

MB05F thru MB10F

Miniature Glass Passivated Single-Phase Surface Mount Flat Bridge Rectifier

VOLTAGE - 50 TO 1000 VOLTS CURRENT - 0.5 AMPERES

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A , 0.8A
V_{RRM}	50-1000V
I_{FSM}	35 A
I_R	5.0 μ A
V_F	1.0V
$T_j \text{ max.}$	150 °C

FEATURES

- Low profile space
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

MECHANICAL DATA

- Case: MBF Molded plastic
over glass passivated chip
- Terminals: Solder plated, solderable per
J-STD-002B and JESD22-B102D
- Polarity: Polarity symbols marked on body

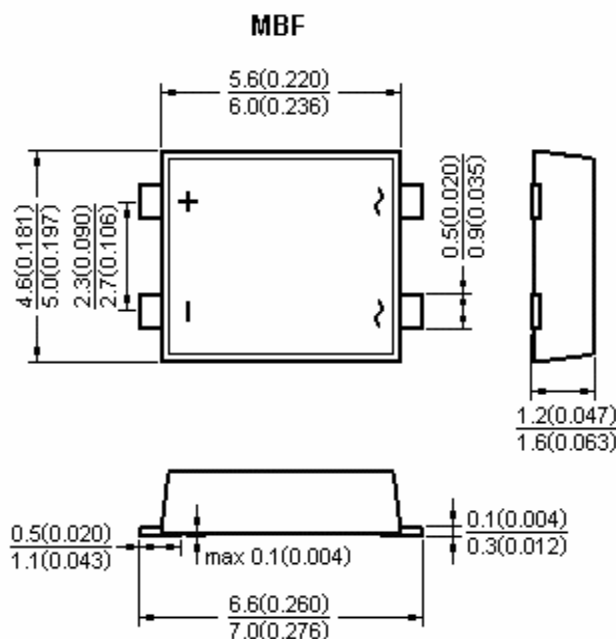
MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise noted)

		Symbol	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	UNIT
Maximum repetitive 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 output rectified current at T _A =30℃ -on glass-epoxy P.C.B(NOTE 1) -on aluminum substrate(NOTE 2)		I _{F(AV)}	0.5 0.8							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load(JEDEC Method)		I _{FSM}	35							A
Maximum instantaneous forwad voltage drop per leg at 0.4A		V _F	1							V
Maximum DC reverse current at T _A = 25 ℃ rated DC blocking voltage per leg T _A = 125℃		I _R	5.0 100							μ A
Typical junction capacitance per leg at 4.0 V ,1MHz		C _J	13							p F
Thermal resistance per leg	(NOTE 1)	R _{θ JA}	85							℃/ W
	(NOTE 2)	R _{θJA}	70							
	(NOTE 1)	R _{θJL}	20							
Operating junction and storage temperature range		T _J , T _{STG}	-55 to +150							℃

NOTE1: On glass epoxy P.C.B. mounted on 0.05×0.05" (1.3×1.3mm) pads

NOTE2: On aluminum substrate P.C.B. with an area of 0.8" × 0.8" (20×20mm) mounted on 0.05×0.05" (1.3×1.3mm) solder pad



Dimensions in millimeters and (inches)

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Characteristic Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

Fig.1 Derating Curve For Output Rectified Current

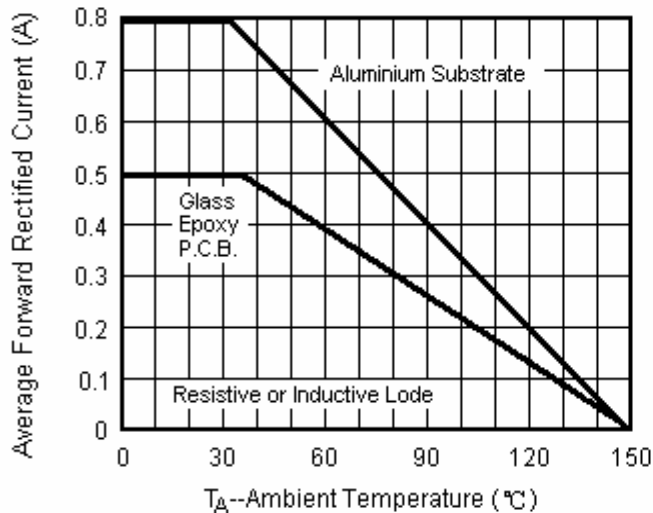


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

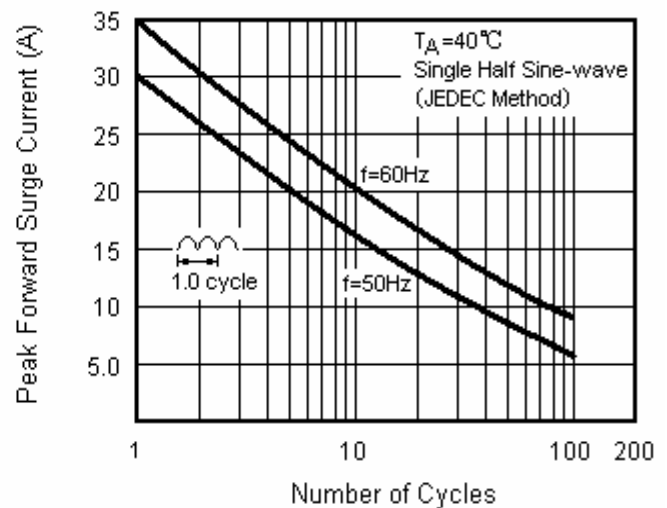


Fig.3 Typical Forward Voltage Characteristics Per Leg

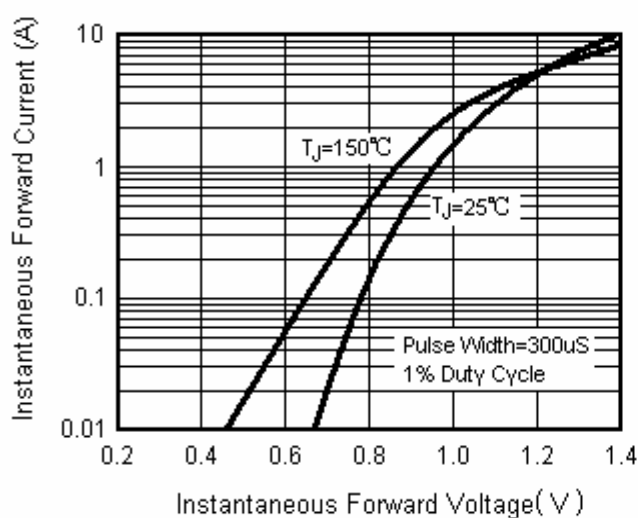


Fig.4 Typical Reverse Leakage Characteristics Per Leg

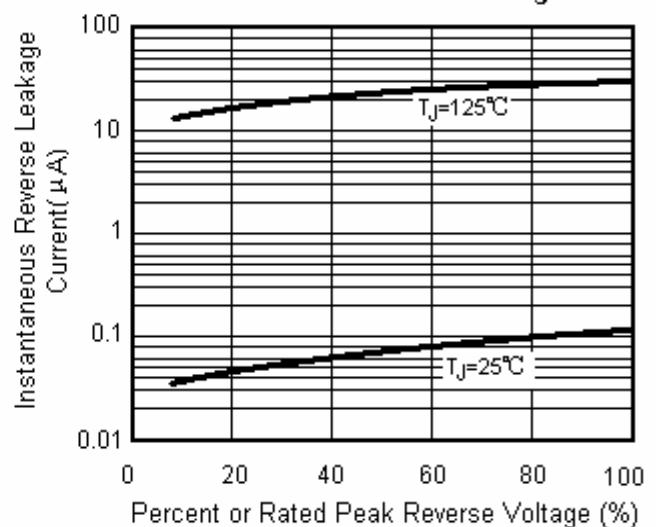


Fig.5 Typical Junction Capacitance Per Leg

