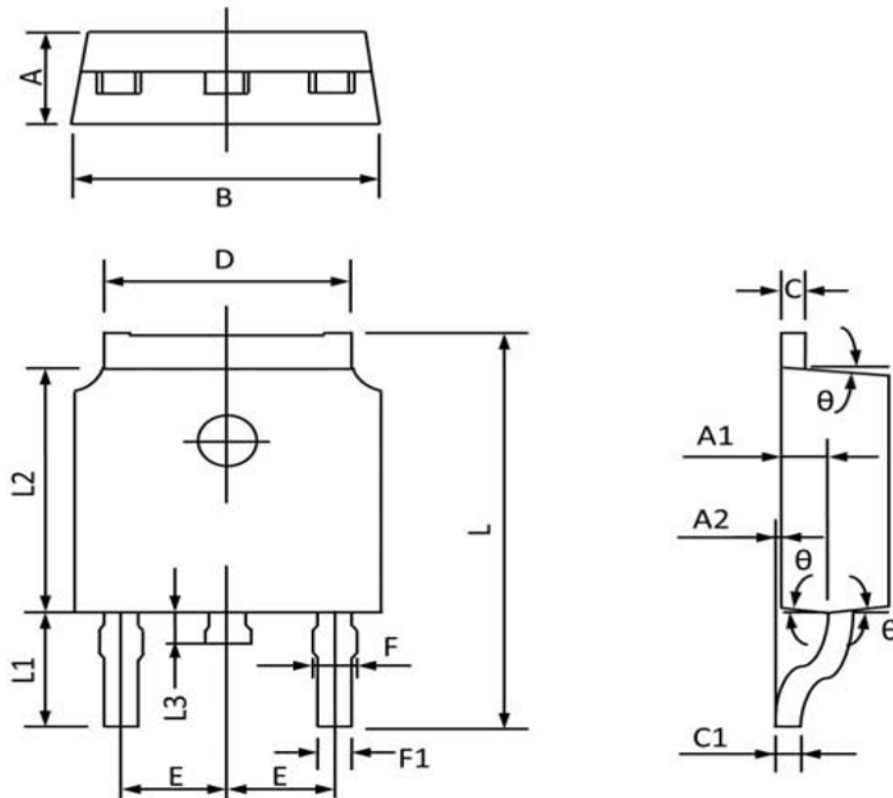
Normalized Transient Impedance



Maximum Safe Operation Area



TO252 PACKAGE INFORMATION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	MAX	MIN	MAX	MIN
A	2.400	2.200	0.094	0.087
A1	1.110	0.910	0.044	0.036
A2	0.150	0.000	0.006	0.000
B	6.800	6.400	0.268	0.252
C	0.580	0.450	0.023	0.018
C1	0.580	0.460	0.023	0.018
D	5.500	5.100	0.217	0.201
E	2.386	2.186	0.094	0.086
F	0.940	0.600	0.037	0.024
F1	0.860	0.500	0.034	0.020
L	10.400	9.400	0.409	0.370
L1	3.000	2.400	0.118	0.094
L2	6.200	5.400	0.244	0.213
L3	1.200	0.600	0.047	0.024
θ	9°	3°	9°	3°