

Features

- Low forward voltage drop
- Ideal for automated placement
- Glass Passivated chip junction
- Low profile space
- 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

Major Ratings and Characteristics

I_F	1 A
V_{RRM}	50 V to 1000 V
I_{FSM}	35 A
I_R	5 μ A
V_F	1.1V
T_j max.	150 °C

Maximum Ratings & Thermal Characteristics (T_A = 25 °C unless otherwise noted)

Items	Symbol	MB 05F	MB 1F	MB 2F	MB 4F	MB 6F	MB 8F	MB 10F	UNIT
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Maximum average forward output rectified current @T _A = 30°C	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	35							A
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	20							°C/W
Thermal resistance from junction to ambient ⁽¹⁾	$R_{\theta JA}$	70							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Note 1: Units mounted on P.C.B with 0.05×0.05"(1.3×1.3 mm)pads

Electrical Characteristics (T_A = 25 °C unless otherwise noted)

Items	Test conditions	Symbol	Min	Type	Max	UNIT
Maximum instantaneous forward voltage drop per leg at 1.0A	$I_F=1A$	V_F	-	-	1.1	V
Reverse current	$V_R=V_{DC}$	I_R	-	-	5	μ A
			-	-	100	
Typical junction capacitance	4.0 V ,1MHz	C_J	-	13	-	p F

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

Fig.1 Derating Curve For Output Rectified Current

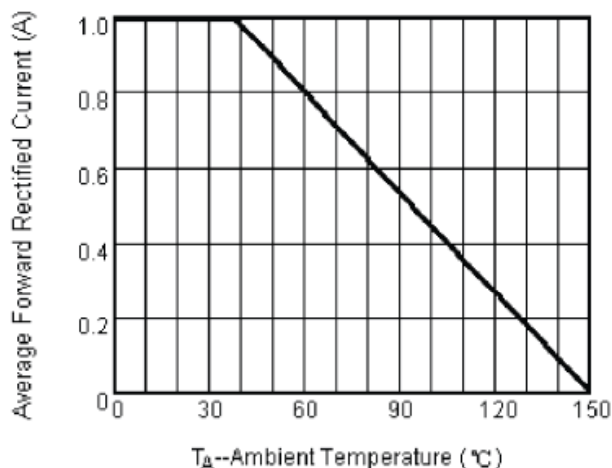


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

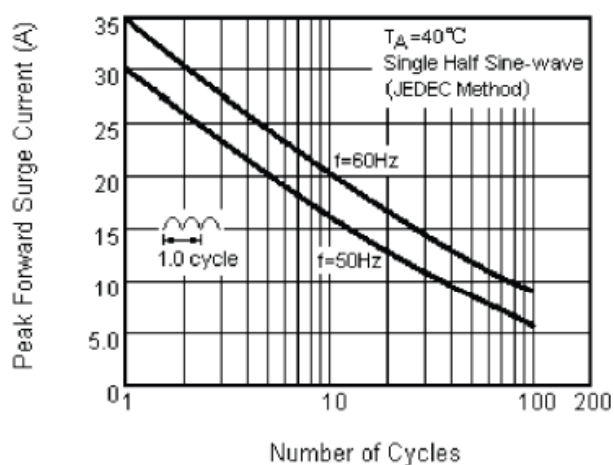


Fig.3 Typical Forward Voltage Characteristics Per Leg

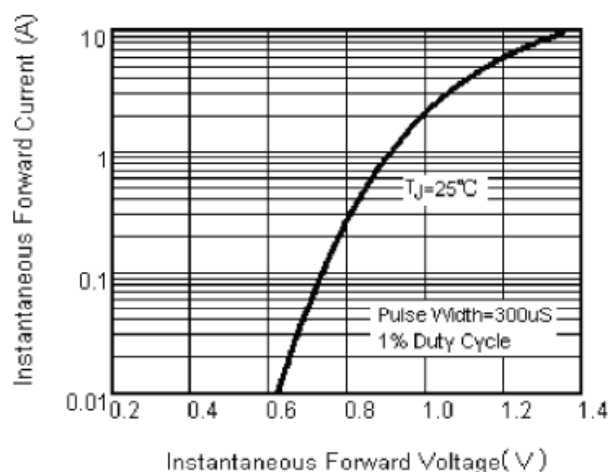


Fig.4 Typical Reverse Leakage Characteristics Per Leg

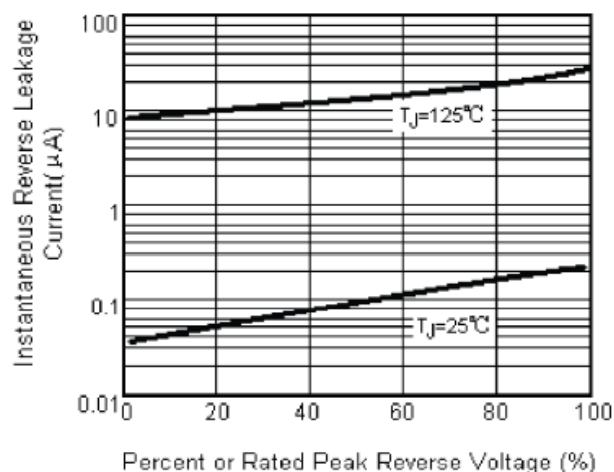
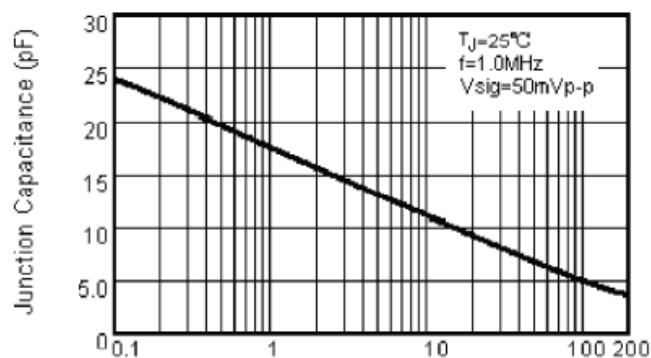
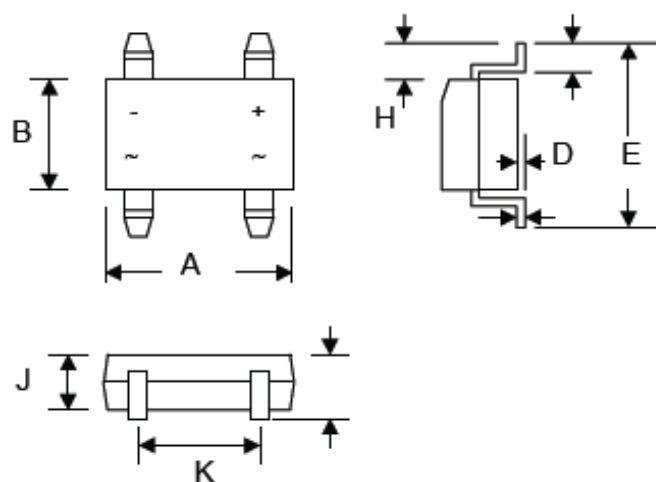


Fig.5 Typical Junction Capacitance Per Leg



Package Outline



MBF

Dim	Min	Max
A	4.50	4.95
B	3.60	4.10
C	0.15	0.35
D	—	0.20
E	6.40	7.00
G	0.50	1.10
H	1.30	1.70
J	1.20	1.60
K	2.30	2.70
L	—	1.80
All Dimensions in mm		