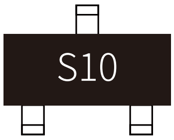
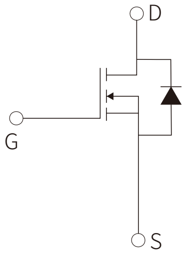
FEATURES

- V_{DS}=60V,I_D=3A
- $R_{DS(ON)\ Typ}$ = 75mΩ @ V_{GS} = 10V
- $R_{DS(ON)\ Typ}$ = 85mΩ @ V_{GS} = 4.5V
- Advanced Trench Technology
- Excellent $R_{DS(ON)}$ and Low Gate Charge
- Lead Free

SOT-23



Marking



Schematic Symbol

APPLICATION

- Load Switch
- PWM Application
- Power Management

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	60	V
Continuous Drain Current	T_A=25°C	I_D	3	A
	T_A=100°C		2	
Pulsed Drain Current[1]		I_{DM}	12	A
Gate Source Voltage		V_{GS}	±20	V
Total Power Dissipation[2] T_A=25°C		P_D	1.56	W
Thermal Resistance Junction-ambient [2]		$R_{\theta JA}$	80	°C/W
Junction and Storage Temperature Range		T_J,T_{STG}	-55 to 150	°C

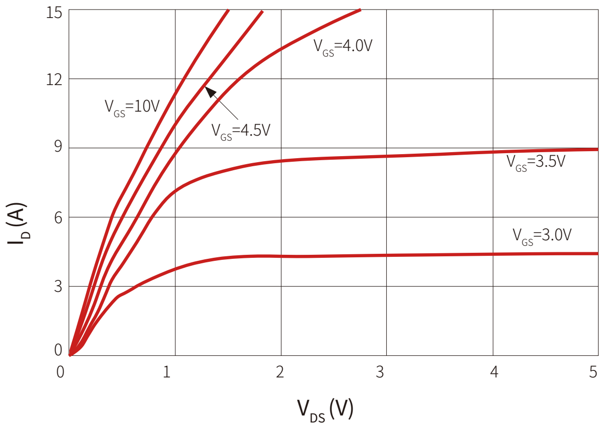
ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=250μA	60			V
Gate-Body Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V			±100	nA
Drain-to-Source Leakage Current	I_{DSS}	V_{DS}=60V, V_{GS}=0V			1.0	μA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	1.0	1.4	2.0	V
Static Drain-Source On-Resistance (1)	$R_{DS(on)}$	V_{GS}=10V, I_D=3A		75	100	mΩ
		V_{GS}=4.5V, I_D=2A		85	110	mΩ
Dynamic Characteristics						
Input capacitance	C_{iss}	V_{DS}=25V,V_{GS}=0V,f=1MHz		350		pF
Output capacitance	C_{oss}			29		pF
Reverse transfer capacitance	C_{rss}			23		pF
Total gate charge	Q_g	V_{GS}=0V to 10V V_{DS}=30V,I_D=3A		9		nC
Gate-source charge	Q_{gs}			1.5		nC
Gate-drain charge	Q_{gd}			2		nC
Switching Characteristics						
Turn–on delay time	$t_{d(on)}$	V_{DD}=30V, I_D=2A R_{GEN}=3Ω,V_{GS}=10V		5		ns
Rise Time	t_r			7		ns
Turn–Off Delay Time	$t_{d(off)}$			37		ns
Fall yime	t_f			22		ns
Drain-Source Diode Characteristics and Maximum Ratings						
Maximum Continuous Drain to Source Diode Forward Current	I_S				3	A
Maximum Pulsed Drain to Source Diode Forward Current	I_{SM}				12	A
Drain to Source Diode Forward Voltage	V_{SD}	V_{GS}=0V,I_S=3A			1.2	V

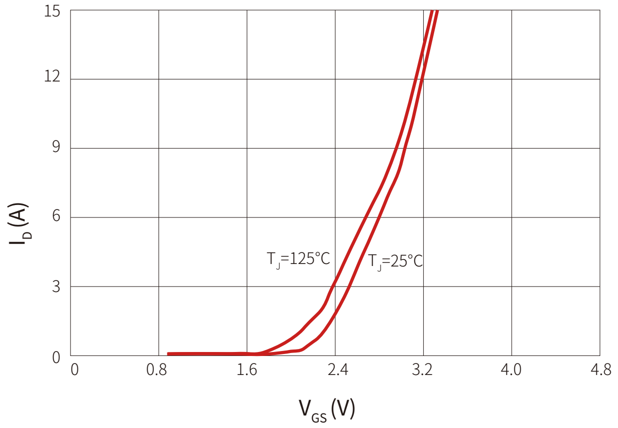
Notes:
1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature.
2.$R_{\theta JA}$ is measured with the device mounted on a 1inch^2 pad of 2oz copper FR4 PCB
3.Pulse Test: Pulse Width⩽300μs, Duty Cycle⩽0.5%.

CHARACTERISTIC CURVES

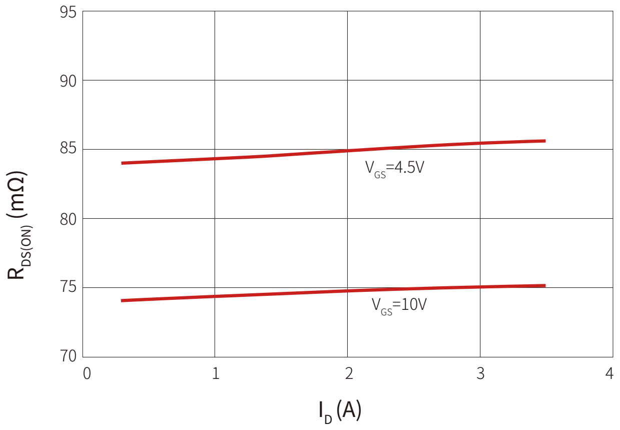
Output Characteristics



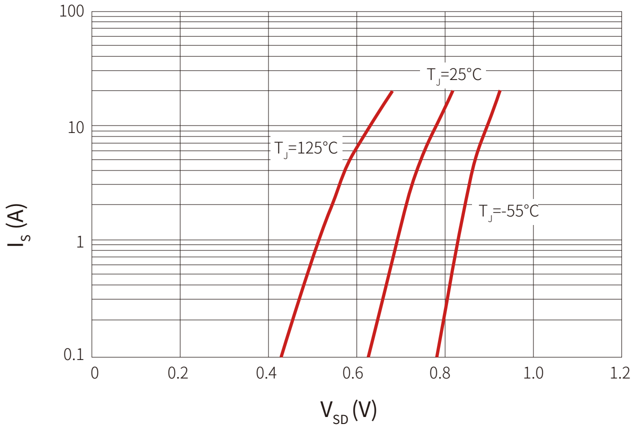
Typical Transfer Characteristics

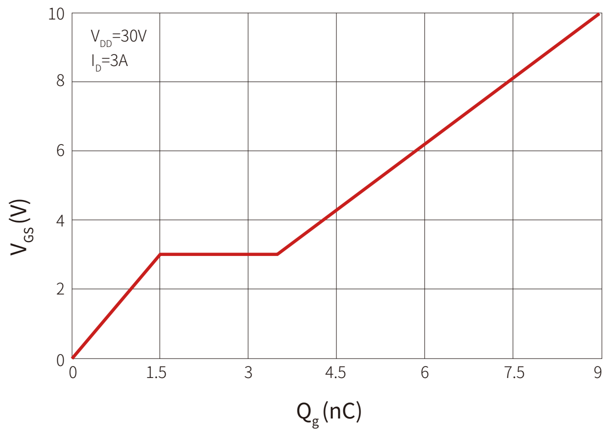


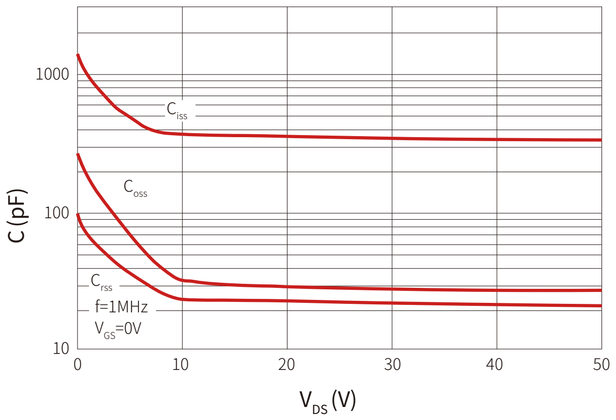
On-resistance vs. Drain Current

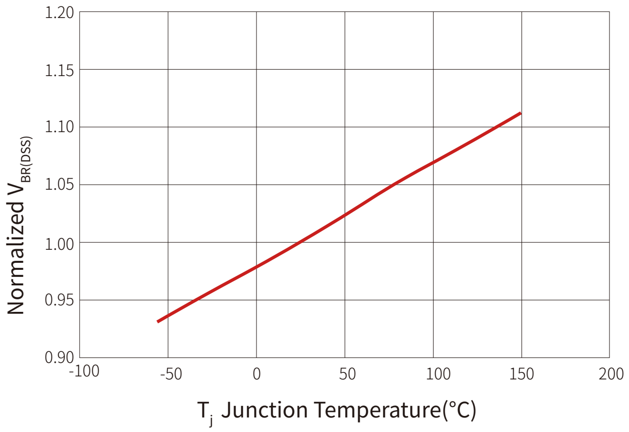


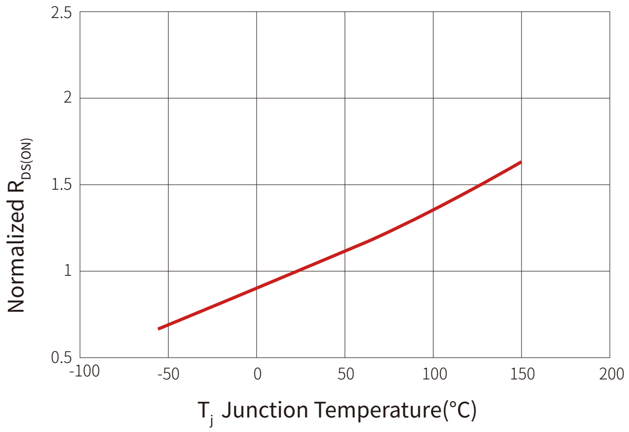
Body Diode Characteristics

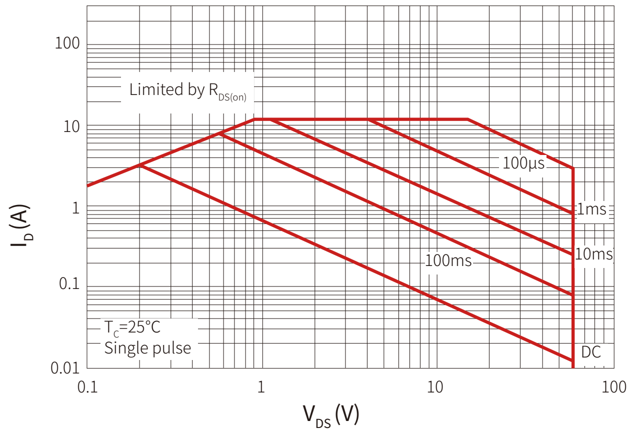


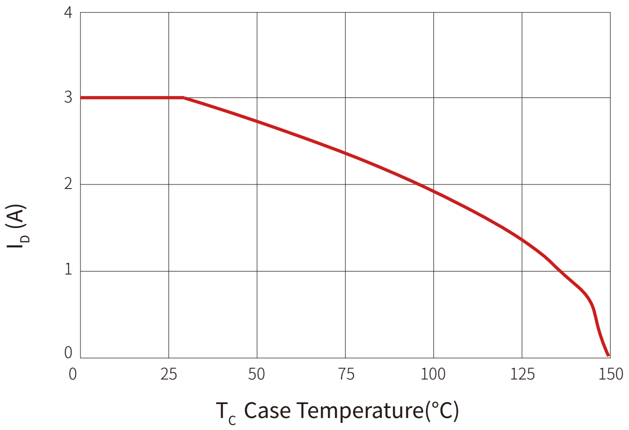

Gate Charge Characteristics


Capacitance Characteristics

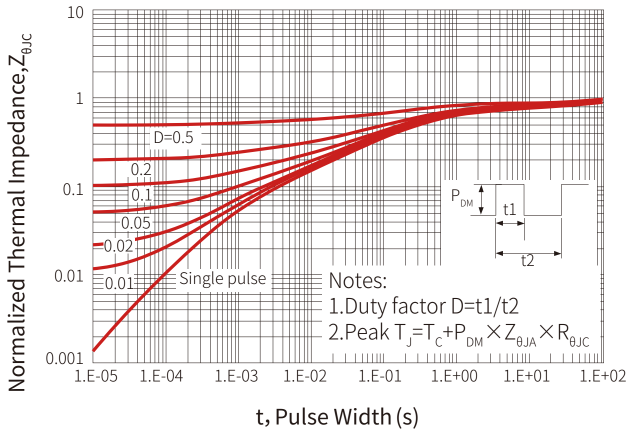

Normalized Breakdown Voltage vs. Junction Temperature


Normalized on Resistance vs. Junction Temperature

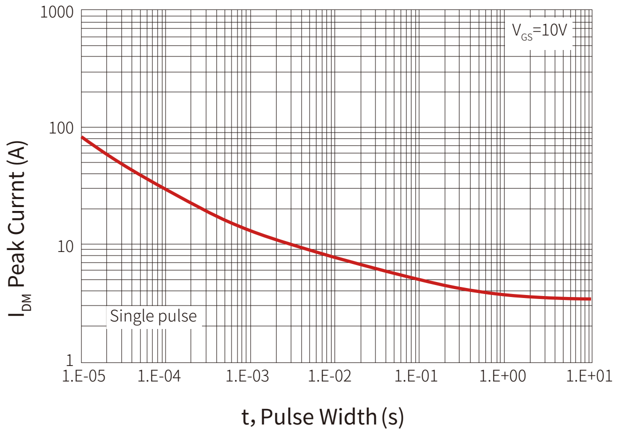

Maximum Safe Operating Area


Maximum Continuous Drain Current vs. Ambient Temperature

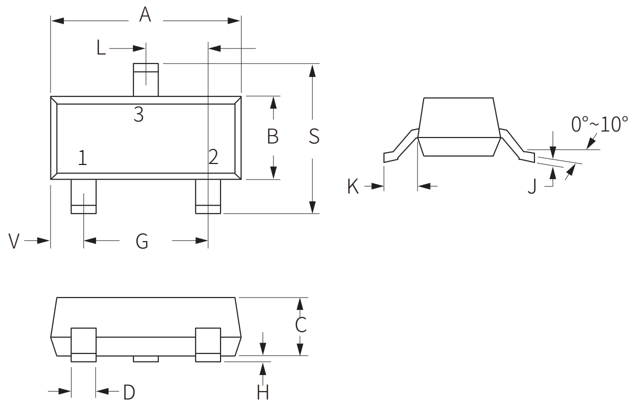
Maximum Effective Transient Thermal Impedance, Junction-to-Ambient



Peak Current Capacity

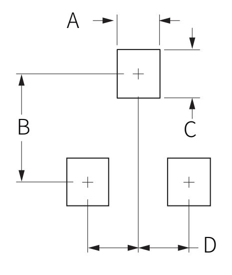


SOT-23 PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.05	0.110	0.120
B	1.20	1.60	0.047	0.063
C	0.90	1.15	0.035	0.045
D	0.37	0.50	0.015	0.020
G	1.75	2.05	0.069	0.081
H	0.01	0.100	0.001	0.004
J	0.085	0.180	0.003	0.007
K	0.35	0.69	0.014	0.029
L	0.89	1.02	0.035	0.040
S	2.10	2.65	0.083	0.104
V	0.45	0.60	0.018	0.024

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min	Max	Min	Max
A	0.71	0.97	0.028	0.038
B	1.88	2.13	0.074	0.084
C	0.71	0.97	0.028	0.038
D	0.81	1.07	0.032	0.042

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SNM2308	SOT-23	3000PCS	7”

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Website Wechat

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