



MBRS1090 THRU MBRS10100

10.0 AMPS. Schottky Barrier Rectifiers



Voltage Range
90 to 100 Volts
Current
10.0 Amperes

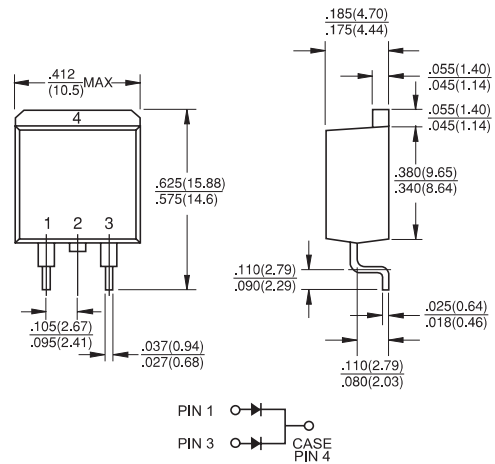
Features

- ✧ Plastic material used carries Underwriters Laboratory Classifications 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ Guardring for overvoltage protection
- ✧ High temperature soldering guaranteed:
260°C/10 seconds, 0.25" (6.35mm) from case

Mechanical Data

- ✧ Cases: JEDEC D2PAK molded plastic body
- ✧ Terminals: Lead solderable per MIL-STD-750, Method 2026
- ✧ Polarity: As marked
- ✧ Mounting position: Any
- ✧ Mounting torque: 5 in. - lbs. max
- ✧ Weight: 0.08 ounce, 2.24 grams

D²PAK



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	Symbol	MBRS1090	MBRS10100	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	90	100	V
Maximum RMS Voltage	V_{RMS}	63	70	V
Maximum DC Blocking Voltage	V_{DC}	90	100	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	10		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150		A
Peak Repetitive Reverse Surge Current (Note 1)	I_{RRM}	0.5		A
Maximum Instantaneous Forward Voltage at (Note 2) $I_F=5.0A, T_c=25^{\circ}C$ $I_F=5.0A, T_c=125^{\circ}C$ $I_F=10A, T_c=25^{\circ}C$ $I_F=10A, T_c=125^{\circ}C$	V_F	0.80 0.65 0.95 0.75		V
Maximum Instantaneous Reverse Current @ $T_J=25^{\circ}C$ at Rated DC Blocking Voltage (Note 2) @ $T_J=100^{\circ}C$	I_R	100 6.0		μA mA
Maximum Thermal Resistance, Junction to Case	$R_{\theta JA}$ $R_{\theta JC}$	60 2.0		$^{\circ}C/W$
Operating Junction Temperature Range	T_J	-65 to +175		$^{\circ}C$
Storage Temperature Range	T_{STG}	-65 to +175		$^{\circ}C$

Notes: 1. 2.0us Pulse Width, f=1.0 KHz

2. Pulse Test: 300us Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (MBRS1090 THRU MBRS10100)

FIG.1- FORWARD CURRENT DERATING CURVE

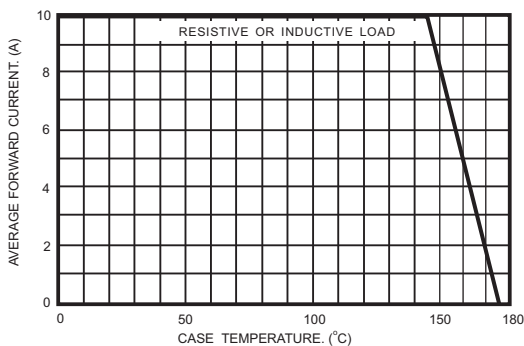


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

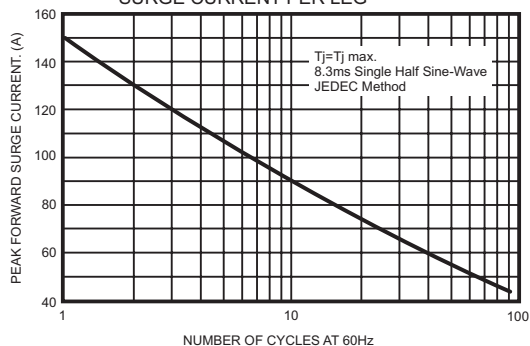


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

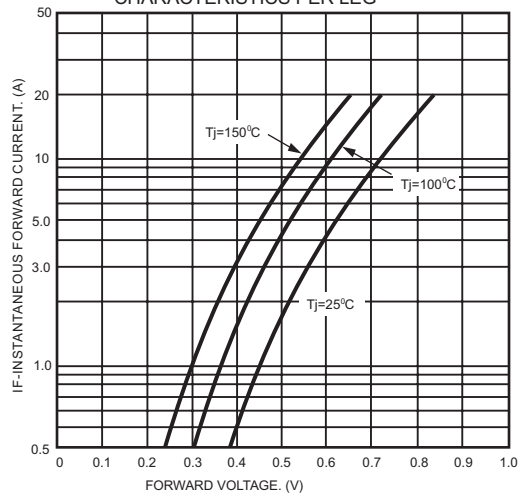


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

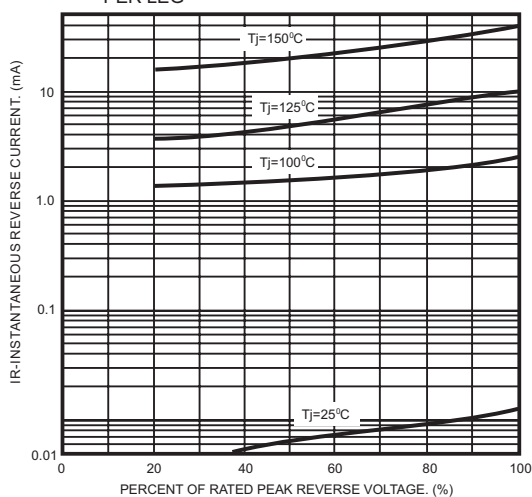


FIG.5- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

