MB05F~MB10F

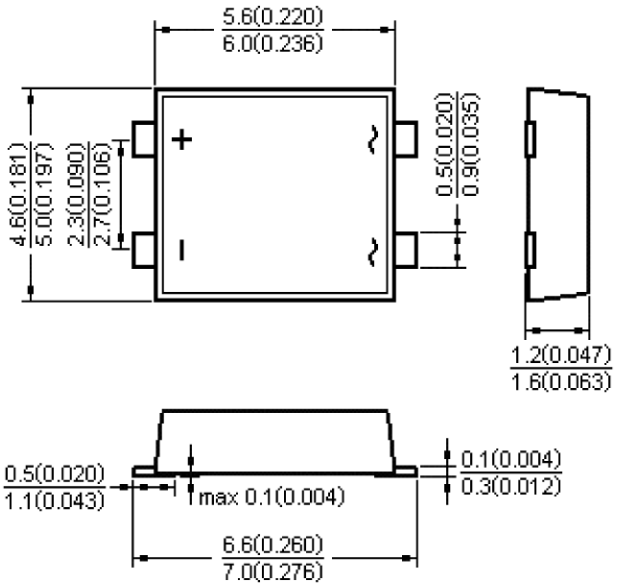
Miniature Glass Passivated Single-Phase Surface Mount Flat Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A , 0.8A
V_{RRM}	50-1000V
I_{FSM}	25 A
I_R	5.0 μA
V_F	1.0V
T_j max.	150 °C

Patent Pending

MBF



Dimensions in millimeters and (inches)

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℃/10 seconds at terminals
- Component in accordance to
  RoHS 2002/95/1 and WEEE 2002/96/EC

Mechanical Date

- 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 & Thermal Characteristics & Electrical Characteristics

(T_A = 25 °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}	25							A
Maximum instantaneous forward voltage drop per leg at 0.4A	V_F	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg T_A = 25 ℃ T_A = 125℃	I_R	5.0 100							μA
Typical junction capacitance per leg at 4.0 V ,1MHz	C_J	13							pF
Thermal resistance per leg (NOTE 1) (NOTE 2) (NOTE 1)	$R_{\theta JA}$ $R_{\theta JA}$ $R_{\theta JL}$	85 70 20							℃/W
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

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Derating Curve For Output Rectified Current

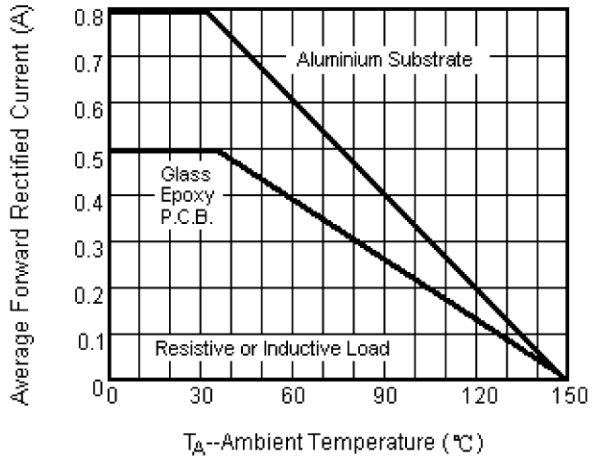


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

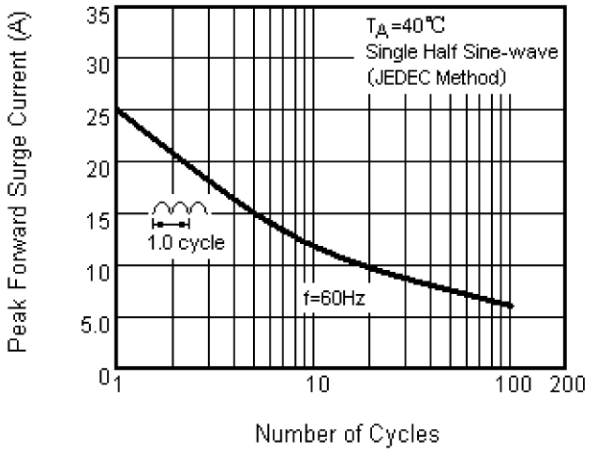


Fig.3 Typical Forward Voltage Characteristics Per Leg

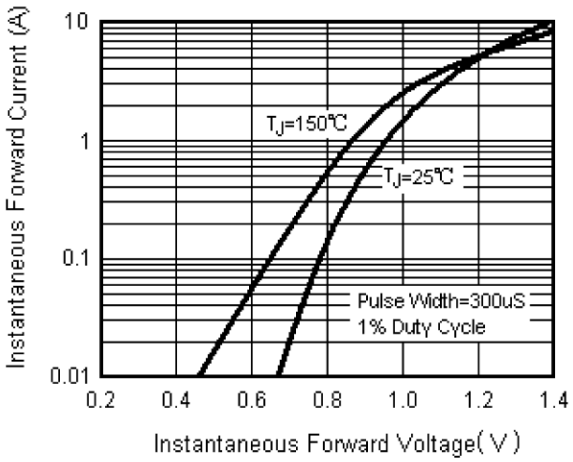


Fig.4 Typical Reverse Leakage Characteristics Per Leg