MDF005-E THRU MDF10-E

Miniature Glass Passivated Single-Phase Bridge Rectifiers

VOLTAGE: 50 to 1000V **CURRENT: 0.5A**

VOLTARISTECH INC.
POWER • PRECISION • INNOVATION

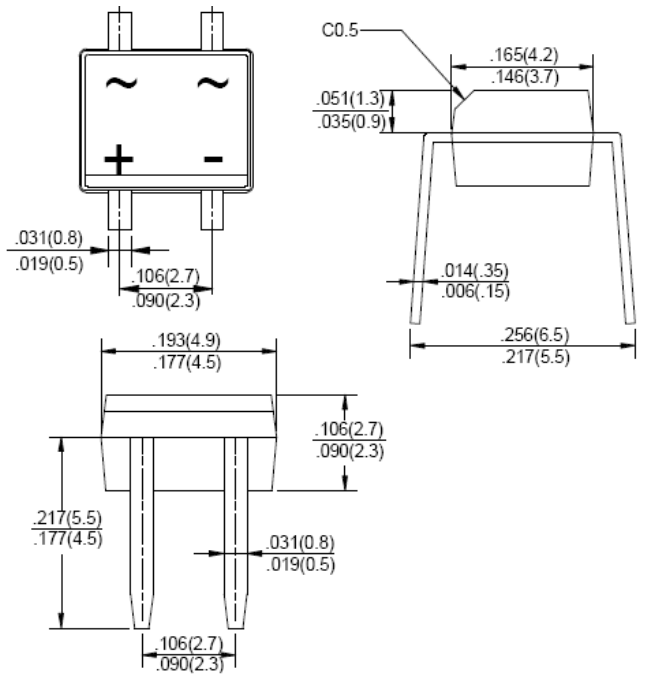
FEATURE

For surface mount application
Reliable low cost construction utilizing molded plastic Technique
Surge overload rating: 30A peak
Halogen Free

MECHANICAL DATA

Terminal: Plated leads solderable per J-STD-002
Case:UL-94 Class V-0 recognized Halogen Free Epoxy
Polarity: Polarity symbol marked on body
Mounting position: any

MBM



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated)

	Symbol	MDF 005-E	MDF 01-E	MDF 02-E	MDF 04-E	MDF 06-E	MDF 08-E	MDF 10-E	Units
Maximum Recurrent Peak Reverse Voltage	Vrrm	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	Vrms	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current (note) on glass-epoxy P.C.B. / on aluminum substrate	If(av)	0.5(1) / 0.8(2)							A
Peak Forward Surge Current	Ifsm	30.0							A
Maximum Instantaneous Forward Voltage at forward current 0.4A	Vf	1.0							V
Rating for fusing (t < 8.3ms)	I^2t	5.0							A^2sec
Maximum DC Reverse Current Ta =25°C / at rated DC blocking voltage Ta =125°C	Ir	5.0 / 500.0							μA
Typical thermal resistance per leg (note)	RθJA / RθJA / RθJL	85(1) / 70(2) / 20(1)							°C/W
Typical Junction Capacitance (note3)	Cj	13.0							Pf
Operating Temperature Range	Tj	-55 to +125							°C
Storage and Operating Junction Temperature	Tstg	-55 to +150							°C

Note:
1. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
2. On aluminum substrate P.C.B. with an area of 0.8" x 0.8" (20 x 20mm) mounted on 0.05 x 0.05" (1.3 x 1.3mm) solder pad
3. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

Fig. 1 - Derating Curve for Output Rectified Current

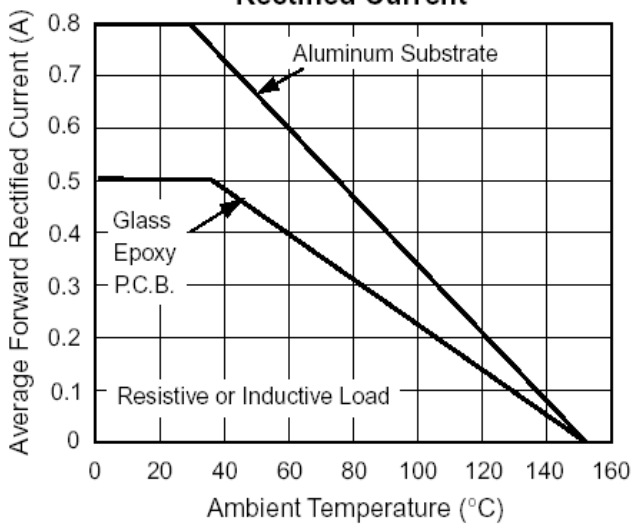


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

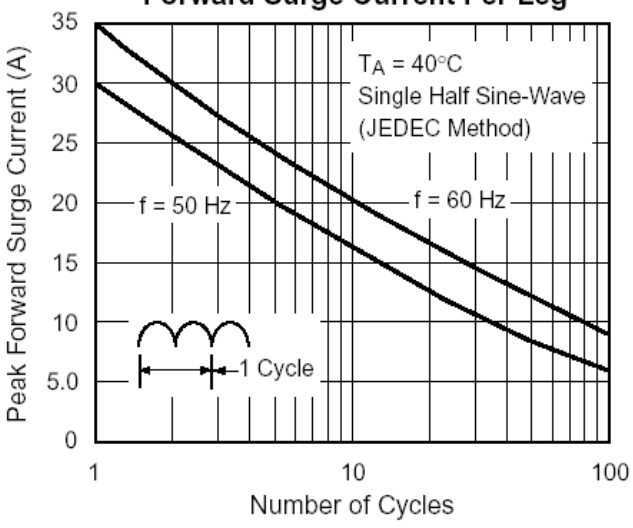


Fig. 3 - Typical Forward Voltage Characteristics Per Leg

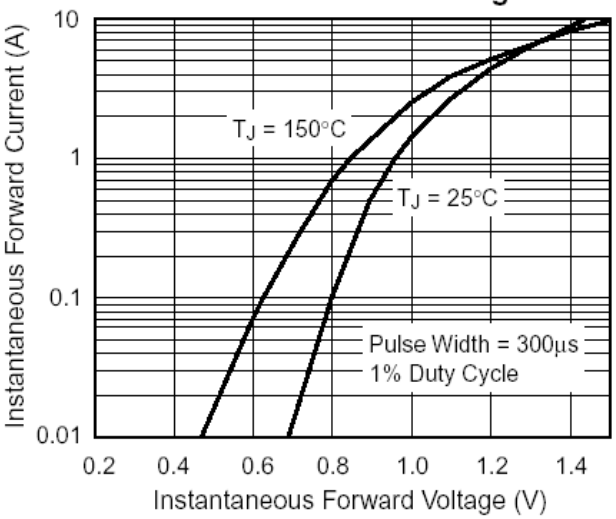


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

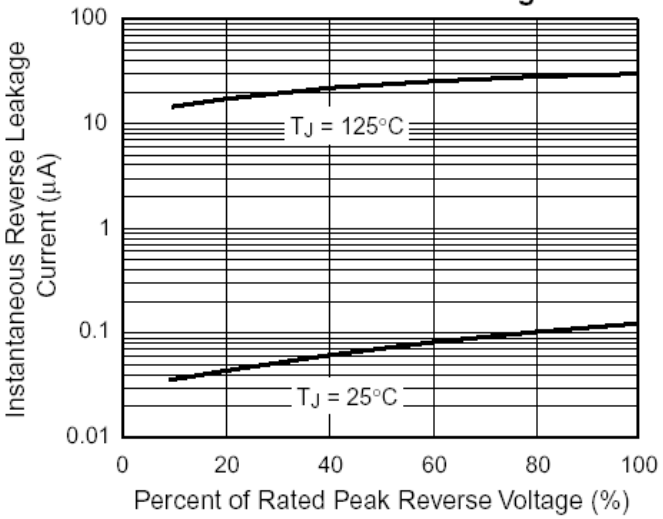


Fig. 5 - Typical Junction Capactitance Per Leg