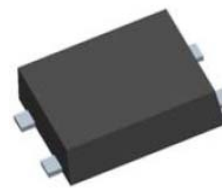


Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junction
- Low forward voltage drop
- Low leakage current
- 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



Package: MBF

Major Ratings and Characteristics

$I_{F(AV)}$	0.5A, 0.8A
V_{RRM}	50V ~ 1000V
I_{FSM}	25 A
I_R	5 μ A
V_F	1.0 V
T_j (max.)	150°C

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

Items	Symbol	MB 05F	MB 1F	MB 2F	MB 4F	MB 6F	MB 8F	MB 10F	UNIT
Peak Repetitive Reverse Voltage DC Blocking Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	
Maximum average forward rectified current at T _A =30℃ -on glass-epoxy P.C.B ⁽¹⁾ -on aluminum substrate ⁽²⁾	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}	25							
Thermal resistance from junction to ambient	R _{θJA} ⁽¹⁾	85							℃/W
	R _{θJA} ⁽²⁾	70							
Thermal resistance from junction to lead ⁽¹⁾	R _{θJL}	20							
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							℃

Note 1 : On glass epoxy P.C.B. mounted on 0.05×0.05 " ($1.3 \times 1.3\text{mm}$) pads

Note 2 : On aluminum substrate P.C.B. with an area of 0.8×0.8 " ($20 \times 20\text{mm}$) mounted on 0.05×0.05 " ($1.3 \times 1.3\text{mm}$) solder pad

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

Items	Test conditions		Symbol	Min	Typ	Max	UNIT
Instantaneous forward voltage per leg	$I_F=0.4\text{ A}$ ⁽³⁾		V_F	--	0.93	1	V
Reverse current	$V_R=V_{DC}$	$T_J=25^\circ\text{C}$	I_R	--	--	5	μA
		$T_J=125^\circ\text{C}$		--	--	500	
Junction capacitance	$f=1\text{MHz}, V_R=4\text{V}$		C_j	--	15	--	pF

Note 3 : Pulse test: 300 μs pulse width, 1% duty cycle.

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

Fig.1: Derating Curve For Output Rectified Current

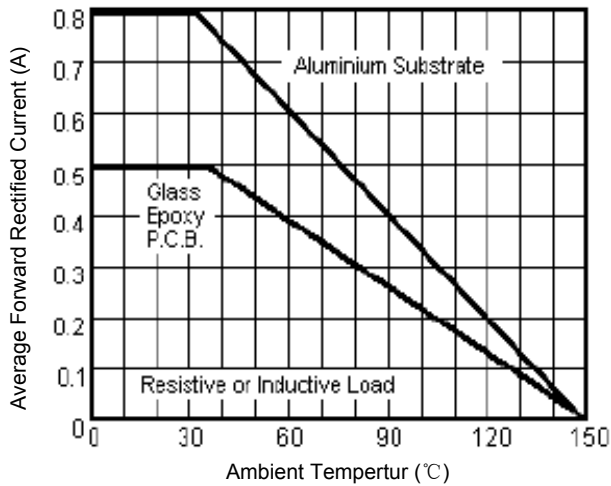


Fig.2: Max.Non-Repetitive Peak Forward Surge Current Per Leg

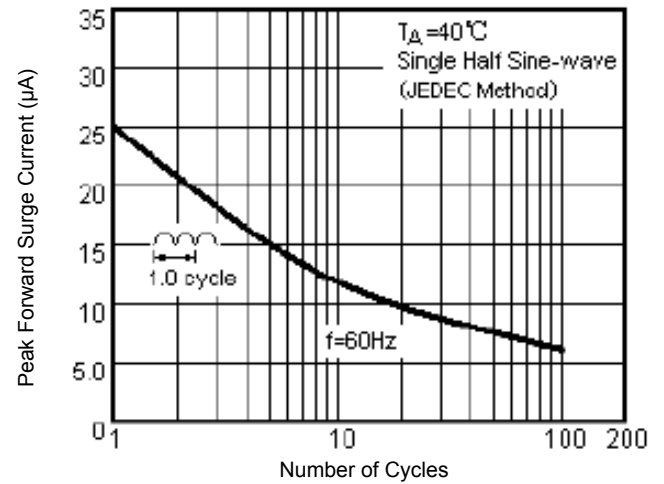


Fig.3: Typical Forward Voltage Characteristics Per Leg

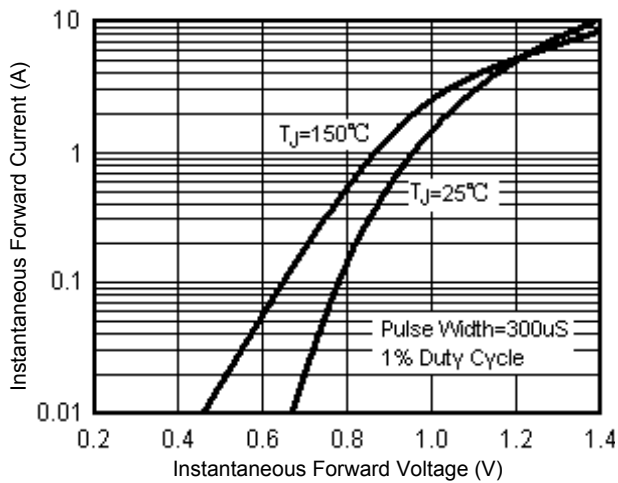
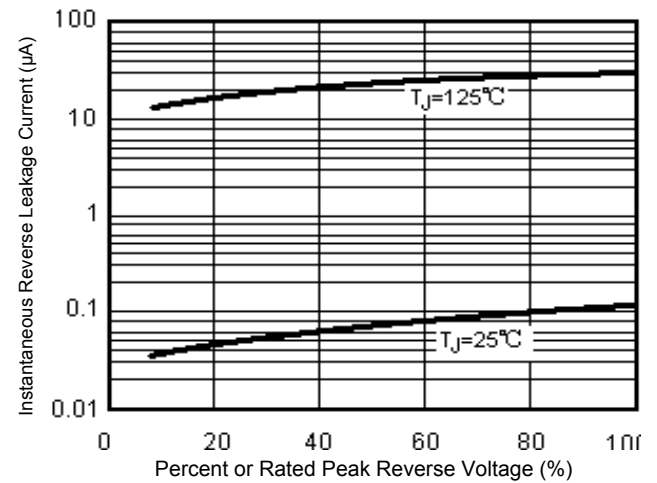
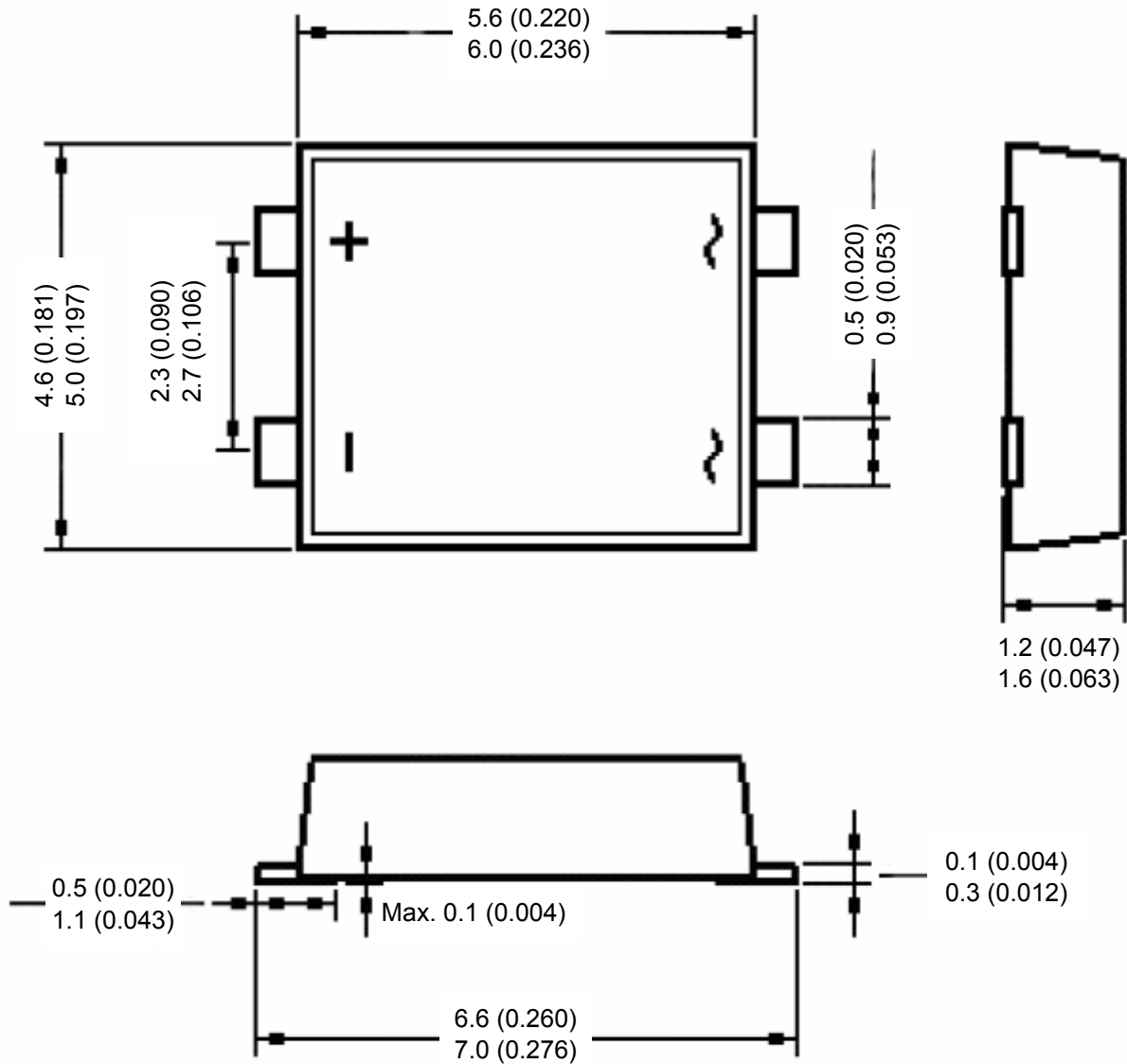


Fig.4: Typical Reverse Leakage Characteristics Per Leg



Package Outline

MBF



Dimensions in millimeters and (inches)

Notice

- Product is intended for use in general electronics applications, especially applicable to energy conservation electronic ballast of fluorescent lamp.
- Product should be worked less than the ratings; if exceeded, may cause permanent damage or introduce latent failure mechanisms.
- The absolute maximum ratings are rated values and must not be exceeded during operation. The following are the general derating methods you design a circuit with a device.
 - $I_{F(AV)}$: We recommend that the worst case current be no greater than 80%.
 - I_{FSM} : This rating specifies the non-repetitive peak current. This is only applied for an abnormal operation, which the general during the lifespan of the device.
 - T_J : Derate this rating when using a device in order to ensure high reliability. We recommend that the device be used at a T_J of below 125°C



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