



BAS16/MMBD4148/MMBD914

Surface Mount Switching Diode



Voltage Range
75 Volts
350m Watts Power Dissipation

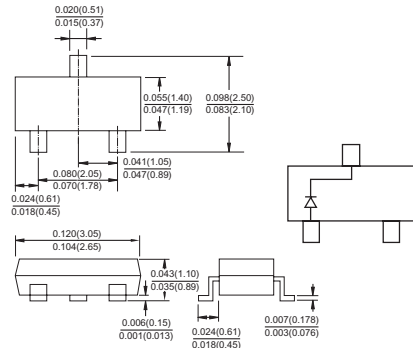
Features

- ✧ 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.)

SOT-23



Dimensions in inches and (millimeters)

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	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectifier Output Current	I_o	200	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu S$ @ $t=1.0S$	I_{FSM}	2.0 1.0	A
Power Dissipation (Note 1)	P_d	350	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	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) $I_R=100\mu A$	$V_{(BR)}$	75		V
Forward Voltage $I_F=1.0mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$	V_F	-	0.715 0.855 1.0 1.25	V
Peak Reverse Current $V_R=75V$ $V_R=75V, T_J=150^\circ C$ $V_R=25V, T_J=150^\circ C$ $V_R=20V$	I_R	-	1.0 50 30 25	μA nA
Junction Capacitance $V_R=0, f=1.0MHz$	C_j	-	2.0	pF
Reverse Recovery Time (Note 2)	t_{rr}	-	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: $I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$.

RATINGS AND CHARACTERISTIC CURVES (BAS16 / MMBD4148 / MMBD914)

FIG.1- POWER DERATING CURVE

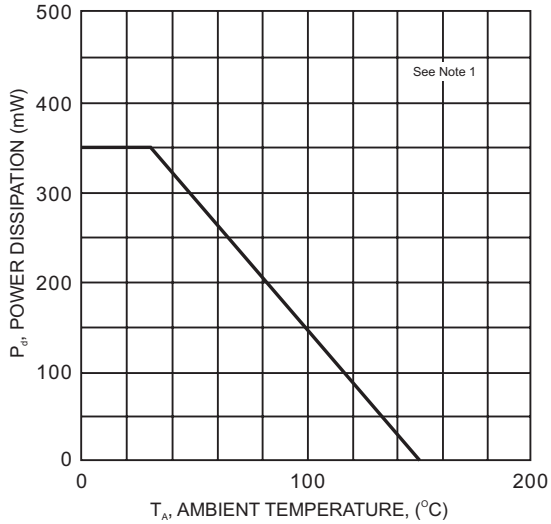


FIG.2- TYPICAL FWD CHARACTERISTICS

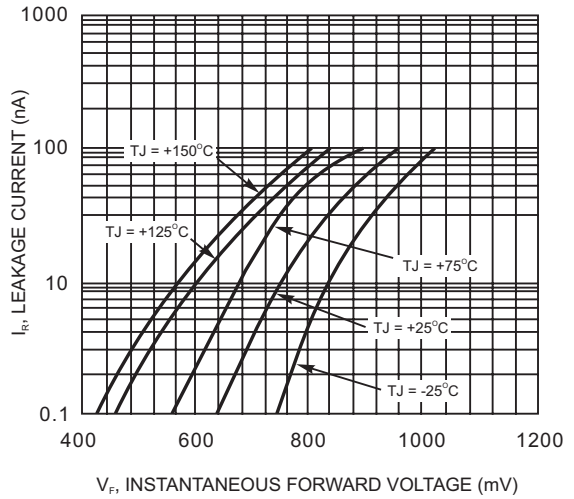


FIG.3- TYPICAL REVERSE CHARACTERISTICS

