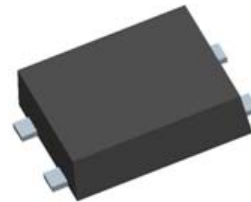


Features

- Low profile package
- Ideal for automated placement
- Ultrafast reverse recovery time
- Low power losses, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering:
260°C/10 seconds at terminals
- Component in accordance to
RoHS 2002/95/1 and WEEE 2002/96/EC

Patented Product



MBF

Mechanical Date

- **Case:** MBF Molded plastic body over Schottky barrier chips
- **Terminals:** Solder plated, solderable per JESD22-B102
- **Polarity:** Polarity symbols marked on body

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	20V to 100V
I_{FSM}	30 A
V_F	0.50V, 0.55V, 0.70V, 0.85V
$T_j \text{ max.}$	125 °C

Maximum Ratings & Thermal Characteristics

($T_A = 25\text{ °C}$ unless otherwise noted)

Items	Symbol	KMB12F	KMB14F	KMB16F	KMB18F	KMB110F	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	80	100	V
Maximum RMS voltage	V_{RMS}	14	28	42	56	70	V
Maximum DC blocking voltage	V_{DC}	20	40	60	80	100	V
Maximum average forward output rectified current at $T_A=30\text{ °C}$	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30					A
Thermal resistance from junction to ambient per leg ⁽¹⁾	$R_{\theta JA}$	85					°C/W
Thermal resistance from junction to lead per leg ⁽¹⁾	$R_{\theta JL}$	20					°C/W
Operating junction temperature range	T_J	-55 to +125					°C
Storage temperature range	T_{STG}	-55 to +125					°C

Note 1: Units mounted on P.C.B. with 0.5×0.5" (13×13mm) pads

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

Items	Test conditions	Symbol	KMB12F	KMB14F	KMB16F	KMB18F~ KMB110F	UNIT
Instantaneous forward voltage per leg	$I_F=1.0A$ ⁽²⁾	V_F	0.50	0.55	0.70	0.85	V
Reverse current per leg	$V_R=V_{DC}$ $T_J=25\text{ °C}$ $T_J=100\text{ °C}$	I_R	0.5 20				mA

Note 2: Pulse test:300µs pulse width,1% duty cycle.

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

Fig.1 Forward Current Derating Curve

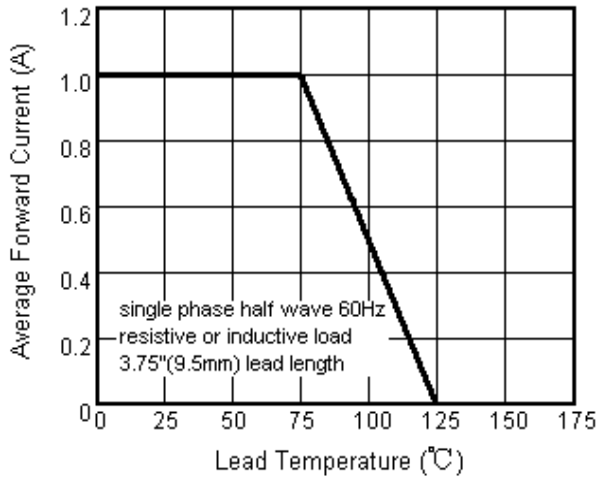


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

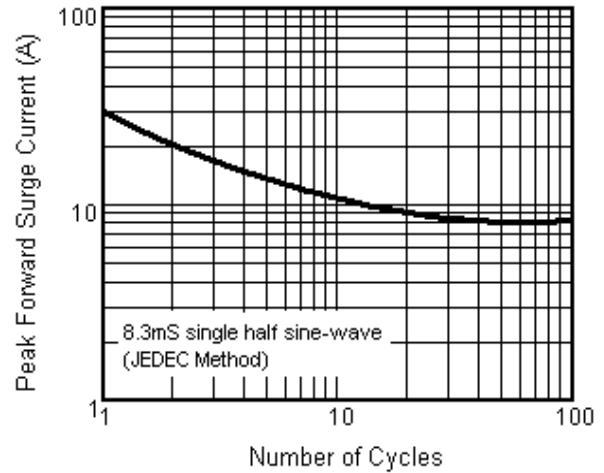


Fig.3 Typical Instantaneous Forward Characteristics

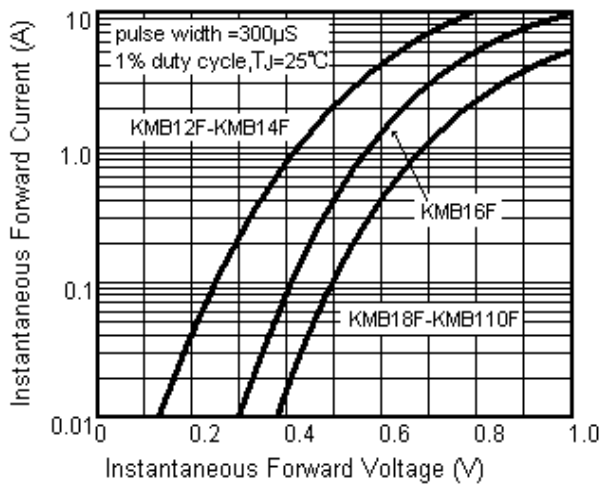
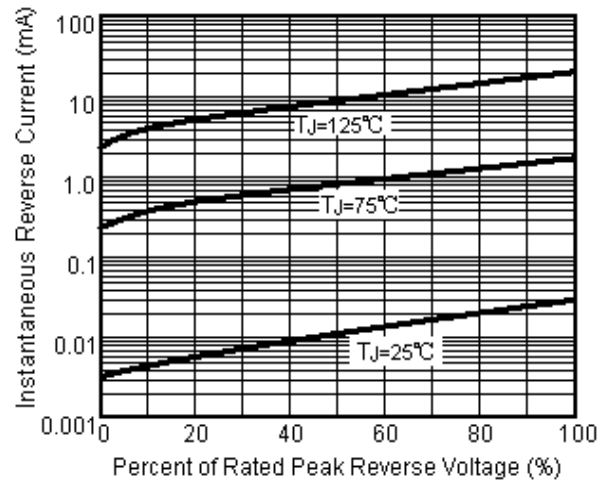
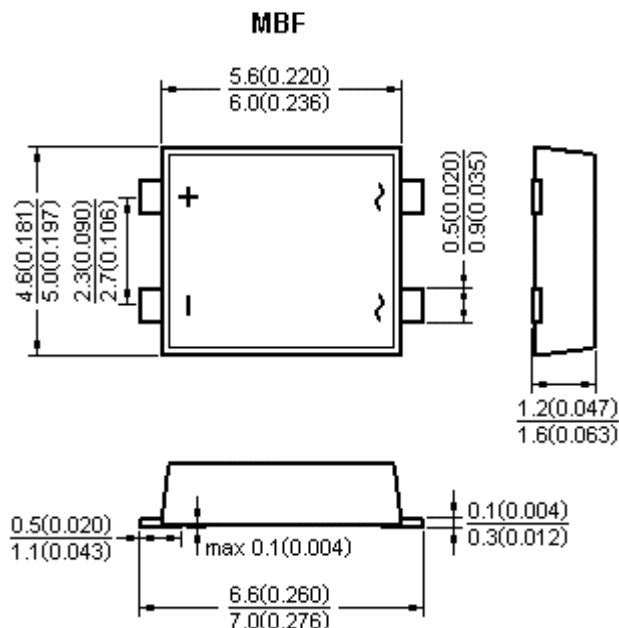


Fig.4 Typical Reverse Characteristics



Package Outline



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% .

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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