

MDF005 THRU MDF10

Miniature Glass Passivated Single-Phase Bridge Rectifiers

VOLTAGE: 50 to 1000V

CURRENT: 0.5A

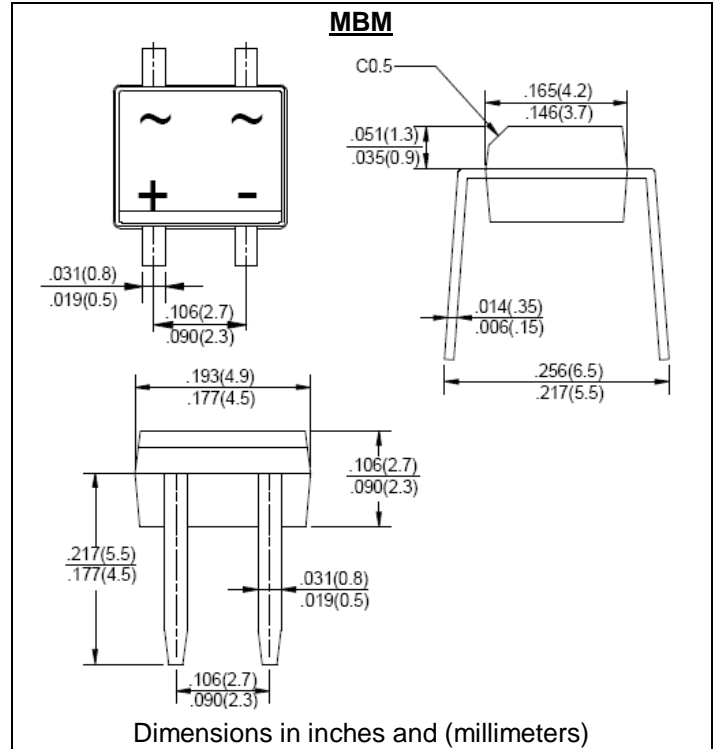


FEATURE

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

MECHANICAL DATA

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOL	MDF 005	MDF 01	MDF 02	MDF 04	MDF 06	MDF 08	MDF 10	Units
Maximum Recurrent Peak Reverse Voltage	V _{rrm}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{rms}	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current (note)	I _{f(av)}					0.5 ⁽¹⁾			A
						0.8 ⁽²⁾			
Peak Forward Surge Current	I _{fsm}					30.0			A
Maximum Instantaneous Forward Voltage at forward current 0.4A	V _f					1.0			V
Rating for fusing (t < 8.3ms)	I ² t					5.0			A ² sec
Maximum DC Reverse Current at rated DC blocking voltage	I _r					5.0			μA
						500.0			uA
Typical thermal resistance per leg (note)	R _{θJA} R _{θJA} R _{θJL}					85 ⁽¹⁾ 70 ⁽²⁾ 20 ⁽¹⁾			°C/W
Typical Junction Capacitance (note3)	C _j					13.0			Pf
Operating Temperature Range	T _j					-55 to +125			°C
Storage and Operating Junction Temperature	T _{stg}					-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

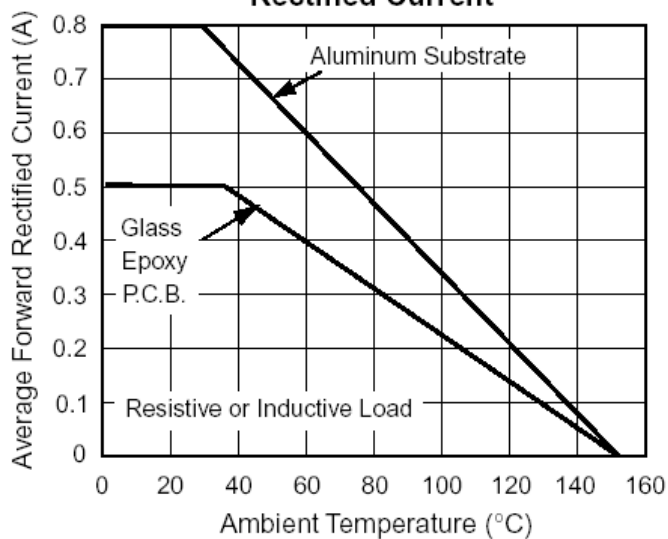


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

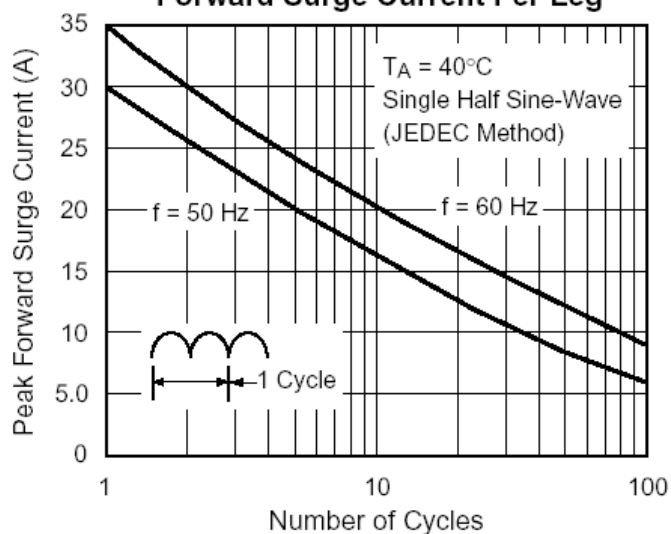


Fig. 3 - Typical Forward Voltage Characteristics Per Leg

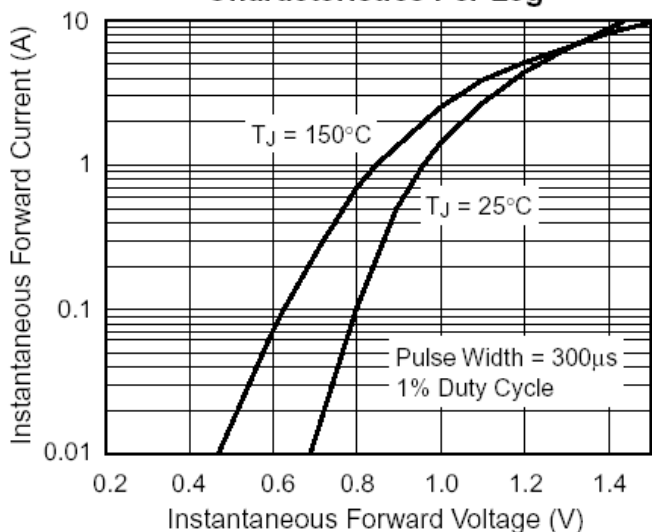


Fig. 4 - Typical Reverse Leakage Characteristics Per Leg

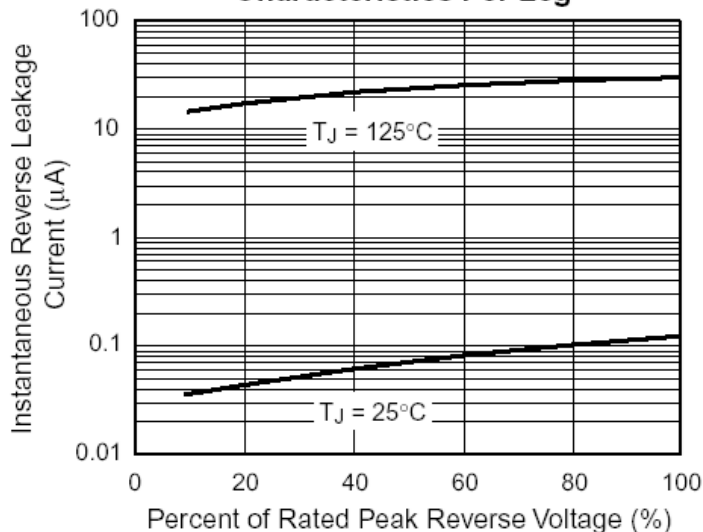


Fig. 5 - Typical Junction Capacitance Per Leg

