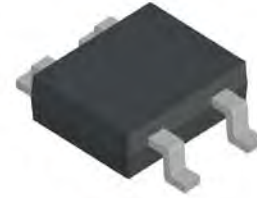


Features

- Glass passivated die construction
- Low forward voltage drop
- High surge current capability
- Designed for surface mount application
- Component in accordance to RoHS 2011/65/EU



RoHS
COMPLIANT

MBF-S

Mechanical Data

- **Case:** MBF-S
Molding compound meets UL 94 V-0 flammability rating
- **Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity:** Polarity symbols marked on body
- **Marking:** type number

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A, 0.8A
V_{RRM}	50V to 1000V
I_{FSM}	30A
I_R	5.0 μ A
V_F	1.0V
$T_{j,max.}$	150 $^{\circ}$ C

Maximum Ratings & Thermal Characteristics ($T_A = 25^{\circ}$ C unless otherwise noted)

Items	Symbol	MB 05F	MB 1F	MB 2F	MB 4F	MB 6F	MB 8F	MB 10F	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS reverse 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 at T_A (see Fig1.) -on glass-epoxy P.C.B. ⁽¹⁾ -on aluminum substrate ⁽²⁾	$I_{F(AV)}$	0.5 0.8							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30							A
Thermal resistance from junction to ambient	$R_{\theta JA}^{(1)}$	85							$^{\circ}$ C/W
Thermal resistance from junction to lead	$R_{\theta JL}^{(1)}$	20							
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^{\circ}$ C

Note: 1. On glass epoxy P.C.B. mounted on 0.05x0.05" (1.3mmx1.3mm) pads

2. On aluminum substrate P.C.B. with mounted on 0.05x0.05" (1.3x1.3mm) solder pad

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

Items	Test conditions	Symbol	Min	Type	Max	Unit
Forward voltage per element	$I_F=0.5\text{A}$	V_F	-	-	1.0	V
Peak reverse current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	I_R	-	-	5.0	μA
	$T_A=125^\circ\text{C}$				500	

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

Fig.1 Output Current Derating Curve

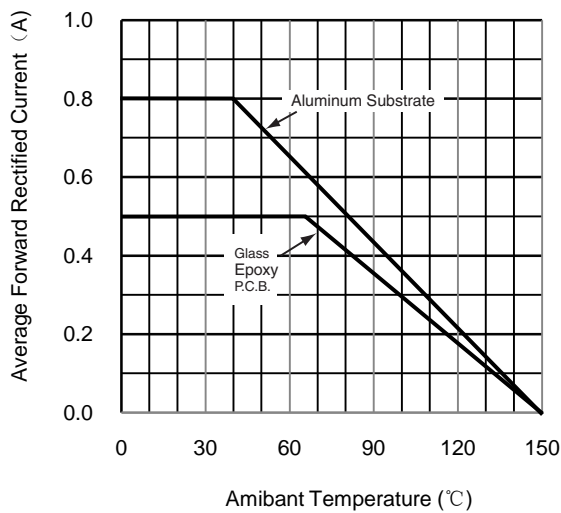


Fig.2 Maximum Peak Forward Surge Current(per leg)

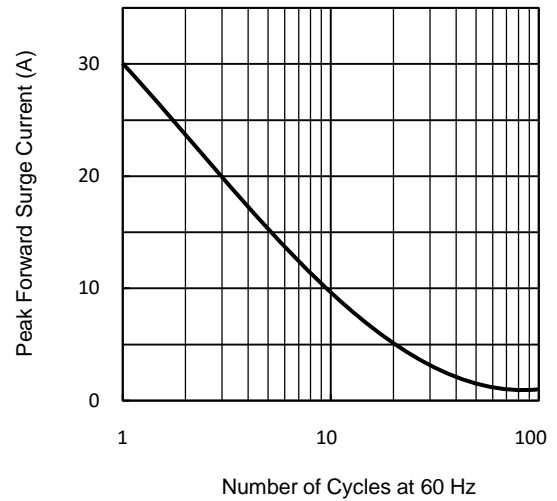


Fig.3 Typical Forward Characteristics (per leg)

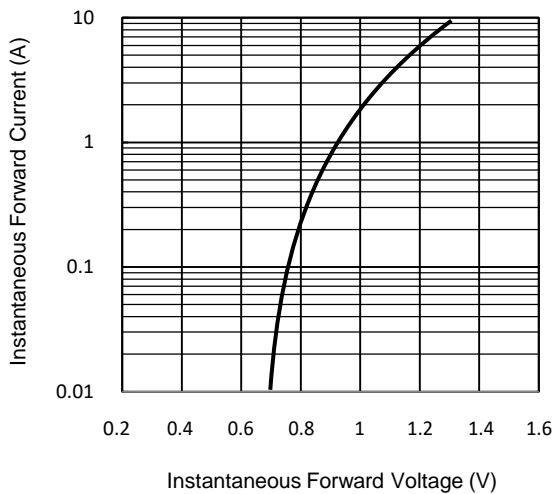
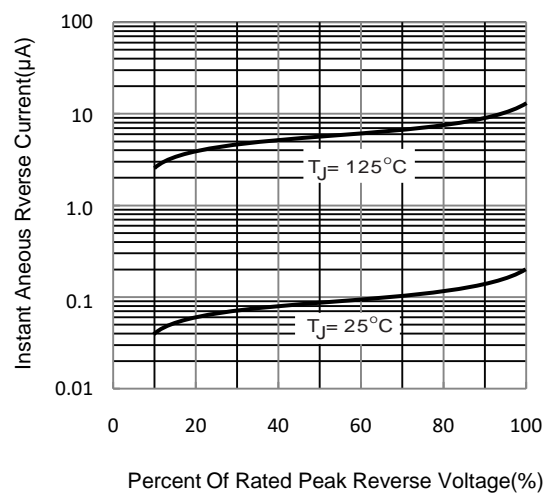
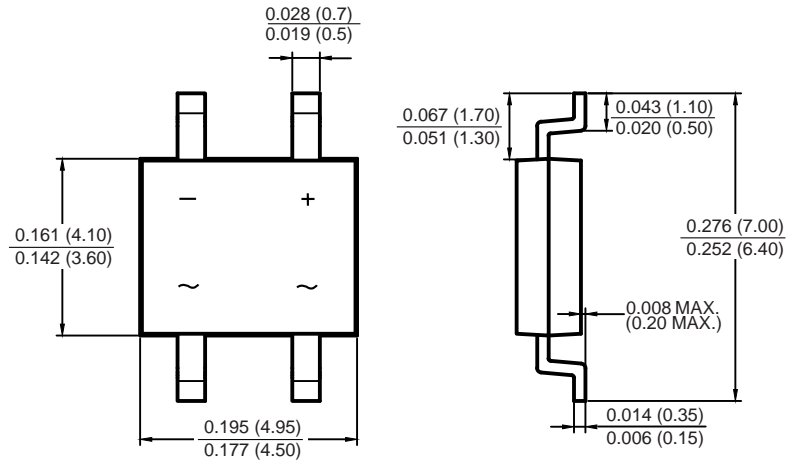


Fig.4 Typical Reverse Characteristics

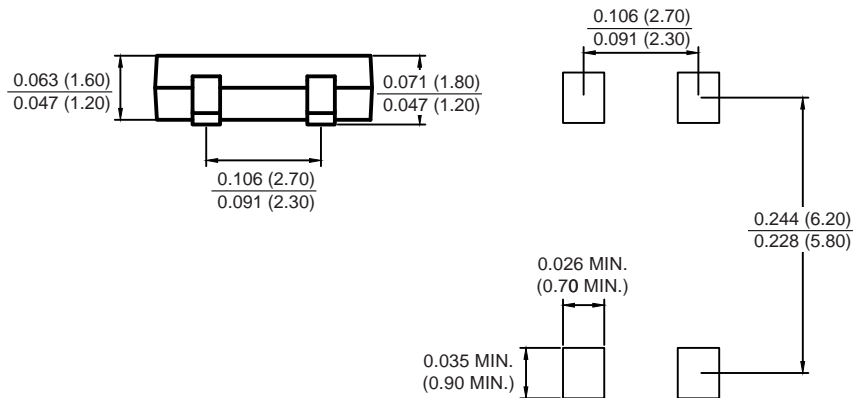


Package Outline

MBF-S



Mounting Pad Layout



Dimensions in inches and (millimeters)