

Features

- Low Leakage
- 150°C Junction Temperature
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Mechanical Data

- Weight: 0.008 Grams (Approx.)

Maximum Ratings

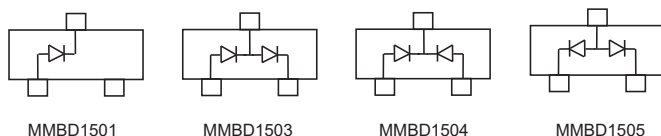
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance:357°C/W Junction to Ambient

MCC Part Number	Device Marking	Working Inverse Voltage V_{IV}
MMBD1501	11	180V
MMBD1503	13	180V
MMBD1504	14	180V
MMBD1505	15	180V

Forward Continuous Current	I_F	600mA	
Average Rectified Output Current	I_o	200mA	
Recurrent Peak Forward Current	i_f	700mA	
Peak Forward Surge Current	I_{FSM}	1.0A 2.0A	@ t = 1.0s @ t = 1.0ms
Power Dissipation	P_D	350mW	

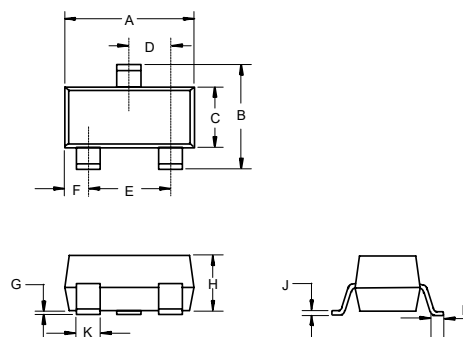
Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

Internal Structure



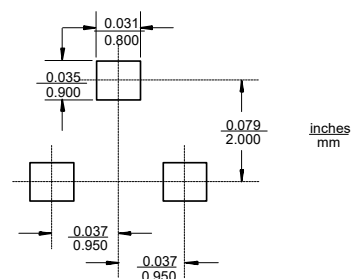
350mW Small Signal Diode

SOT-23



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.110	0.120	2.80	3.04	
B	0.083	0.104	2.10	2.64	
C	0.047	0.055	1.20	1.40	
D	0.034	0.041	0.85	1.05	
E	0.067	0.083	1.70	2.10	
F	0.018	0.024	0.45	0.60	
G	0.0004	0.006	0.01	0.15	
H	0.035	0.043	0.90	1.10	
J	0.003	0.007	0.08	0.18	
K	0.014	0.020	0.35	0.51	
L	0.007	0.020	0.20	0.50	

Suggested Solder Pad Layout



Electrical Characteristics @ 25°C Unless Otherwise Specified

Minimum Reverse Breakdown Voltage	V_{BR}	200V	$I_R=5.0\mu A$
Forward Voltage Drop	V_F	0.62V(Min.) 0.72V(Min.) 0.80V(Min.) 0.83V(Min.) 0.87V(Min.) 0.90V(Min.)	$I_F=1.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=100.0mA$ $I_F=200mA$ $I_F=300mA$
		0.75V(Max.) 0.85V(Max.) 0.95V(Max.) 1.10V(Max.) 1.30V(Max.) 1.50V(Max.)	$I_F=1.0mA$ $I_F=10.0mA$ $I_F=50.0mA$ $I_F=100.0mA$ $I_F=200mA$ $I_F=300mA$
Maximum Reverse Current	I_R	10nA 5.0 μA	$V_R=180V$ $V_R=180V, T_A=150^\circ C$
Maximum Junction Capacitance	C_J	4.0pF	$V_R=0.0V, f=1.0MHz$

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

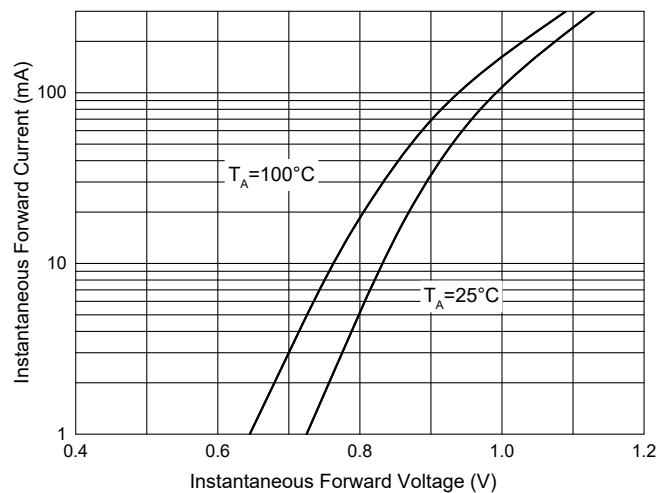


Fig. 2 - Typical Reverse Leakage Characteristics

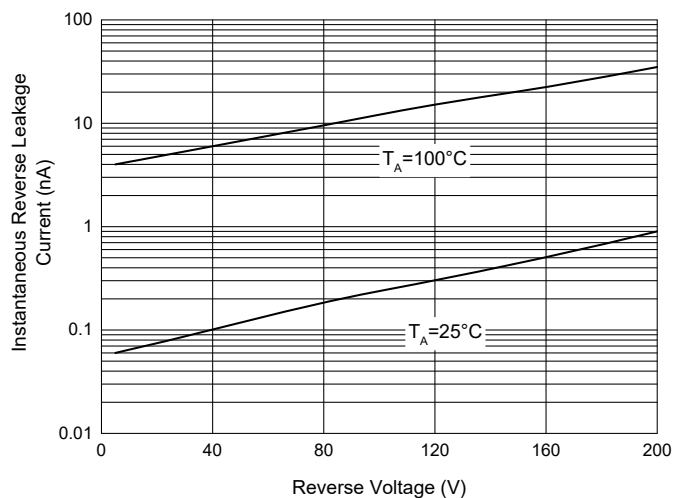
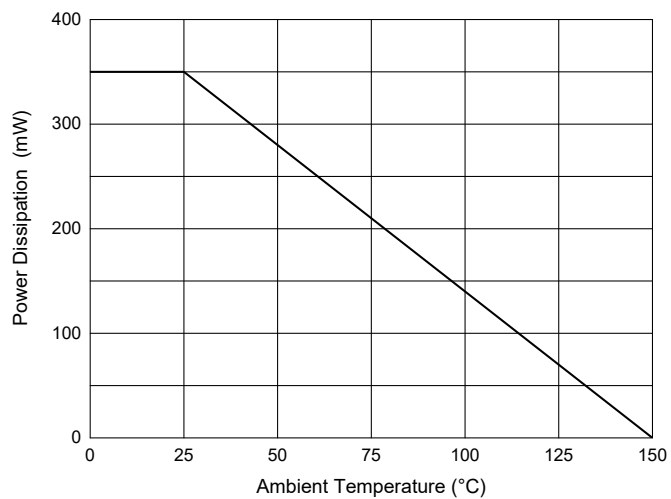


Fig. 3 - Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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