-100V P-Channel Enhancement Mode Power MOSFET

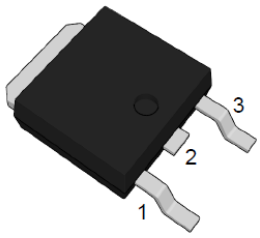
DESCRIPTION：

V_{DS}	-100V
I_D	-13A
$R_{DS(ON)_MAX}$ @V_{GS}=-10V	150mΩ

·Advanced Split Gate Trench Technology
·100% Avalanche Tested
·RoHS Compliant
·Halogen and Antimony Free
·Moisture Sensitivity Level 3

TYPICAL APPLICATIONS：

·Power Switching Application
·Uninterruptible Power Supply



TO-252

MAXIMUM RATINGS (at T_C = 25 °C, unless otherwise specified)

Characteristic	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DS}$	100	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	$-I_D$	13	A
Drain Curent-Pulsed	$-I_{DM}$	30	A
Power dissipation	P_D	40	W
Junction temperature Range	T_J	150	℃
Storage temperature Range	T_{STG}	-55~+150	℃

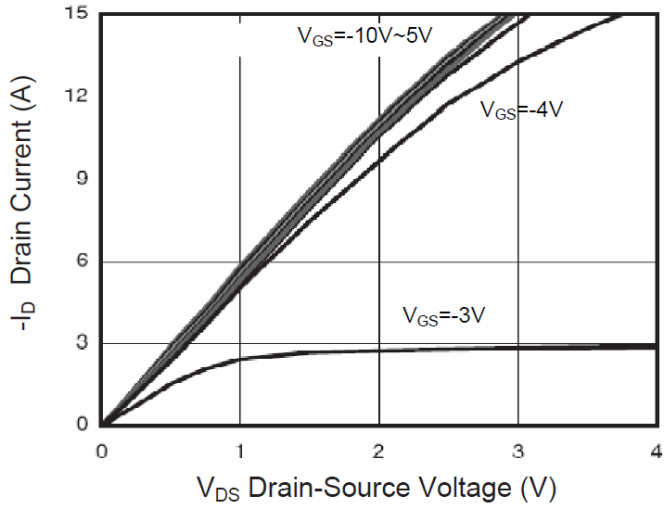
THERMAL CHARACTERISTICS

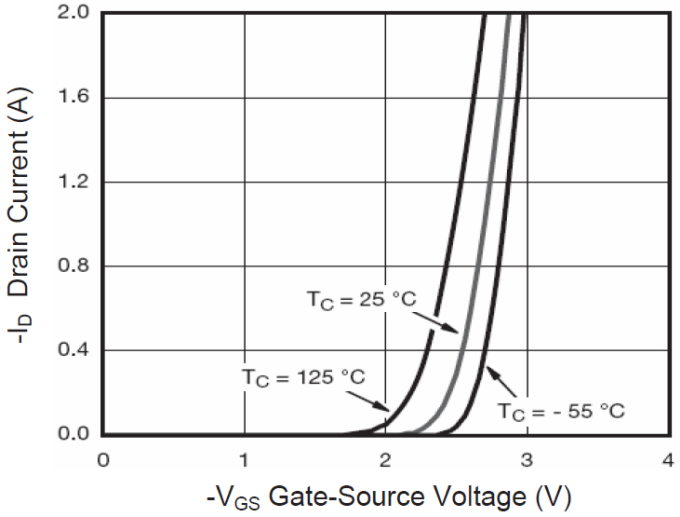
Characteristic	Condition	Symbol	Value	Unit
Thermal resistance,	Junction-to-Case	$R_{\theta JC}$	3.13	℃/W

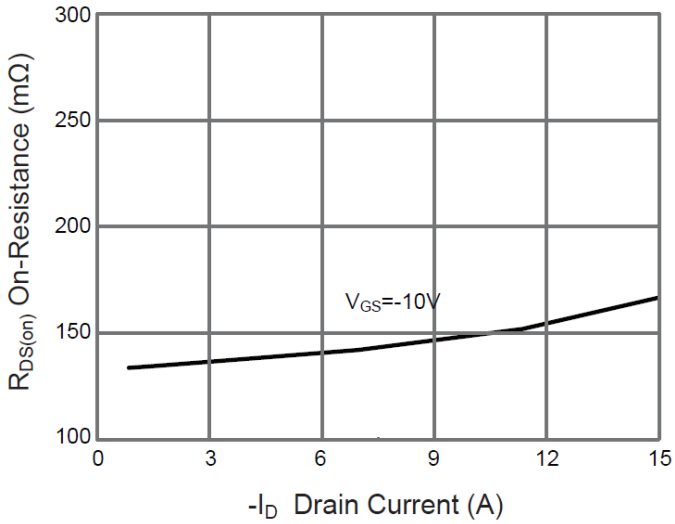
ELECTRICAL CHARATERISTICS (at T_J = 25 °C, unless otherwise specified)

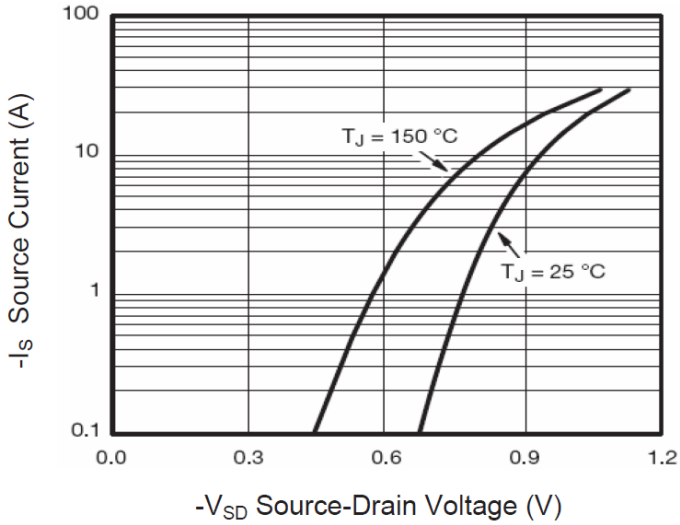
Characteristic	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage VGS = 0V, ID = -250uA	$-V_{(BR)DSS}$	100			V
Zero Gate Voltage Drain Current VDS = -100 V, VGS = 0 V	$-I_{DSS}$			1	uA
Gate-Source Leakage Current VGS = ±20V, VDS = 0V	I_{GSS}			±10	uA
Gate-Source threshold voltage VDS = VGS, ID = -250uA	$-V_{GS(th)}$	1		3	V
Drain-Source On-State Resistance VGS = -10V, ID = -7A VGS = -4.5V, ID = -4A	$R_{DS(on)}$			150 165	mΩ
Forward Transconductance VDS = -5 V, ID = -2A	gfs		7		S
Input capacitance f=1MHz, VDS=-25V, VGS=0 V	C_{iss}		725		pF
Output capacitance f=1MHz, VDS=-25V, VGS=0 V	C_{oss}		79		pF
Reverse transfer capacitance f=1MHz, VDS=-25V, VGS=0 V	C_{rss}		15.5		pF
Gate Resistance V_{DS}=0V,V_{GS}=0V,f=1MHz	R_G		19		Ω
Total Gate Charge VDS= -50V, VGS= -10V, ID=-10A	Qg		25		nC
Gate-Source Charge VDS= -50V, VGS= -10V, ID=-10A	Qgs		5		nC
Gate-Drain Charge VDS= -50V, VGS= -10V, ID=-10A	Qgd		7		nC
Turn-on delay time VDD= -50V, ID=-10A, VGS=-10V, R_{GEN}=9.1Ω	td (ON)		14		nS
Rise time VDD= -50V, ID=-10A, VGS=-10V, R_{GEN}=9.1Ω	tr		18		nS
Turn-off delay time VDD= -50V, ID=-10A, VGS=-10V, R_{GEN}=9.1Ω	td (OFF)		50		nS
Fall time VDD= -50V, ID=-10A, VGS=-10V, R_{GEN}=9.1Ω	tf		18		nS
Continuous Current	$-I_S$			13	A
Diode Forward Voltage VGS = 0V, IS =- 10A	$-V_{SD}$			1.2	V

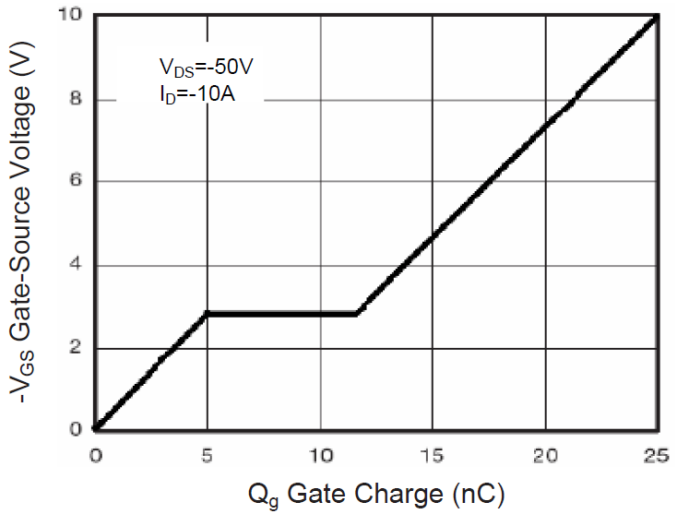
Typical Performance Characteristics

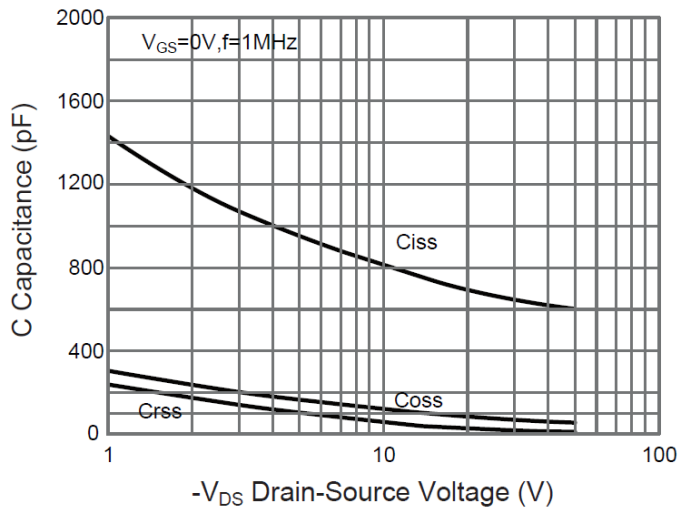




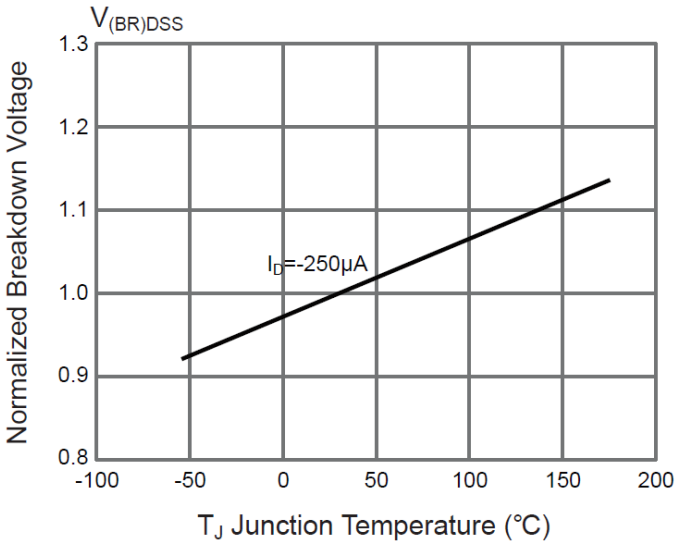


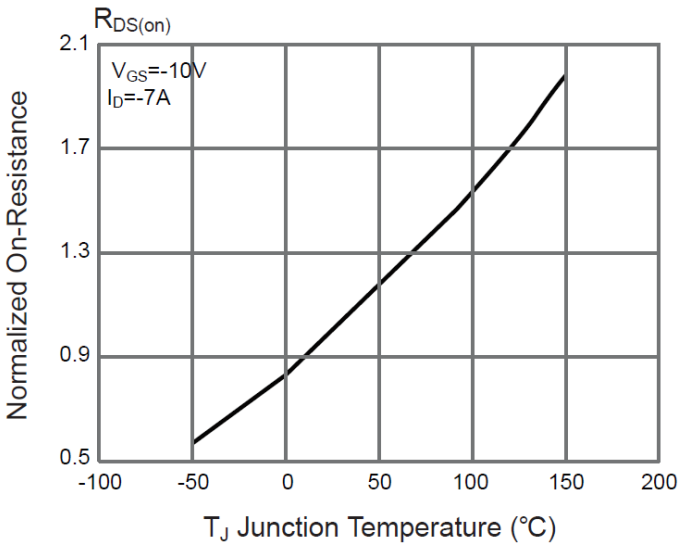




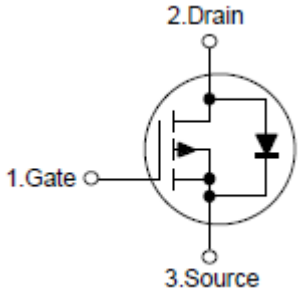


Typical Performance Characteristics

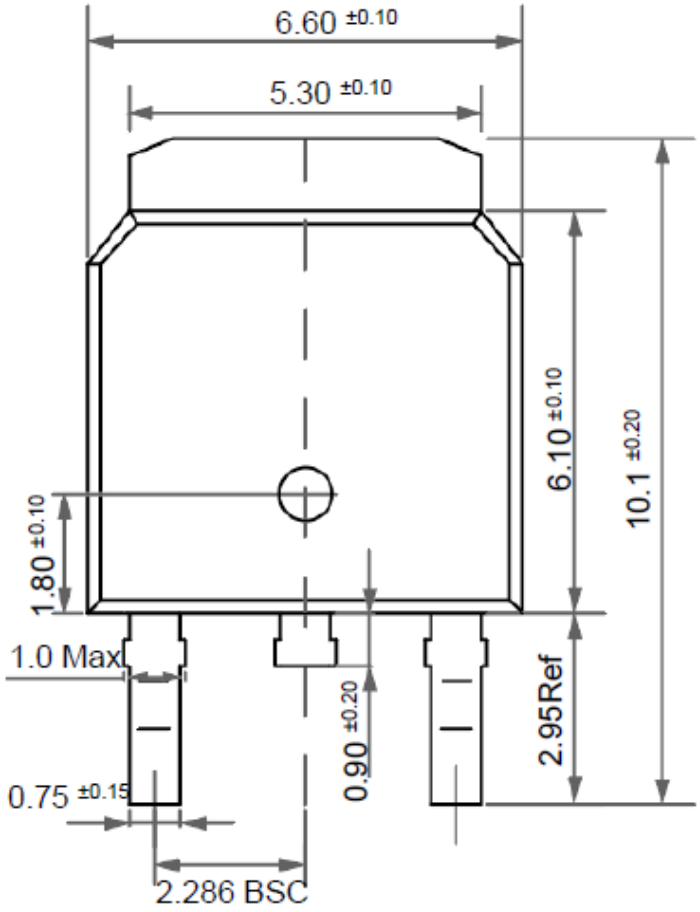




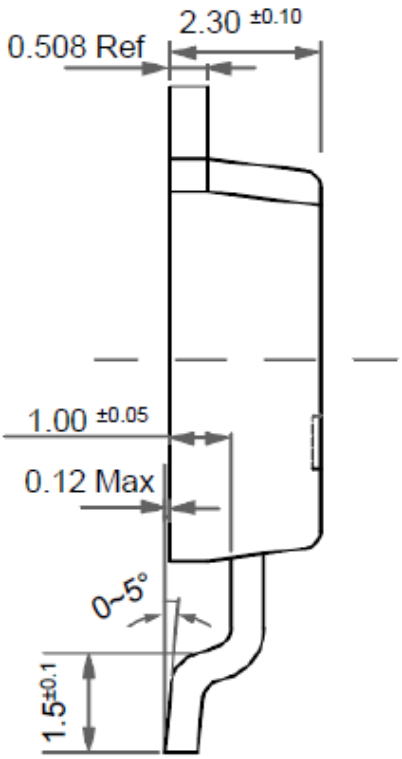
·Circuit diagram



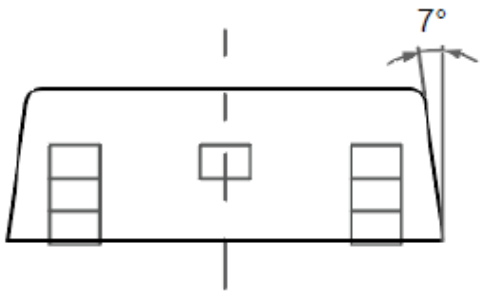
·Package outlines : Dimensions in (mm)



Front View



Side View



Bottom View

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