

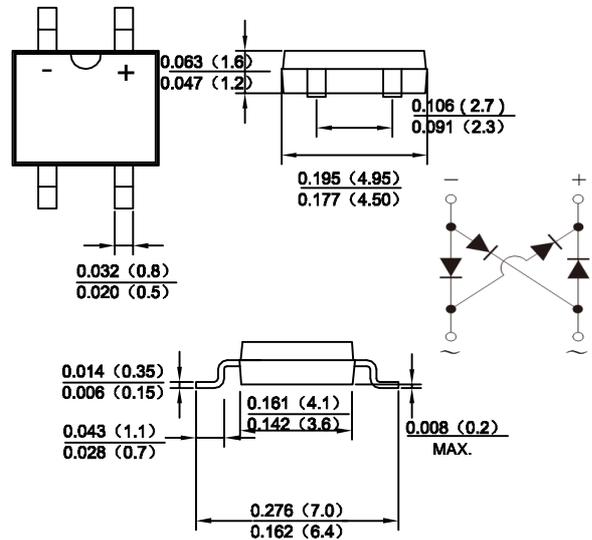
### Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Designed for surface mount application
- Plastic material-UL flammability 94V-0

### Mechanical Data

- Case: MB-F, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- Lead Free: For RoHS / Lead Free Version,

### MBF



dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	MB05F	MB1F	MB2F	MB4F	MB6F	MB8F	MB10F	UNITS
Peak Repetitive Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$								
DC Blocking Voltage	$V_{DC}$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)@Tc=100°C (Note 2)@Tc=100°C	$I_{F(AV)}$	0.5 0.8						A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30						A	
$I^2t$ Rating for Fusing (t < 8.3ms)	$I^2t$	3.735						A <sup>2</sup> s	
Forward Voltage per element @IF=0.5A @IF=0.8A	$V_{FM}$	0.95 1.0						V	
Peak Reverse Current @TA=25°C At Rated DC Blocking Voltage @TA=125°C	$I_R$	5.0 200						uA	
Typical Junction Capacitance per leg (Note3)	$C_J$	13						pF	
Typical Thermal Resistance per leg	$R_{\theta JA}$	60						°C/W	
	$R_{\theta JL}$	16							
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55to+150						°C	

Note:1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.

2. Mounted on aluminum substrate PC board with 1.3mm<sup>2</sup> solder pad.

3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Fig. 1 Output Current Derating Curve

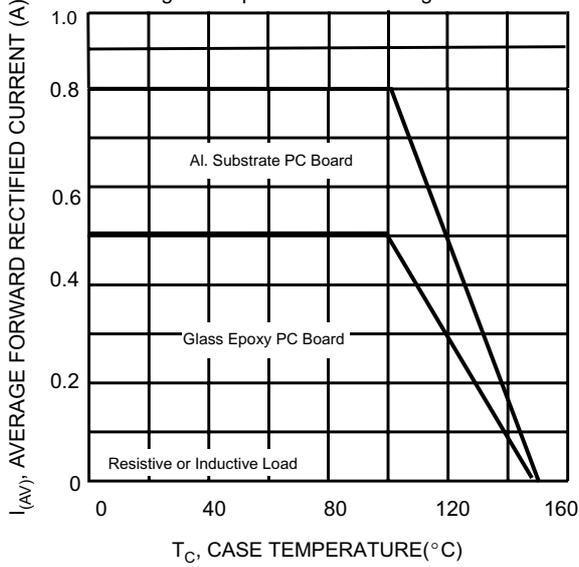


Fig. 2 Typical Forward Characteristics (per leg)

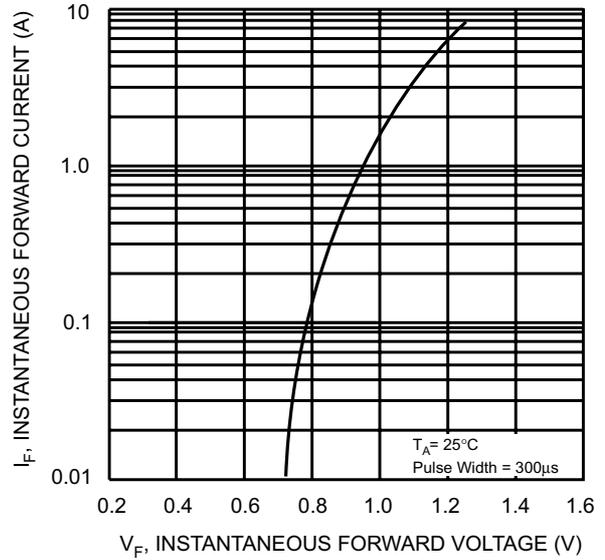


Fig. 3 Maximum Peak Forward Surge Current (per leg)

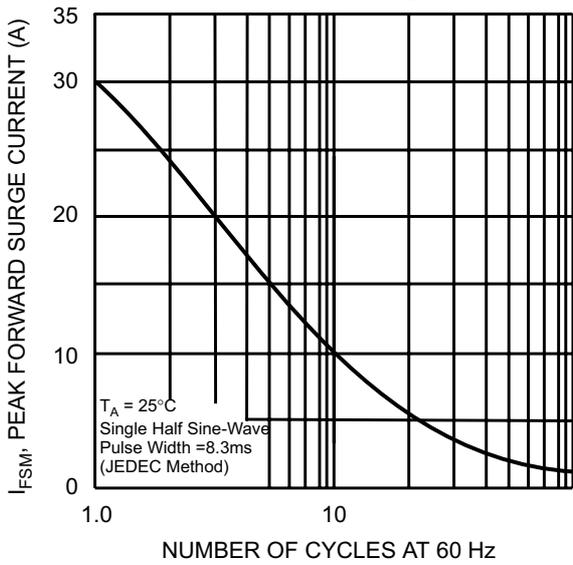


Fig. 4 Typical Junction Capacitance

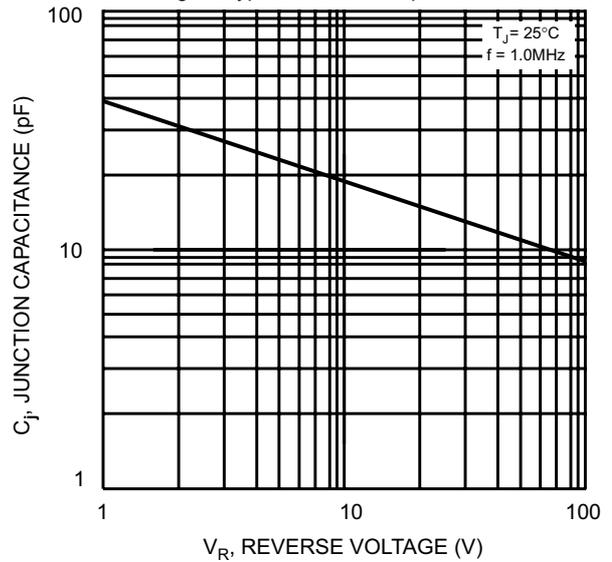


FIG.5 TYPICAL REVERSE CHARACTERISTICS

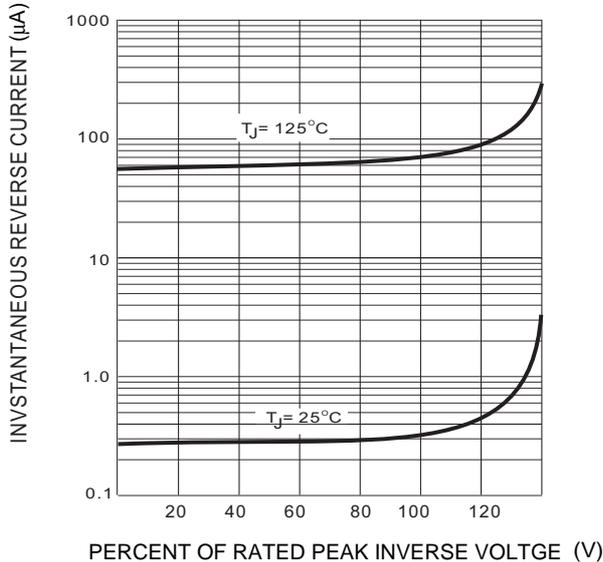
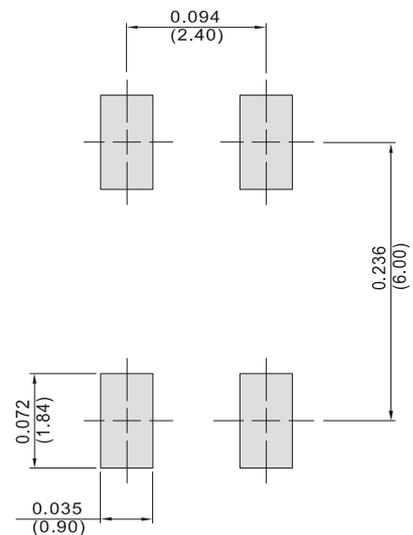


FIG.6 MOUNTING PAD LAYOUT



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