



DC COMPONENTS CO., LTD.  
RECTIFIER SPECIALISTS

MMBD4148  
MMBD4448

TECHNICAL SPECIFICATIONS OF SURFACE MOUNT SWITCHING DIODES

VOLTAGE - 100 Volts

CURRENT - 0.15 Ampere

FEATURES

- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High speed switching
- \* High current capability
- \* High reliability

MECHANICAL DATA

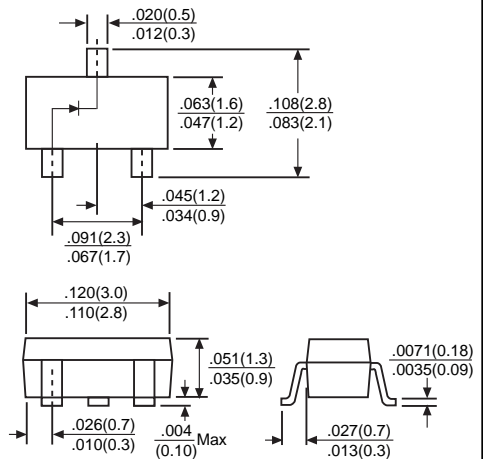
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: See diagram
- \* Mounting position: Any
- \* Weight: 0.008 grams Approx.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



SOT-23



Dimensions in inches and (millimeters)

	SYMBOL	MMBD4148	MMBD4448	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>		100	V
Maximum Average Rectified Current	I <sub>o</sub>		150	mA
Peak Forward Surge Current I <sub>FSM</sub> (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	2.0	4.0	A
Maximum Power Dissipation T <sub>amb</sub> =25°C	P <sub>tot</sub>		350	mW
Maximum Forward Voltage	V <sub>F</sub>	1.0 @ I <sub>F</sub> =10mA	0.72 @ I <sub>F</sub> =5mA	V
Maximum Reverse Current @V <sub>R</sub> =75V	I <sub>R</sub>		2.5	μA
Maximum Reverse Recovery Time(NOTE 1)	t <sub>rr</sub>		4.0	nS
Typical Junction Capacitance(NOTE 2)	C <sub>J</sub>		4.0	pF
Typical Thermal Resistance	R <sub>θJA</sub>		357	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>		-55 to +125	°C

NOTE: 1. Test conditions: I<sub>F</sub>=I<sub>R</sub>=10mA, V<sub>R</sub>=6V, R<sub>L</sub>=100Ω, measured at I<sub>RR</sub>=1mA  
2. Measured at 1.0MHz and V<sub>R</sub>=0

# RATING AND CHARACTERISTIC CURVES (MMBD4148, MMBD4448)

FIG.1 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

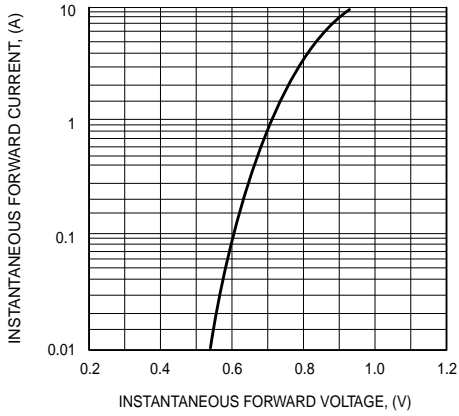


FIG.2 - TYPICAL REVERSE CHARACTERISTICS

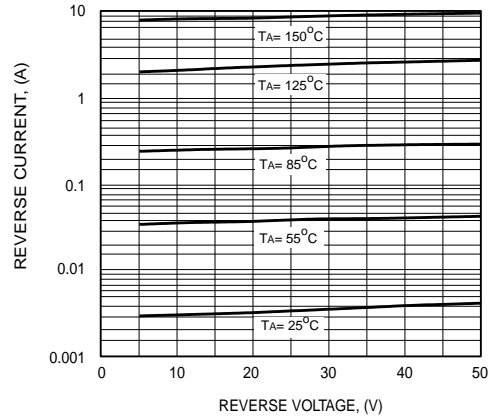


FIG.3 - TYPICAL JUNCTION CAPACITANCE

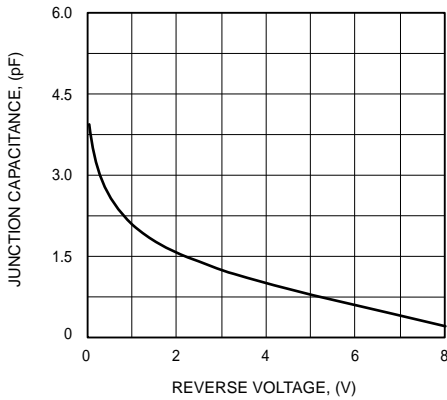


FIG.4 - RECTIFICATION EFFICIENCY MEASUREMENT CIRCUIT

