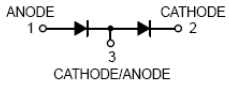
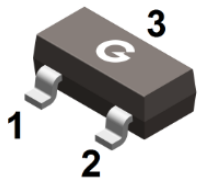
Switching Diode
TMMBD7000

Features

- Fast switching speed
- High conductance
- Connected in series
- Halogen free
- Qualified to AEC-Q101 standards for high reliability

HF





SOT-23

Mechanical Data

- Case: SOT-23
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte tin-plated leads; solderability-per MIL-STD-202, Method 208

Ordering Information

Part Number	Package	Shipping Quantity	Marking Code
TMMBD7000	SOT-23	3000 pcs / Tape & Reel	M5C

Maximum Ratings (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
DC Blocking Voltage	V_R	100	V
Average Rectified Output Current	I_F	200	mA
Peak Forward Surge Current, 1μs Single Half-sine-wave	I_{FSM}	4	A
Peak Forward Surge Current, 1ms Single Half-sine-wave	I_{FSM}	2	A

Thermal Characteristics

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	250	mW
Thermal Resistance Junction-to-Air *1	$R_{\theta JA}$	152	°C/W
Thermal Resistance Junction-to-Case *1	$R_{\theta JC}$	92	°C/W
Thermal Resistance Junction-to-Lead *1	$R_{\theta JL}$	80	°C/W
Operating Junction Temperature Range	T_J	-65 ~ +150	°C
Storage Temperature Range	T_{STG}	-65 ~ +150	°C

Note 1: The data tested by surface mounted on a 15mm * 15mm * 1mm FR4-epoxy P.C.B

Electrical Characteristics (@ T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	I_R = 100μA	100	-	-	V
Forward Voltage	V_F	I_F = 1mA	-	-	0.700	V
		I_F = 10mA	-	-	0.820	V
		I_F = 100mA	-	-	1.100	V
Maximum Peak Reverse Current	I_R	V_R = 50V	-	-	300	nA
		V_R = 100V	-	-	500	nA
Total Capacitance	C_J	V_R = 0V, f = 1.0MHz	-	-	2	pF
Reverse Recovery Time	t_{rr}	I_F = I_R = 10mA I_{rr} = 0.1×I_R, R_L = 100Ω	-	-	4	ns

Ratings and Characteristics Curves (@ T_A = 25°C unless otherwise specified)

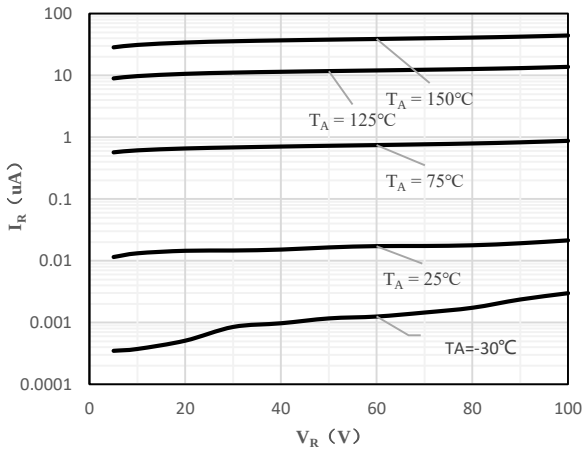


Fig 1 Typical Reverse Characteristic

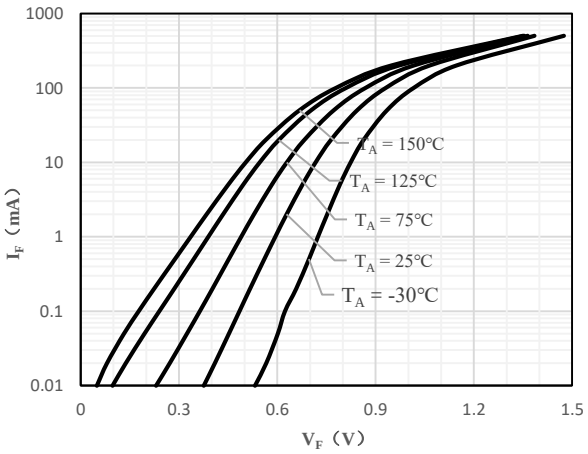


Fig 2 Typical Forward Characteristics

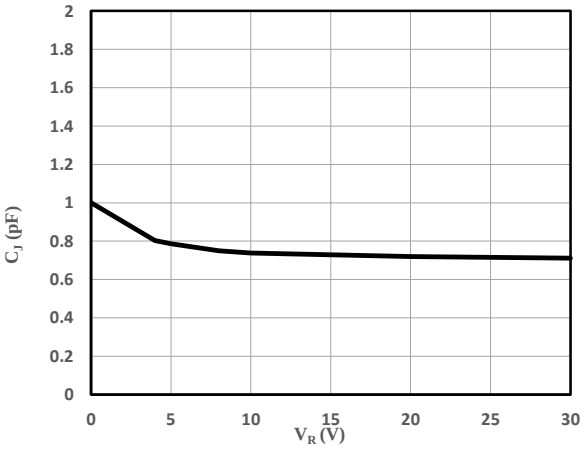


Fig 3 Capacitance vs. Reverse Voltage

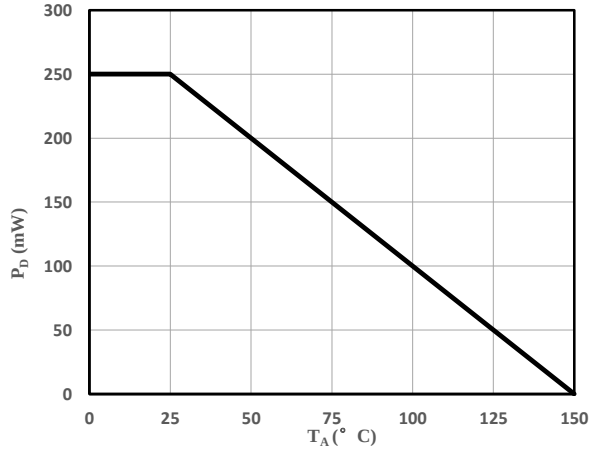
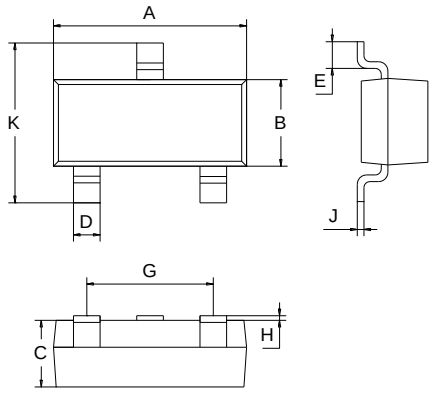


Fig 4 Power Derating Curve

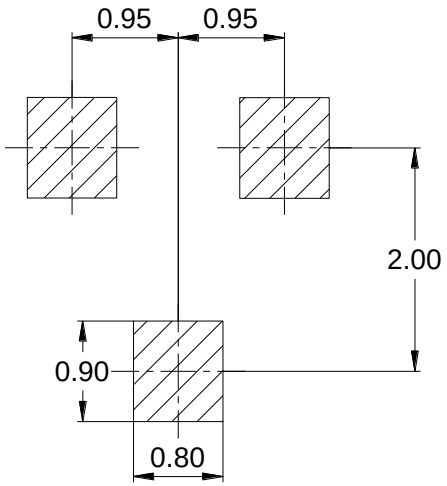
Package Outline Dimensions (Unit: mm)



SOT-23		
Dimension	**Min.**	**Max.**
A	2.70	3.10
B	1.10	1.50
C	0.90	1.10
D	0.30	0.50
E	0.35	0.48
G	1.80	2.00
H	0.02	0.10
J	0.05	0.15
K	2.20	2.60

Package Outline Dimensions (Unit: mm)

SOT-23



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