

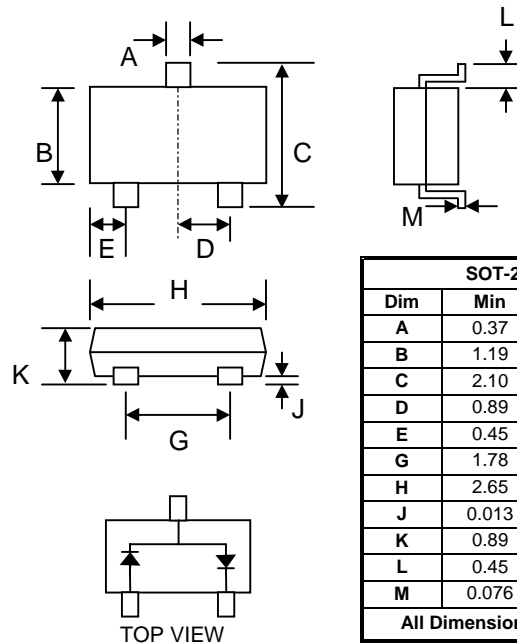
SURFACE MOUNT FAST SWITCHING DIODE

Features

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

Mechanical Data

- Case: SOT-23, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams (approx.)
- Mounting Position: Any
- Marking: T3
- **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_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Average Rectified Output Current (Note 1)	I_O	200	mA
Peak Forward Surge Current (Note 1)	I_{FSM}	2.0	A
Power Dissipation (Note 1)	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient Air (Note 1)	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	75	—	V	@ $I_R = 100\mu\text{A}$
Forward Voltage	V_F	0.55 0.67 0.75	0.7 0.82 1.1	V	@ $I_F = 1.0\text{mA}$ @ $I_F = 10\text{mA}$ @ $I_F = 100\text{mA}$
Reverse Leakage Current	I_R	—	1.0 3.0	μA	@ $V_R = 50\text{V}$ @ $V_R = 100\text{V}$
Junction Capacitance	C_j	—	1.5	pF	$V_R = 0\text{V}, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	4.0	nS	$I_F = I_R = 10\text{mA}$, $I_{RR} = 0.1 \times I_R, R_L = 100\Omega$

Note: 1. Device mounted on fiberglass substrate 40 x 40 x 1.5mm.

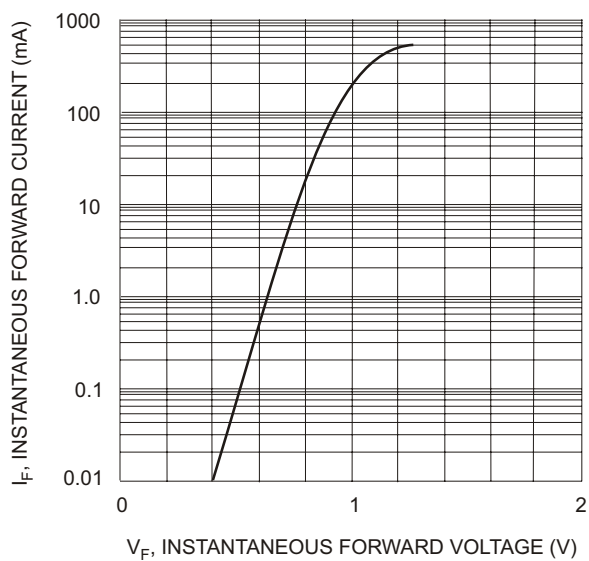


Fig. 1 Forward Characteristics

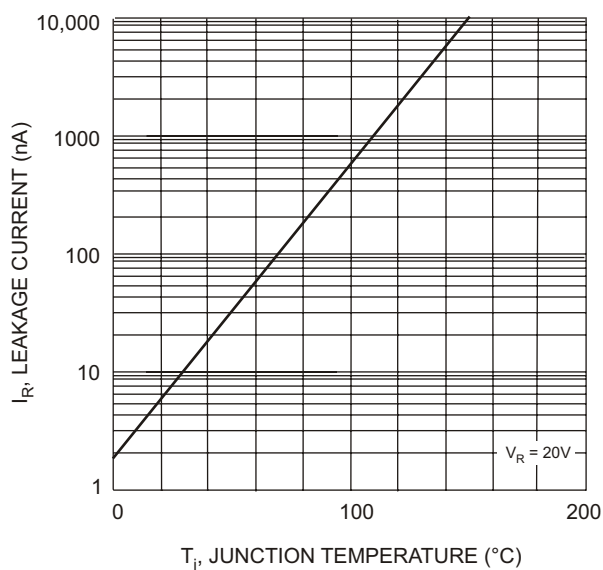


Fig. 2 Leakage Current vs. Junction Temperature

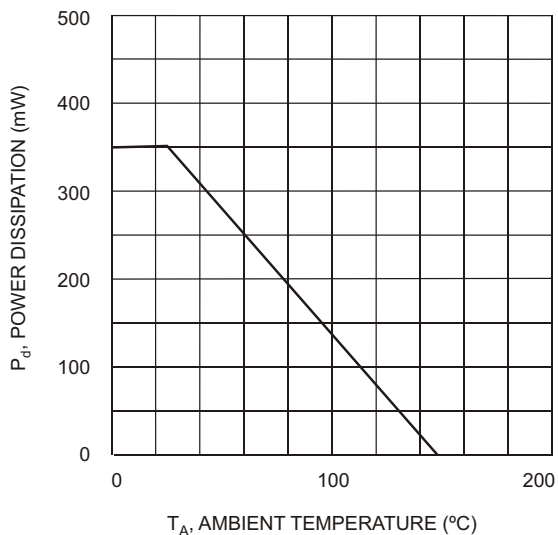
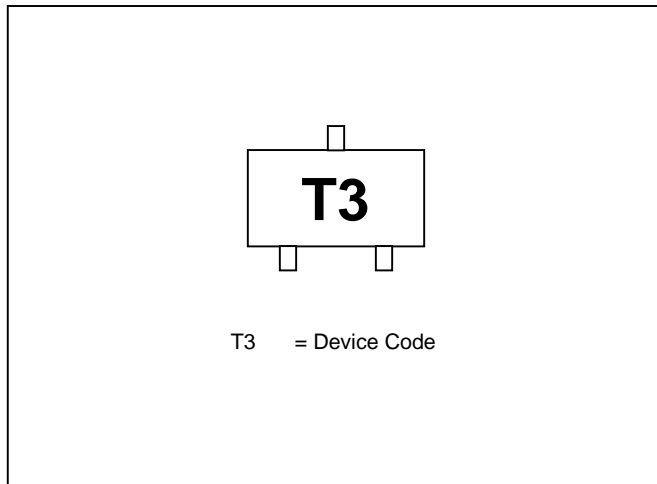
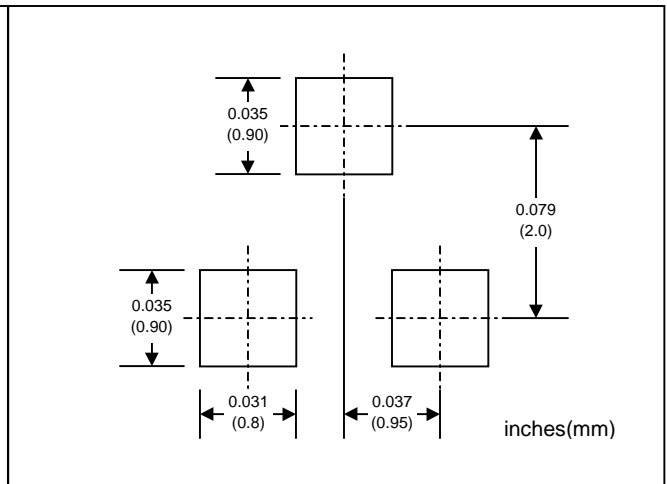


Fig. 3 Power Dissipation Derating

MARKING INFORMATION

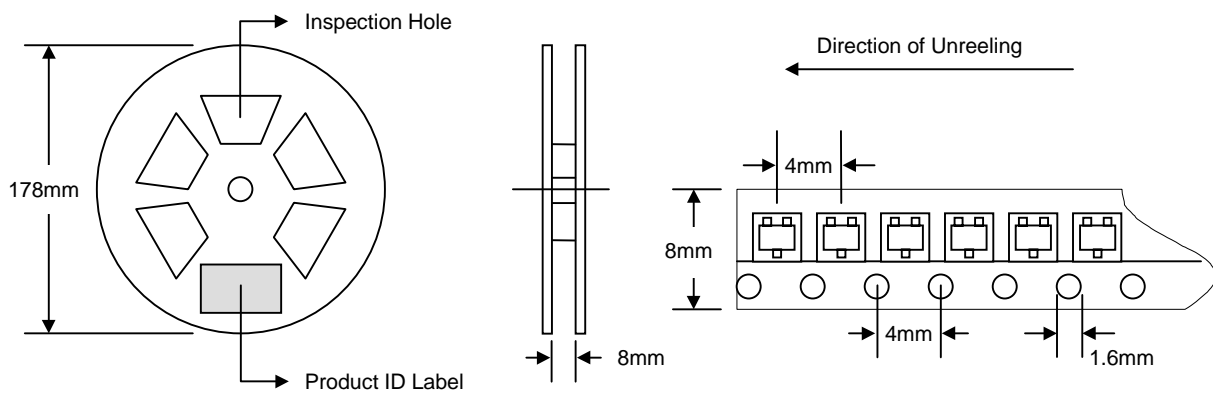


RECOMMENDED FOOTPRINT



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	10.0

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
MMBD7000-T1	SOT-23	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, MMBD7000-T1-LF.**

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