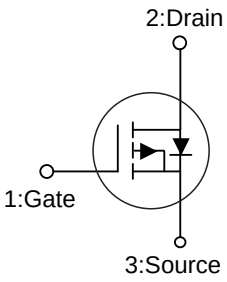
■ PRODUCT CHARACTERISTICS

V_{DSS}	-15V
$R_{DS(ON)}$ Typ(@V_{GS}=-4.5V)	24mΩ
$R_{DS(ON)}$ Typ(@V_{GS}=-2.5V)	33mΩ
I_D	-7.5A

Symbol



■ APPLICATIONS

* Load switch for portable
* DC/DC converter

■ FEATURES

* High Density Cell Design For Ultra Low On-Resistance
* Advanced trench process technology



■ ORDER INFORMATION

Order codes		Package	Packing
Halogen-Free	Halogen		
MOT2325B2	N/A	SOT-23	3000pieces/Reel

■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-15	V
Gate-Source Voltage	V_{GS}	±12	V
Continuous Drain Current	I_D	-7.5	A
Pulsed Drain Current	I_{DM}	-30	A
Power Dissipation	P_D	1	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	125	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{stg}	-55~+150	℃

■ ELECTRICAL CHARACTERISTICS (T_J =25°C unless otherwise specified)

Parameter	Symbol	Condition	Min	Typ	Max	Units
Static characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =-250μA	-15	-	-	V
Zero gate voltage drain curre	I_{DSS}	V_{DS} =-15V,V_{GS} = 0V	-	-	-1	μA
Gate-source leakage current	I_{GSS}	V_{GS} =±12V, V_{DS} = 0V	-	-	±100	nA
Drain-source on-resistance	$R_{DS(on)}$	V_{GS} =-4.5V, I_D =-2A	-	24	34	mΩ
		V_{GS} =-2.5V, I_D =-1A	-	33	45	mΩ
Forward tranconductance	g_{FS}	V_{DS} =-5V, I_D =-3A	5.5	-	-	S
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-0.3	-0.65	-1.5	V
Diode forward voltage	V_{SD}	I_S=-1A,V_{GS}=0V	-	-	-1	V
Dynamic characteristics						
Input capacitance	C_{iss}	V_{DS} =-10V,V_{GS} =0V f =1MHz	-	830	-	pF
Output capacitance	C_{oss}		-	132	-	pF
Reverse transfer capacitance	C_{rss}		-	85	-	pF
Total Gate Charge	Q_g	V_{GS} =-4.5V, V_{DS}=-10V I_D= -7.5A	-	8.8	-	nC
Gate Source Charge	Q_{gs}		-	1.4	-	nC
Gate Drain("Miller") Charge	Q_{gd}		-	1.9	-	nC
Switching characteristics						
Turn-on delay time	$t_{d(on)}$	V_{GS}=-4.5V,V_{DS}=-10V, I_D= -7.5A ,R_{GEN}=1Ω	-	10	-	ns
Turn-on rise time	t_r		-	32	-	ns
Turn-off delay time	$t_{d(off)}$		-	50	-	ns
Turn-off fall time	t_f		-	51	-	ns
Drain-source diode characteristics						
Maximum Continuous Forward Voltage	I_S		-	-	-7.5	A
Maximum Pulsed Forward Voltage	I_{SM}		-	-	-30	A
Drain to Source Diode Forward Voltage	V_{SD}	V_{GS} = 0V, I_S =-1A	-	-	-1.2	V

■ TYPICAL CHARACTERISTICS

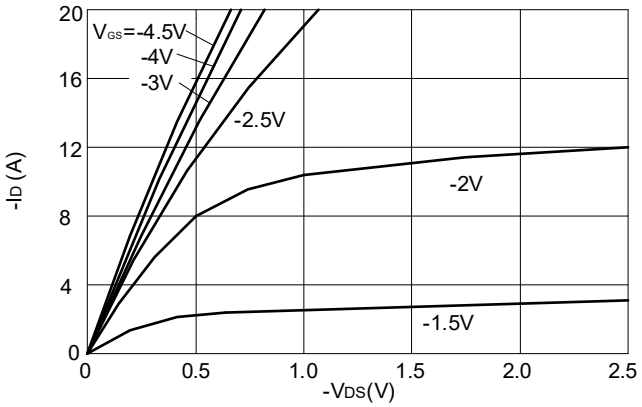


Figure 1: Output Characteristics

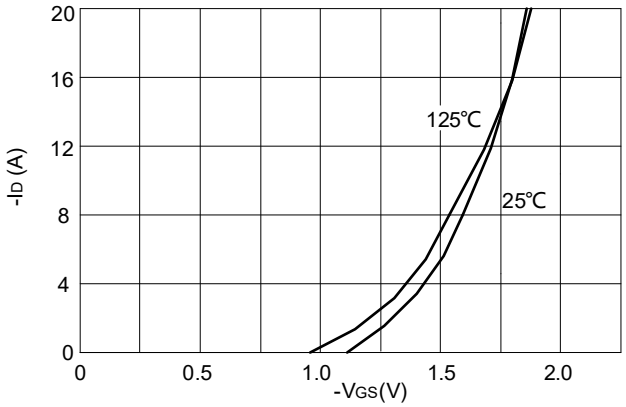


Figure 2: Typical Transfer Characteristics

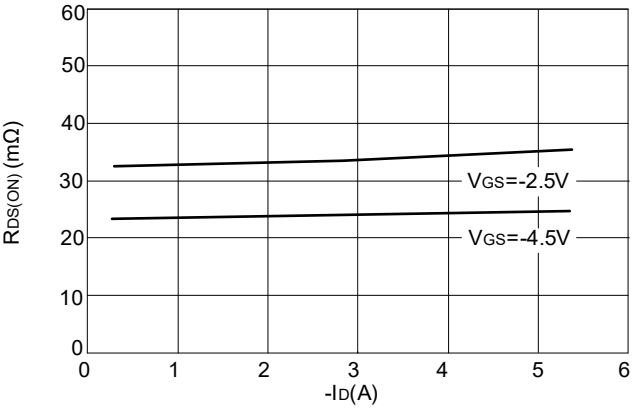


Figure 3: On-resistance vs. Drain Current

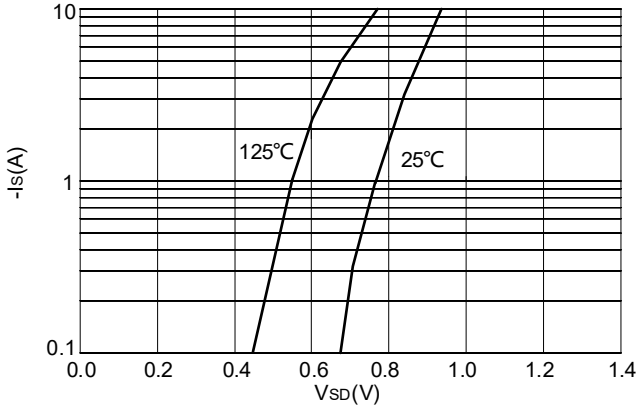


Figure 4: Body Diode Characteristics

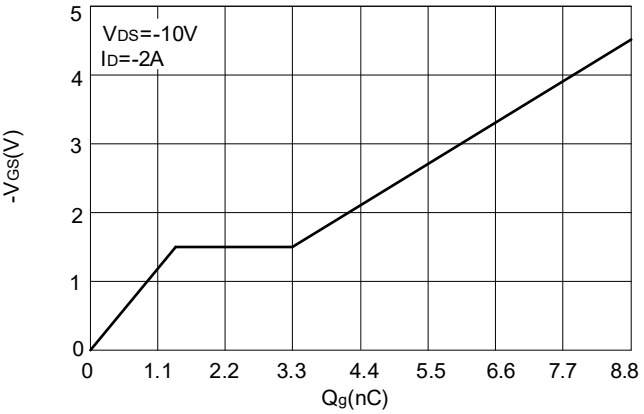


Figure 5: Gate Charge Characteristics

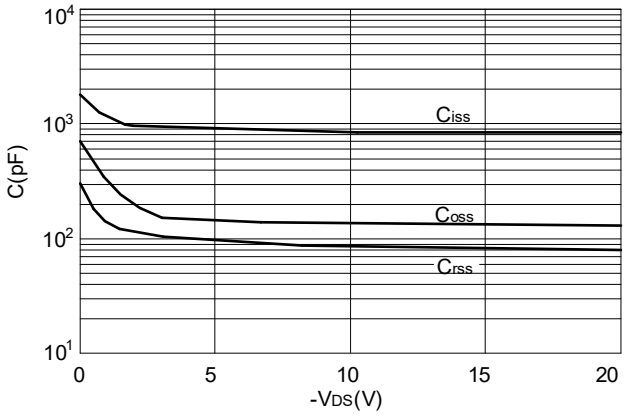


Figure 6: Capacitance Characteristics

■ TYPICAL CHARACTERISTICS(Cont.)

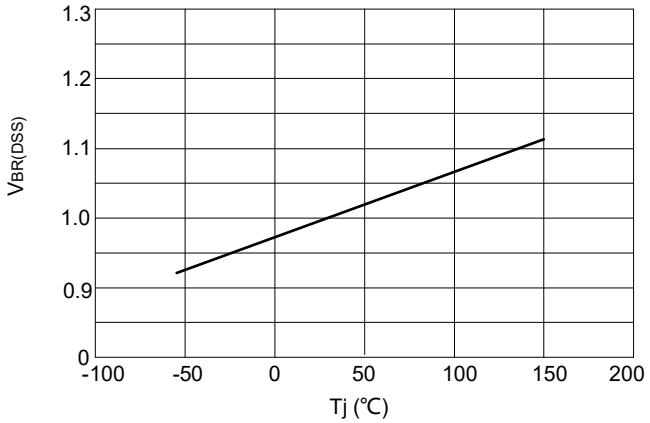


Figure 7: Normalized Breakdown Voltage vs. Junction Temperature

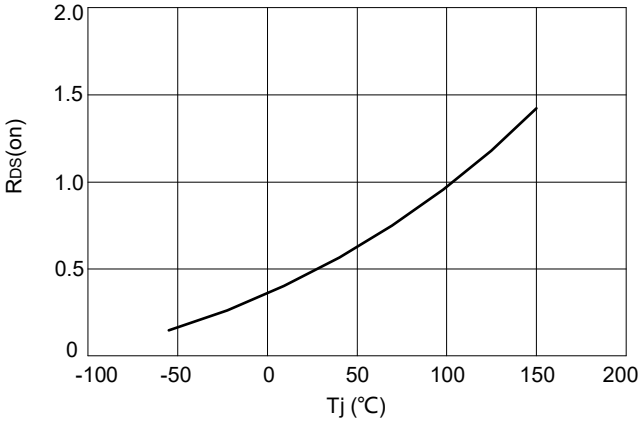


Figure 8: Normalized on Resistance vs. Junction Temperature

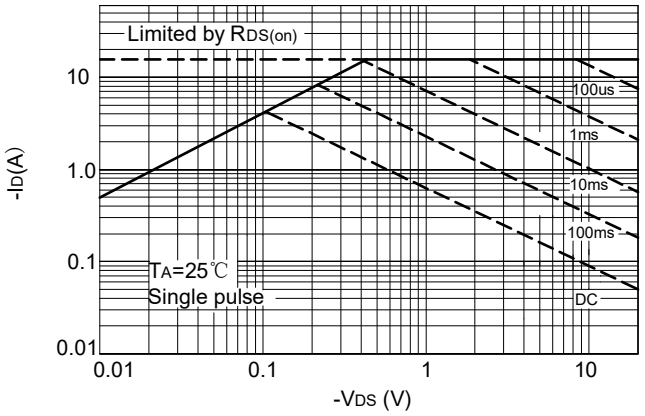


Figure 9: Maximum Safe Operating Area

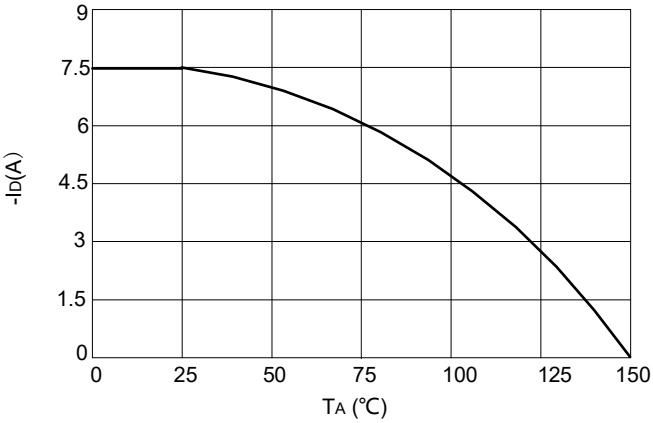
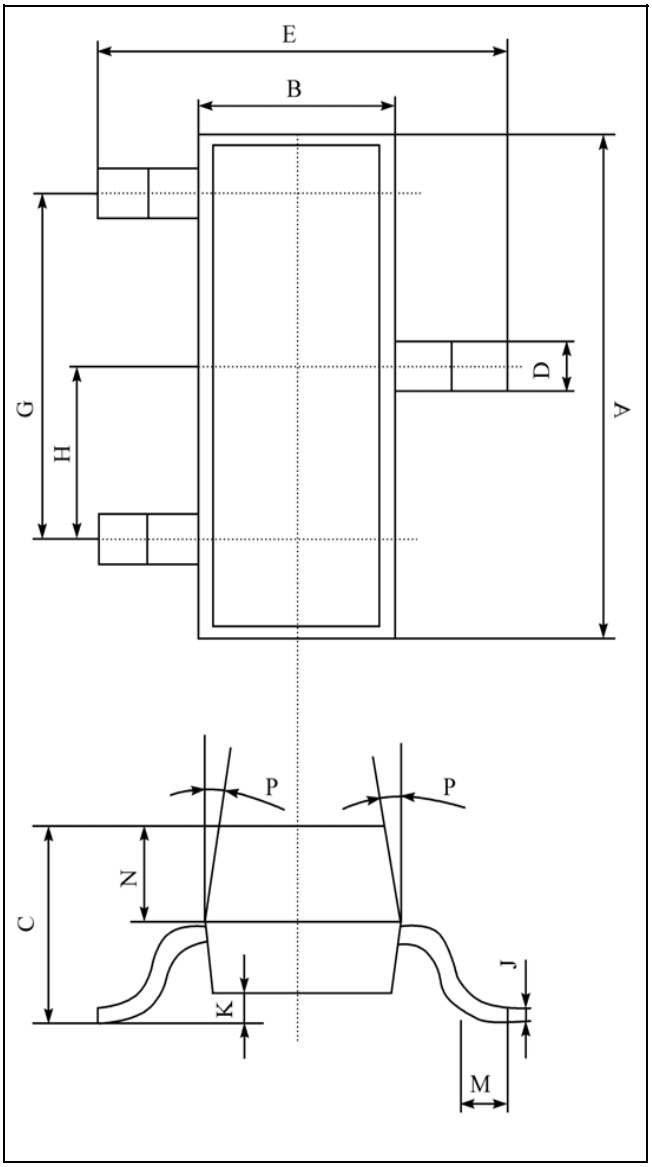


Figure 10: Maximum Continuous Drain Current vs. Ambient Temperature

■SOT-23 PACKAGE OUTLINE DIMENSIONS



单位（UNIT）：mm

序号	数值及公差
A	2.90±0.10
B	1.30±0.10
C	1.00±0.10
D	0.40±0.10
E	2.40±0.20
G	1.90±0.10
H	0.95±0.05
J	0.13±0.05
K	0.00-0.10
M	≥0.20
N	0.60±0.10
P	7±2°

Packing
SOT-23 包装规格
SMD片式表面贴封装
包装方式: 载带卷盘包装
Tape & Reel, 3Kpcs/Reel
每卷数量3000只（3Kpcs/Reel）
每盒数量45000只（45Kpcs/BOX）
每箱数量180000只（180Kpcs/Cartons）

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