



# DATA SHEET

## MMBD4148/MMBD4448/BAS16

### SURFACE MOUNT SWITCHING DIODES

**VOLTAGE** 100 Volts    **POWER** 250mWatts

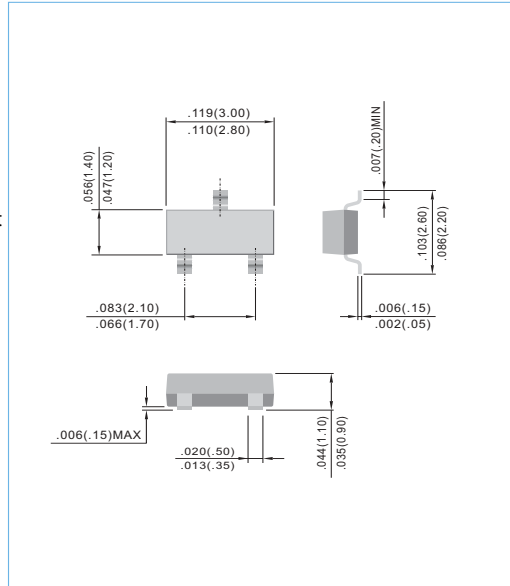
**SOT-23**    Unit: inch (mm)

#### FEATURES

- Fast switching Speed.
- Electrically Identical to Standard JEDEC
- High Conductance
- Surface Mount Package Ideally Suited for Automatic Insertion.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request

#### MECHANICAL DATA

Case: SOT-23 plastic case.  
 Terminals : Solderable per MIL-STD-202G, Method 208  
 Standard packaging: 8mm tape  
 Weight: approximately 0.008g

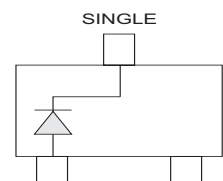


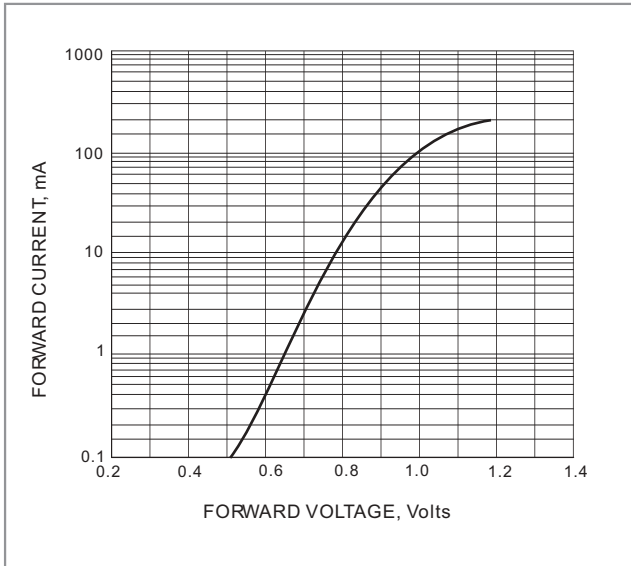
### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T<sub>J</sub>=25°C unless otherwise noted)

PARAMETER	SYMBOL	MMBD 4148	MMBD 4448	BAS16	UNITS
Marking Code		A 2	A 3	A 6	
Reverse Voltage	V <sub>R</sub>	75			V
Peak Reverse Voltage	V <sub>RM</sub>	100			V
RMS Voltage	V <sub>RMS</sub>	50			V
Maximum DC Blocking Voltage	V <sub>DC</sub>	75			V
Maximum Average Forward Current at Ta=25°C	I <sub>AV</sub>	150			mA
Peak Forward Surge Current, 1.0us	I <sub>FSM</sub>	2	4	2	A
Power Dissipation Derate Above 25°C	P <sub>TOT</sub>	250			mW
Maximum Forward Voltage	V <sub>F</sub>	0.715@ 0.001A 0.855@ 0.01A 1.0@ 0.05A 1.25@ 0.15A	0.72 / 0.005A 1.0 / 0.1A	0.855 / 0.01A	V
Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>J</sub> = 25°C	I <sub>R</sub>	0.025@ 20V 2.5@ 75V	2.5@ 75V	1.0@ 75V	uA
Junction Capacitance (Notes1)	C <sub>J</sub>	1.5	4.0	2.0	pF
Maximum Reverse Recovery (Notes2)	T <sub>RR</sub>	4.0	4.0	6.0	ns
Maximum Thermal Resistance	R <sub>θJA</sub>	357			°C / W
Storage Temperature Range	T <sub>J</sub>	-55 to +150			°C

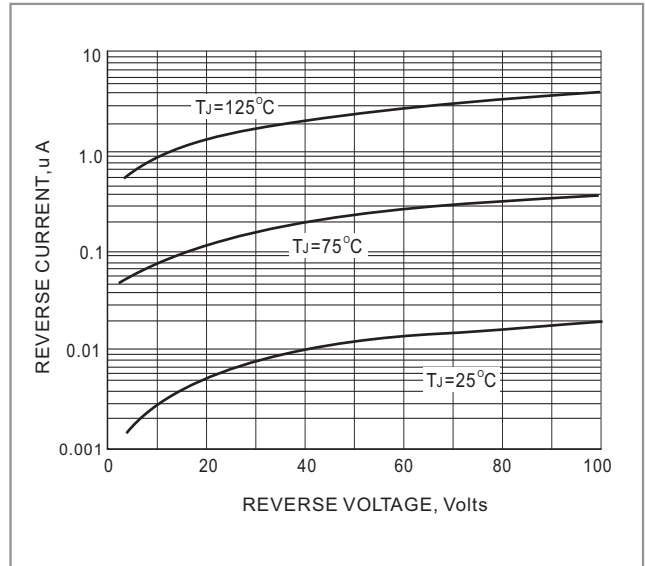
**NOTE:**

1. C<sub>J</sub> at V<sub>R</sub>=0, f=1MHZ
2. From I<sub>F</sub>=10mA to I<sub>R</sub>=1mA, V<sub>R</sub>=6Volts, R<sub>L</sub>=100Ω

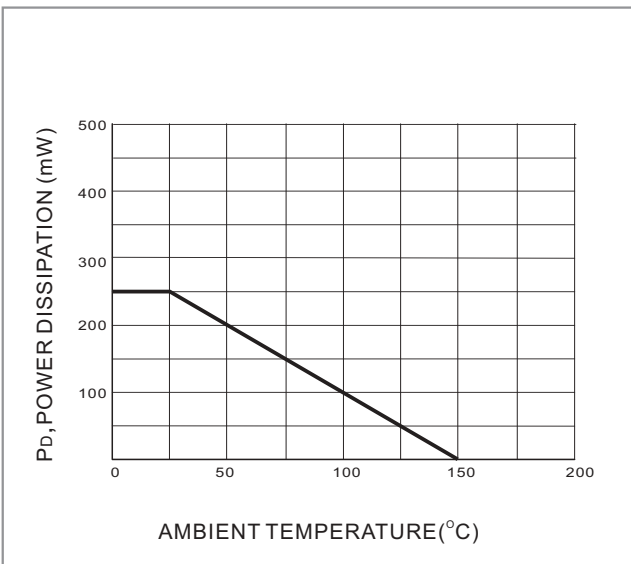




**FIG. 1-TYPICAL FORWARD CHARACTERISTIC**



**FIG. 2-TYPICAL REVERSE CHARACTERISTICS**



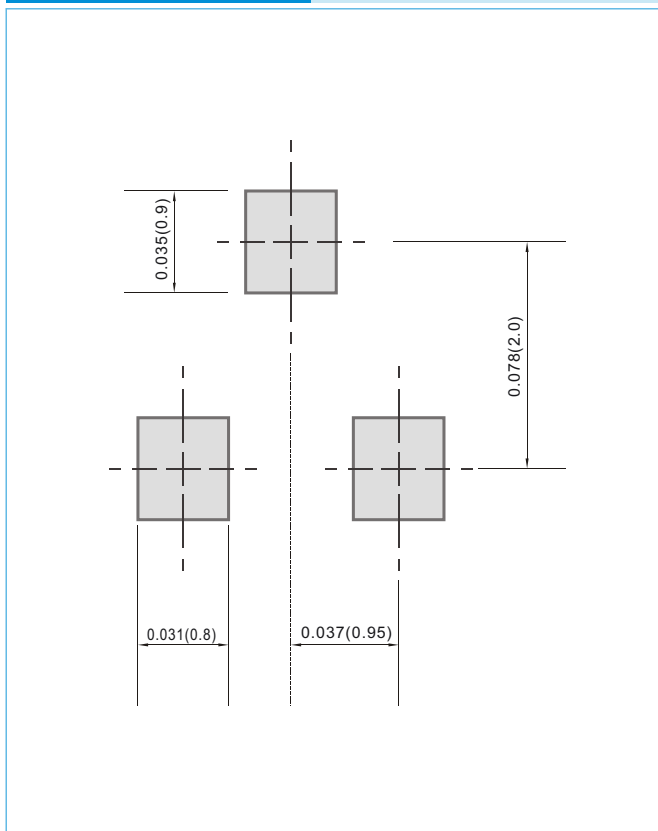
**FIG. 3 POWER DERATING CURVE**



## MOUNTING PAD LAYOUT

SOT-23

Unit: inch (mm)



## ORDER INFORMATION

- Packing information

T/R - 12K per 13" plastic Reel

T/R - 3.0K per 7" plastic Reel

## LEGAL STATEMENT

### IMPORTANT NOTICE

This information is intended to unambiguously characterize the product in order to facilitate the customer's evaluation of the device in the application. The information will help the customer's technical experts determine that the device is compatible and interchangeable with similar devices made by other vendors. The information in this data sheet is believed to be reliable and accurate. The specifications and information herein are subject to change without notice. New products and improvements in products and product characterization are constantly in process. Therefore, the factory should be consulted for the most recent information and for any special characteristics not described or specified.

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