



# MMBD4448

## Surface Mount Switching Diode



Voltage Range  
75 Volts  
350m Watts Power Dissipation

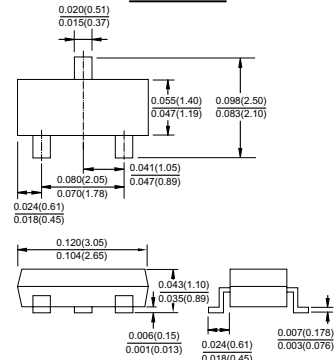
### SOT-23

### 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: KA3
- ✧ Weight: 0.008 gram (approx.)



### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

| Type Number  | Symbol   | MMBD4448     | Units |
|--|----------|--------------|-------|
| Non-Repetitive Peak Reverse Voltage                                | VRM      | 100          | V     |
| Peak Repetitive Reverse Voltage                                    | VRRM     |              |       |
| Working Peak Reverse Voltage                                       | VRWM     | 75           | V     |
| DC Blocking Voltage  | VR       |              |       |
| RMS Reverse Voltage  | VR(RMS)  | 53           | V     |
| Forward Continuous Current (Note 1)                                | IFM      | 500          | mA    |
| Average Rectifier Output Current (Note 1)                          | Io       | 250          | mA    |
| Non-Repetitive Peak Forward Surge Current<br>@ t=1.0uS<br>@ t=1.0S | IFSM     | 4.0<br>2.0   | A     |
| Power Dissipation (Note 1)   | Pd       | 350          | mW    |
| Thermal Resistance Junction to Ambient Air<br>(Note 1)             | RθJA     | 357          | K/W   |
| Operating and Storage Temperature Range                            | TJ, TSTG | -65 to + 150 | °C    |

#### Electrical Characteristics

| Type Number  | Symbol | Min  | Max                           | Units    |
|--|--------|------|-------------------------------|----------|
| Forward Voltage<br>IF=1.0mA<br>IF= 10mA<br>IF =50mA<br>IF=150mA                  | VF     | 0.62 | 0.715<br>0.855<br>1.0<br>1.25 | V        |
| Peak Reverse Current<br>VR=75V<br>VR=75V, Tj=150°C<br>VR=25V, Tj=150°C<br>VR=20V | IR     | -    | 2.5<br>50<br>30<br>25         | uA<br>nA |
| Junction Capacitance VR=0, f=1.0MHz  | Cj     | -    | 4.0                           | pF       |
| Reverse Recovery Time (Note 2)   | trr    | -    | 4.0                           | nS       |

Notes: 1. Valid Provided that Terminals are Kept at Ambient Temperature.

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

## RATINGS AND CHARACTERISTIC CURVES (MMBD4448)

FIG.1- FORWARD CHARACTERISTICS

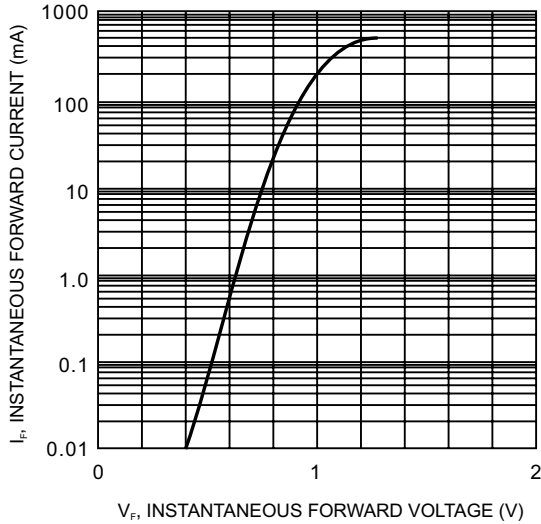


FIG.2- LEAKAGE CURRENT VS JUNCTION TEMPERATURE

