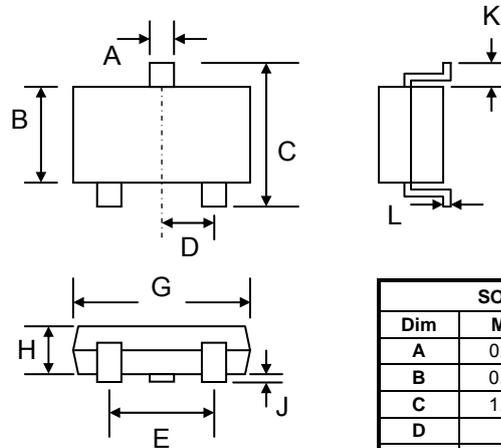


Features

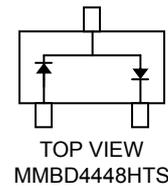
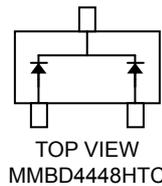
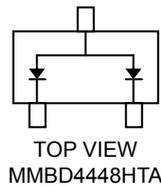
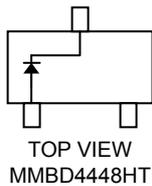
- Single and Dual Diode
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



SOT-523		
Dim	Min	Max
A	0.15	0.30
B	0.75	0.85
C	1.45	1.75
D	0.50 Typical	
E	0.90	1.10
G	1.50	1.70
H	0.60	0.80
J	0.02	0.10
K	0.10	0.30
L	0.10	0.20
All Dimensions in mm		

Mechanical Data

- Case: SOT-523, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagrams Below
- Weight: 0.002 grams (approx.)
- Marking: Device Code, See Page 3
- Mounting Position: Any
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



Maximum Ratings @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	V_{RSM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	80	V
Repetitive Peak Forward Current	I_{FRM}	500	mA
Continuous Forward Current	I_O	250	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	I_{FSM}	4.0 1.0	A
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 1)	P_D	150	mW
Thermal Resistance, Junction to Ambient (Note 1)	R_{JA}	833	$^\circ\text{C/W}$

Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage @ $I_R = 2.5\mu\text{A}$	$V_{(BR)}$	80			V
Forward Voltage Drop @ $I_F = 5.0\text{mA}$ @ $I_F = 10\text{mA}$ @ $I_F = 100\text{mA}$ @ $I_F = 150\text{mA}$	V_{FM}			0.72 0.855 1.0 1.25	V
Peak Reverse Leakage Current @ $V_R = 70\text{V}, T_J = 25^\circ\text{C}$ @ $V_R = 25\text{V}, T_J = 150^\circ\text{C}$ @ $V_R = 75\text{V}, T_J = 150^\circ\text{C}$	I_{RM}			0.1 30 50	μA
Diode Capacitance ($V_R = 6.0\text{V}, f = 1.0\text{MHz}$)	C_D			3.5	pF
Reverse Recovery Time ($I_F = I_R = 5.0\text{mA}, V_R = 6.0\text{V}, R_L = 100\Omega$)	t_{rr}			4.0	nS

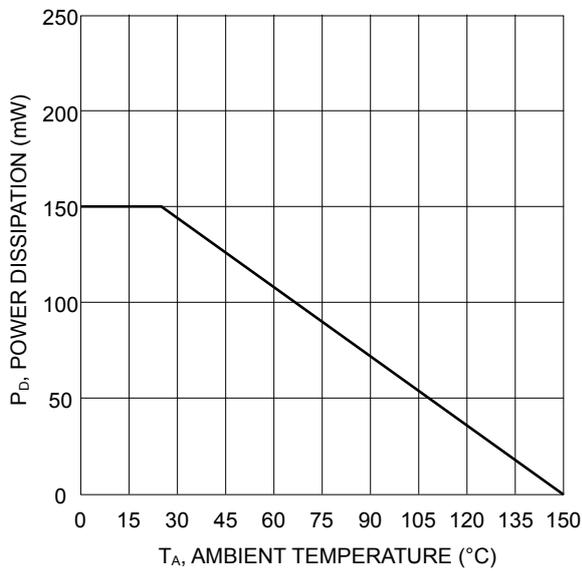


Fig. 1 Power Derating Curve

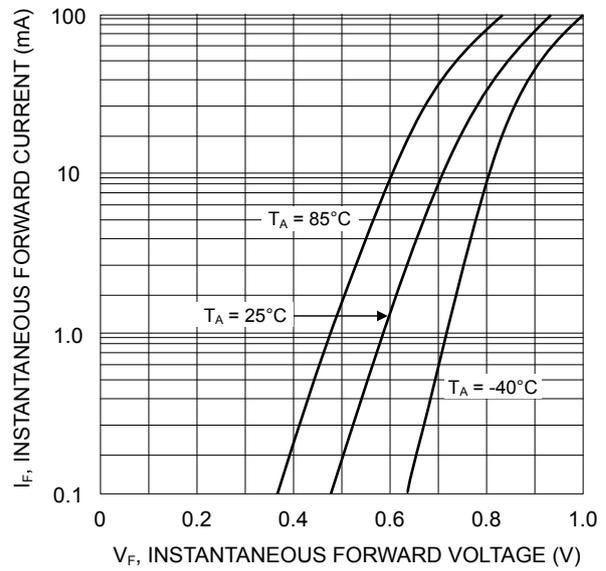


Fig. 2 Typical Forward Characteristics

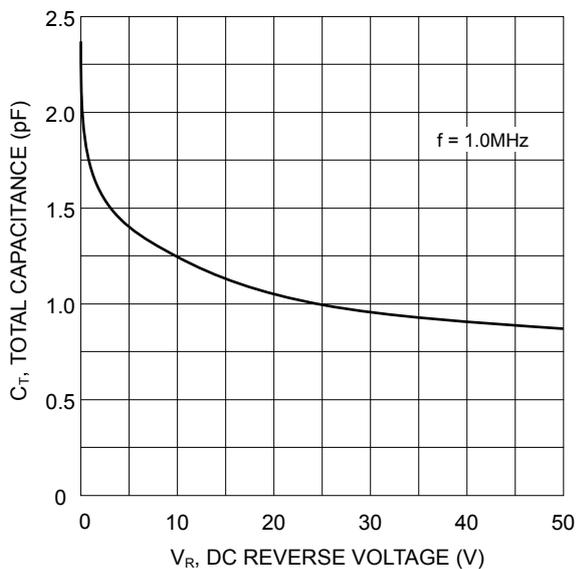


Fig. 3 Total Capacitance vs. Reverse Voltage

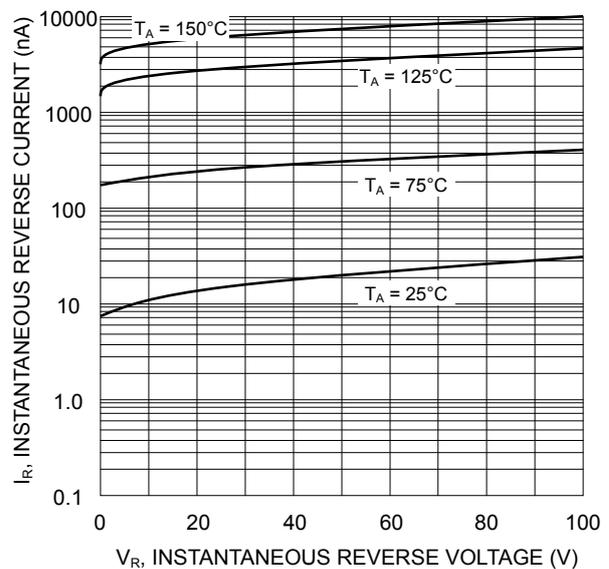
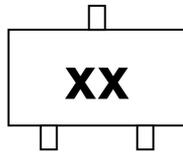


Fig. 4 Typical Reverse Characteristics

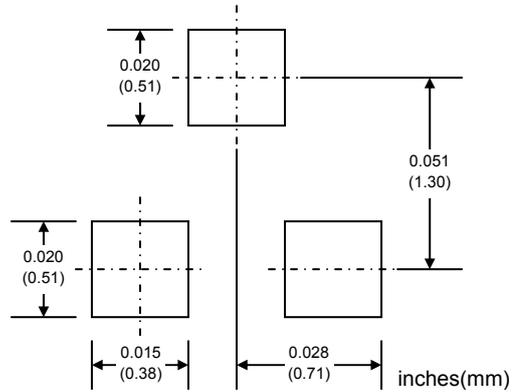
MARKING INFORMATION



xx = Device Code, See Table Below

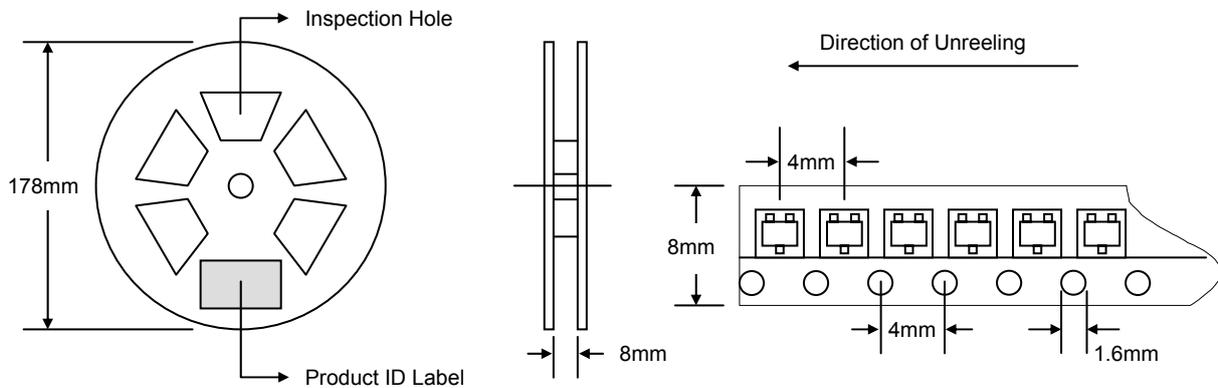
MMBD4448HT	MMBD4448HTA	MMBD4448HTC	MMBD4448HTS
A3	A6	A7	AB

RECOMMENDED FOOTPRINT



PACKAGING INFORMATION

TAPE & REEL



Reel Diameter (mm)	Quantity (PCS)	Inner Box Size L x W x H (mm)	Quantity (PCS)	Carton Size L x W x H (mm)	Quantity (PCS)	Approx. Gross Weight (KG)
178	3,000	187 x 187 x 65	15,000	390 x 240 x 420	150,000	8.0

Note: 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
MMBD4448HT-T1	SOT-523	3000/Tape & Reel
MMBD4448HTA-T1	SOT-523	3000/Tape & Reel
MMBD4448HTC-T1	SOT-523	3000/Tape & Reel
MMBD4448HTS-T1	SOT-523	3000/Tape & Reel

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MMBD4448HT-T1-LF.**

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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We power your everyday.