



## MB05F THRU MB10F

### 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

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward output rectified current at $T_A=30^\circ\text{C}$ on glass-epoxy P.C.B(NOTE 1) on aluminum substrate(NOTE 2)	$I_F(AV)$	0.5 0.8							Amp
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load(JEDEC Method)	$I_{FSM}$	35							Amp
Maximum instantaneous forward voltage dropper leg at 0.4A	$V_F$	1.0							Volts
Maximum DC reverse current at $T_A=25^\circ\text{C}$ rated DC blocking voltage per leg $T_A=125^\circ\text{C}$	$I_R$	5.0 100							uAmp
Typical junction capacitance per leg at 4.0 V ,1MHz	$C_J$	13							pF
Thermal resistance per leg	(NOTE 1) $R_{\theta JA}$	85							°C/W
	(NOTE 2) $R_{\theta JA}$	70							°C/W
	(NOTE 1) $R_{\theta JL}$	20							
Operating junction and storage temperature range	$T_J, T_{stg}$	-55 to +150							°C

### NOTES:

- 1- On glass epoxy P.C.B. mounted on 0.05×0.05" (1.3×1.3mm) pads
- 2- 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 ( $T_A=25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig.1 Derating Curve For Output Rectified Current

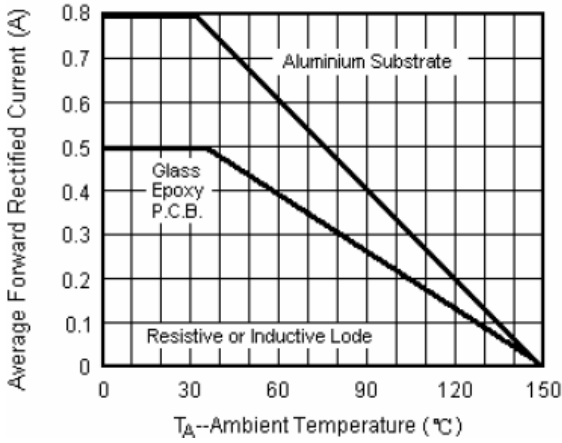


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

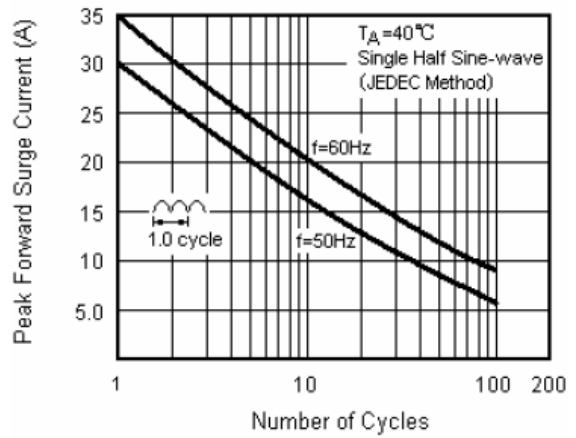


Fig.3 Typical Forward Voltage Characteristics Per Leg

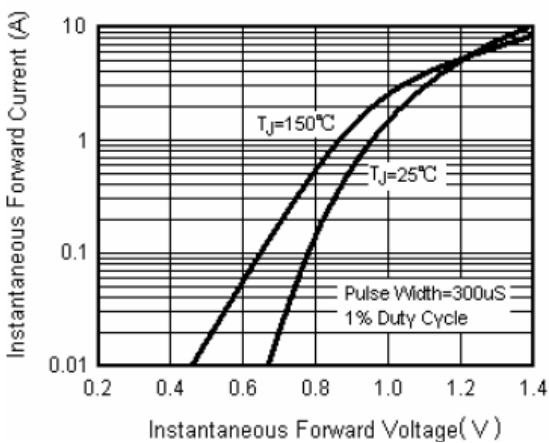


Fig.4 Typical Reverse Leakage Characteristics Per Leg

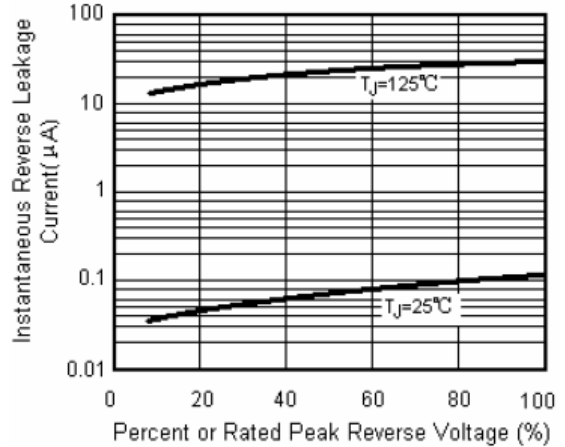
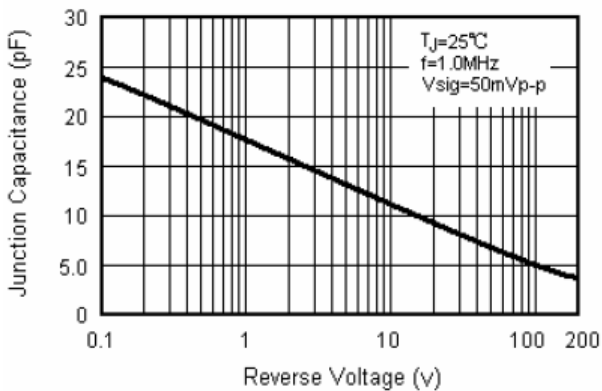


Fig.5 Typical Junction Capacitance Per Leg





Package Dimensions

MBF

unit:mm

