

Features

- Low Leakage
- 150°C Junction Temperature
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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.)

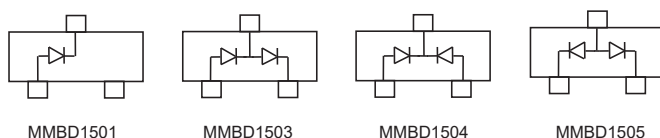
Maximum Ratings

- 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

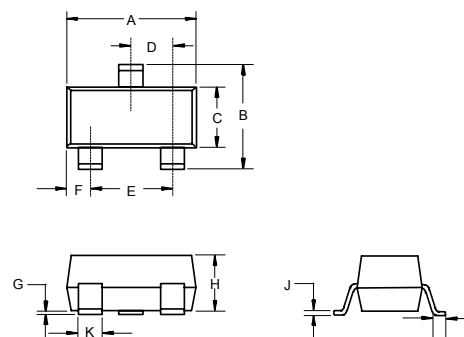
Forward Continuous Current	I_F	600mA	
Average Rectified Output Current	I_o	200mA	
Recurrent Peak Forward Current	i_f	700mA	
Peak Forward Surge Current	I_{FSM}	1.0A 2.0A	@ t = 1.0s @ t = 1.0ms
Power Dissipation	P_D	350mW	

Internal Structure



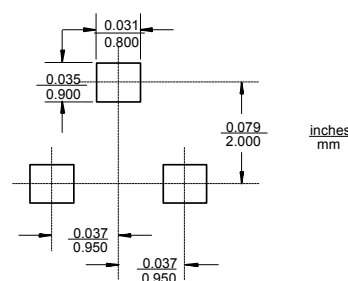
350mW Small Signal Diode

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	$V_R=0.0V, f=1.0MHz$

Note: 1) These ratings are based on a max. junction temperature of 150 °C
 2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operation

Curve Characteristics

Fig. 1 - Typical Instantaneous Forward Characteristics

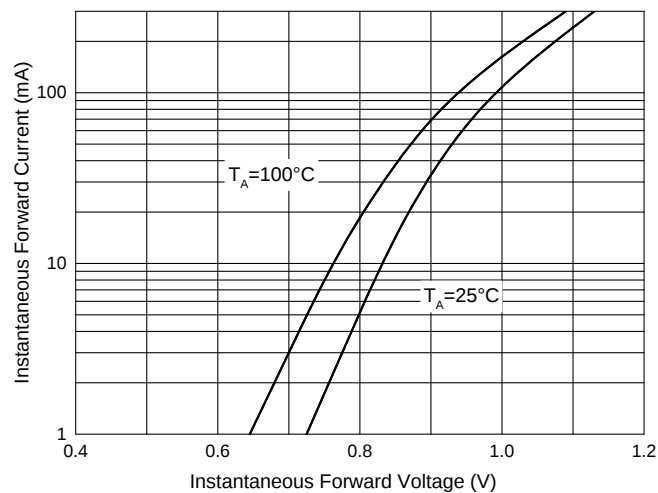


Fig. 2 - Typical Reverse Leakage Characteristics

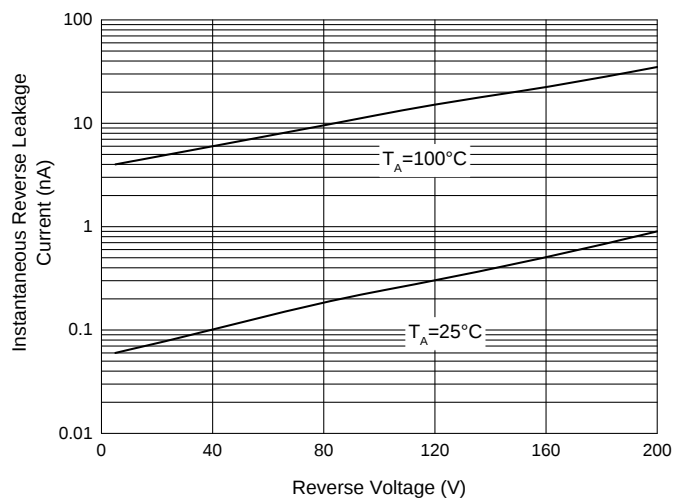
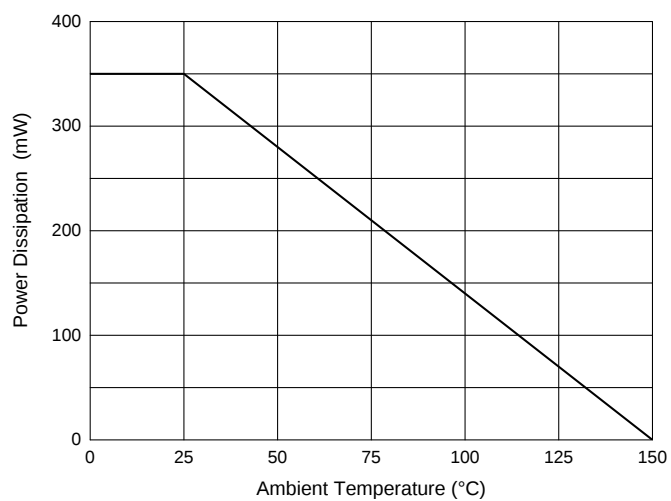


Fig. 3 - Power Derating Curve



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

IMPORTANT NOTICE

Micro Commercial Components Corp. reserves the right to make changes without further notice to any product herein to make corrections, modifications , enhancements , improvements , or other changes . **Micro Commercial Components Corp** . does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights ,nor the rights of others . The user of products in such applications shall assume all risks of such use and will agree to hold **Micro Commercial Components Corp** . and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

MCC's products are not authorized for use as critical components in life support devices or systems without the express written approval of Micro Commercial Components Corporation.

CUSTOMER AWARENESS

Counterfeiting of semiconductor parts is a growing problem in the industry. Micro Commercial Components (MCC) is taking strong measures to protect ourselves and our customers from the proliferation of counterfeit parts. MCC strongly encourages customers to purchase MCC parts either directly from MCC or from Authorized MCC Distributors who are listed by country on our web page cited below. Products customers buy either from MCC directly or from Authorized MCC Distributors are genuine parts, have full traceability, meet MCC's quality standards for handling and storage. **MCC will not provide any warranty coverage or other assistance for parts bought from Unauthorized Sources.** MCC is committed to combat this global problem and encourage our customers to do their part in stopping this practice by buying direct or from authorized distributors.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Micro Commercial Components \(MCC\):](#)

[MMBD1505-TP-HF](#)