



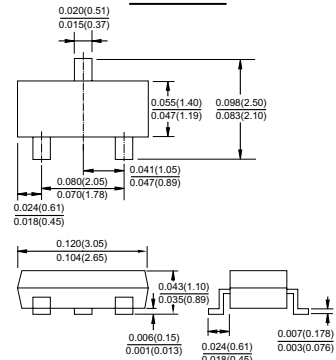
BAS16/MMBD4148/MMBD914

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 _J , T _{STG} | -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. Device 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 (BAS16 / MMBD4148 / MMBD914)

FIG.1- POWER DERATING CURVE

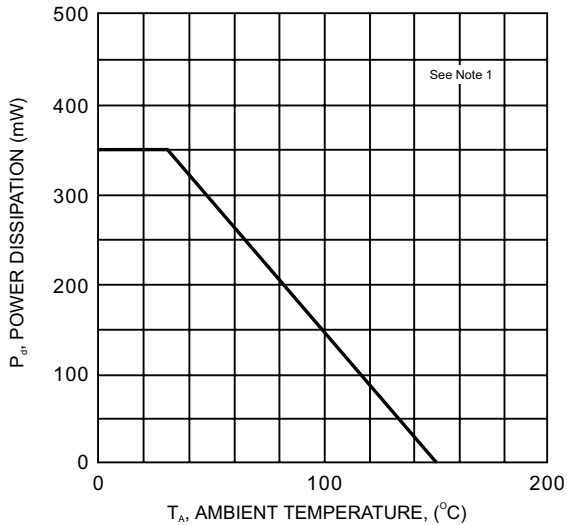


FIG.2- TYPICAL FWD CHARACTERISTICS

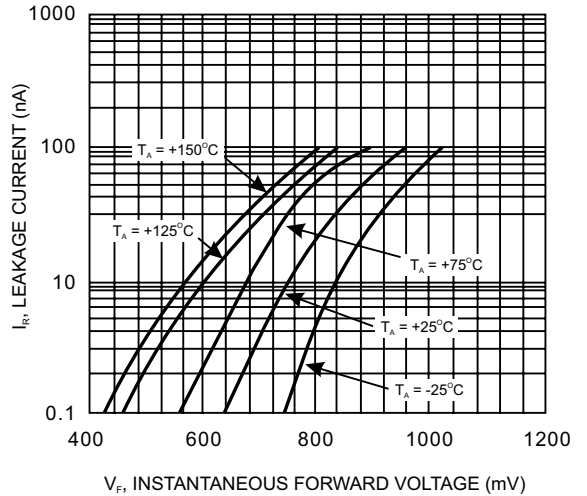


FIG.3- TYPICAL REVERSE CHARACTERISTICS

