Typical Characteristics

Electrical Characteristics (Ta=25℃ unless otherwise noted)

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Unit
Off Chara cteristics						
BV_{DSS}	Drain-Source Breakdown Voltage	I_D=250μA，V_{GS}=0	650	-	-	V
△BVDSS/ △TJ	Breakdown Voltage Temperature Coefficient	I_D=250 μA ,Reference to 25℃	-	0.67	-	V/℃
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=650V, V_{GS}=0V	-	-	10	μA
		V_{DS} =520V, Tj=125℃			100	
I_{GSSF}	Gate-body leakage Current, Forward	V_{GS}=+30V, V_{DS}=0V	-	-	100	nA
I_{GSSR}	Gate-body leakage Current, Reverse	V_{GS}=-30V, V_{DS}=0V	-	-	-100	
On Characteristics						
$V_{GS(TH)}$	Date ThresholdVoltage	I_D=250μA,V_{DS}=V_{GS}	2	-	4	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	I_D=2.0A,V_{GS}=10V	-		2.5	Ω
Dynamic Characteristics						
Ciss	Input Capacitance	V_{DS}=25V，V_{GS} =0，f=1.0MHz	-	560	-	pF
Coss	Output Capacitance		-	48	-	
Crss	Reverse Transfer Capacitance		-	5.4	-	
Sw itchingCharacteristics						
Td(on)	Turn-On Delay Time	V_{DD}=325V，I_D=4A R_G=25Ω (Note 3,4)	-	25		nS
Tr	Turn-On Rise Time		-	45		
Td(off)	Turn-Off Delay Time		-	25		
Tf	Turn-Off Rise Time		-	35		
Qg	Total Gate Charge	V_{DS}=520V,V_{GS} =10V， I_D=4A (Note3,4)	-	14 .3		nC
Qgs	Gate-Source Charge		-	2.8	-	
Qgd	Gate-Drain Charge		-	4.5	-	
Drain-Source Diode Characteristics and Maximum Ratings						
Is	Max. Diode ForwardCurrent	-		- -	4	A
I_{SM}	Max. Pulsed Forward Current	-		- -	16	
V_{SD}	Diode Forward Voltage	I_D=4A	-	-	1.4	V
Trr	Reverse Recovery Time	I_S=4A,V_{GS} =0V diF/dt=100A/μs (Note3)	-	393	-	nS
Qrr	Reverse Recovery Charge		-	1.5	-	μC

Notes : 1, L=0.5mH, IAS= 4A, VDD=50V, RG=25Ω , Starting TJ =25℃

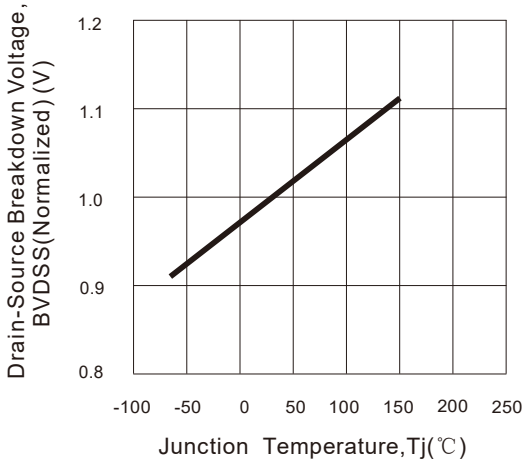
2, Repetitive Rating : Pulse width limited by maximum junction temperature

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

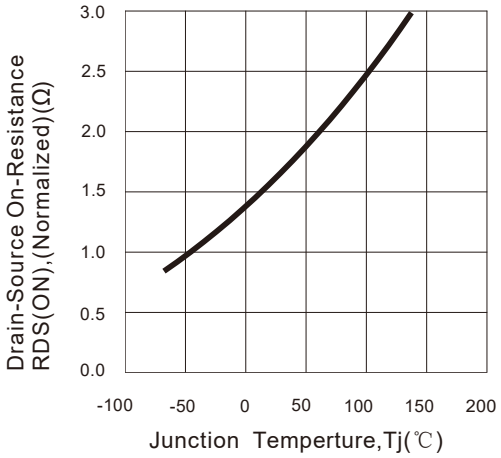
4, Essentially Independent of Operating Temperature

Typical Characteristics

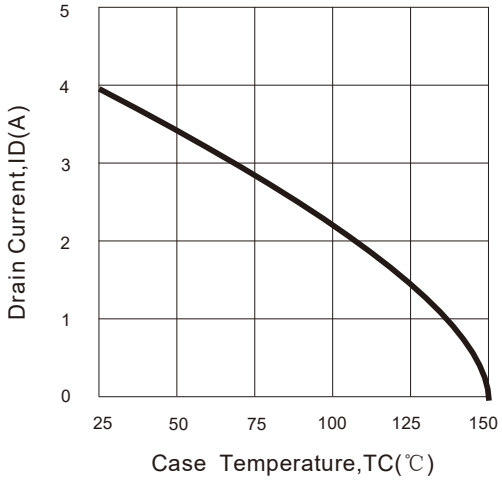
Breakdown Voltage Variation
VS. Temperayure



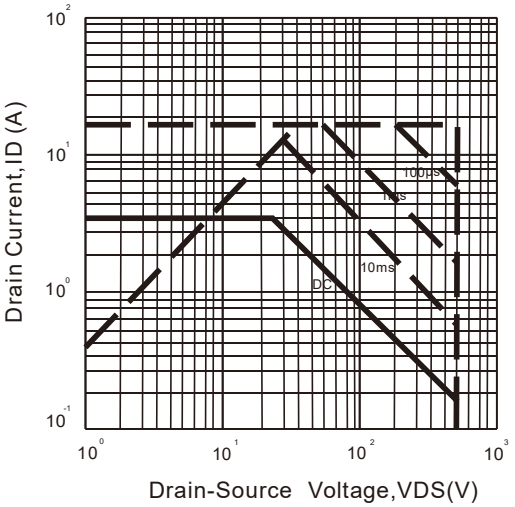
On-Resistance Junction
Temperature



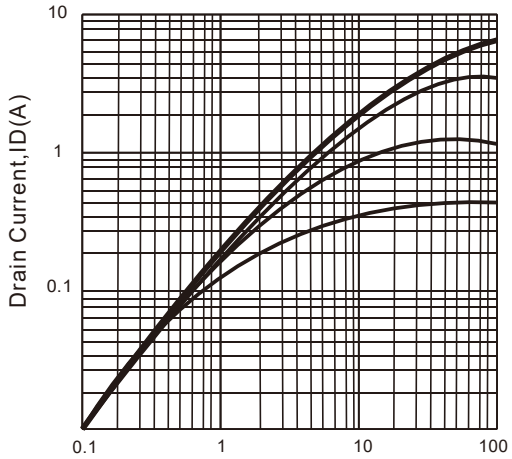
Maximum Drain Current
VS.Case Temperature



Maximum Safe Operating Area



On-State Characteristics



Transfer Characteristics