



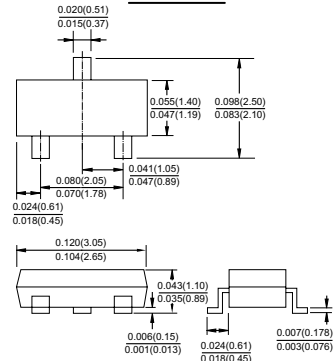
# MMBD4148

## Surface Mount Switching Diode



Voltage Range  
75 Volts  
350m Watts Power Dissipation

### SOT-23



Dimensions in inches and (millimeters)

### Features

- ✧ Fast switching speed
- ✧ Surface mount package ideally suited for automatic insertion
- ✧ For general purpose switching applications
- ✧ High conductance

### Mechanical Data

- ✧ Case: SOT-23, Molded plastic
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Polarity: See diagram
- ✧ Marking: KA6, KA2, K5D
- ✧ Weight: 0.008 gram (approx.)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

Type Number	Symbol	Value	Units
Non-Repetitive Peak Reverse Voltage	VRM	100	V
Peak Repetitive Reverse Voltage	VRRM	75	V
Working Peak Reverse Voltage	VRWM		
DC Blocking Voltage	VR		
RMS Reverse Voltage	VR(RMS)	53	V
Forward Continuous Current	IFM	300	mA
Average Rectifier Output Current	Io	200	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0uS @ t=1.0S	IFSM	2.0 1.0	A
Power Dissipation (Note 1)	Pd	350	mW
Thermal Resistance Junction to Ambient Air	R θ JA	357	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

#### Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Reverse Breakdown Voltage (Note 3) IR=100uA	V(BR)	75		V
Forward Voltage IF=1.0mA IF= 10mA IF = 50mA IF=150mA	VF		0.715 0.855 1.0 1.25	V
Peak Reverse Current (Note 3) VR=75V VR=75V, Tj=150°C VR=25V, Tj=150°C VR=20V	IR		1.0 50 30 25	uA nA
Junction Capacitance (Note 3) VR=0, f=1.0MHz	Cj		2.0	pF
Reverse Recovery Time (Note 2)	trr		4.0	nS

Notes: 1. Diode Mounted on Glass Epoxy PCB 1.6"x1.6"x0.06", Mounting pad for the Cathode Lead Min. 0.93 inches.

2. Reverse Recovery Test Conditions: IF=IR=10mA, Irr=0.1 x IR, RL=100 Ω.

3. Short Duration Test Pulse used to Minimize Self-Heating Effect.

## RATINGS AND CHARACTERISTIC CURVES (MMBD4148)

FIG.1- POWER DERATING CURVE

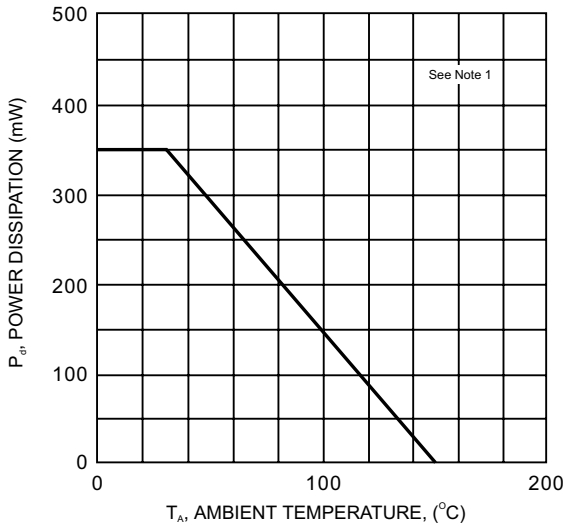


FIG.2- TYPICAL FWD CHARACTERISTICS

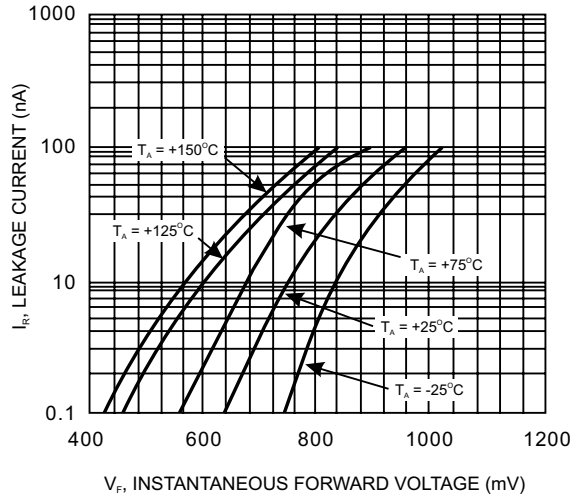


FIG.3- TYPICAL REVERSE CHARACTERISTICS

