

# KMB12F thru KMB110F

## Schottky Surface Mount Flat Bridge Rectifier

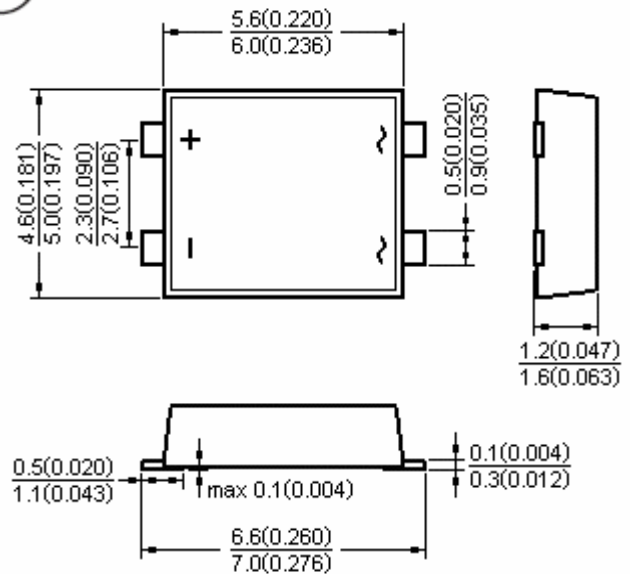
VOLTAGE - 20 TO 100 VOLTS    CURRENT - 1.0 AMPERES

### Major Ratings and Characteristics

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



MBF



Dimensions in millimeters and (inches)

### 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

### MECHANICAL DATA

- **Case:** MBF molded plastic body over Schottky barrier chips
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Polarity symbols marked on body

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	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 rectified current 0.2×0.2"(5.0×5.0mm)copper pad area	$I_{F(AV)}$	1.0					A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30					A
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.50	0.55	0.70	0.85		V
Maximum DC reverse current $T_A = 25\text{ °C}$ at Rated DC blocking voltage $T_A = 100\text{ °C}$	$I_R$	0.5 20					mA
Typical Junction Capacitance at 4.0V, 1.0MHz	$C_J$	250			125		pF
Typical Thermal resistance (Note1)	$R_{\theta JA}$ $R_{\theta JL}$	85 20					°C/W
Operating junction temperature range	$T_J$	-55 to +125					°C
Storage temperature range	$T_{STG}$	- 55 to +150					°C

Note: 1. Thermal resistance from junction to ambient and from junction to lead P.C.B. mounted on 0.2×0.2"(5.0×5.0mm)copper pad areas.

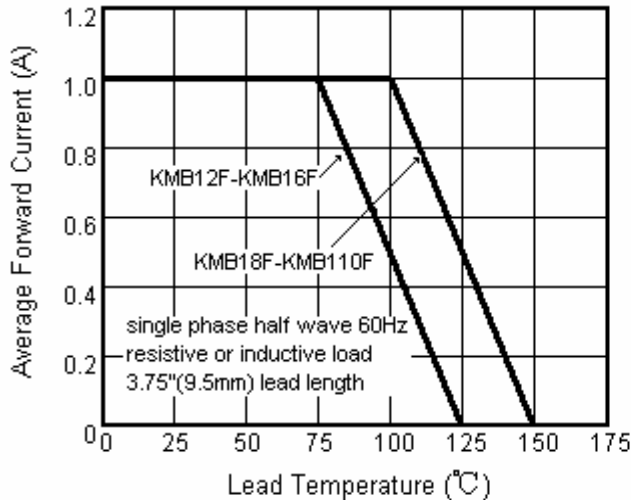
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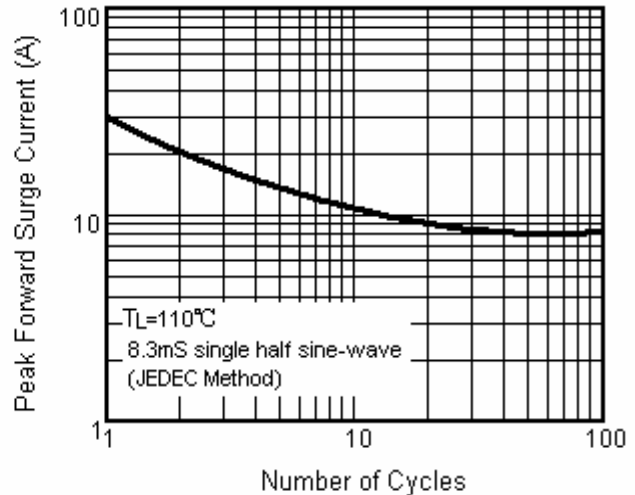
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### Characteristic Curves ( $T_A=25^\circ\text{C}$ unless otherwise noted)

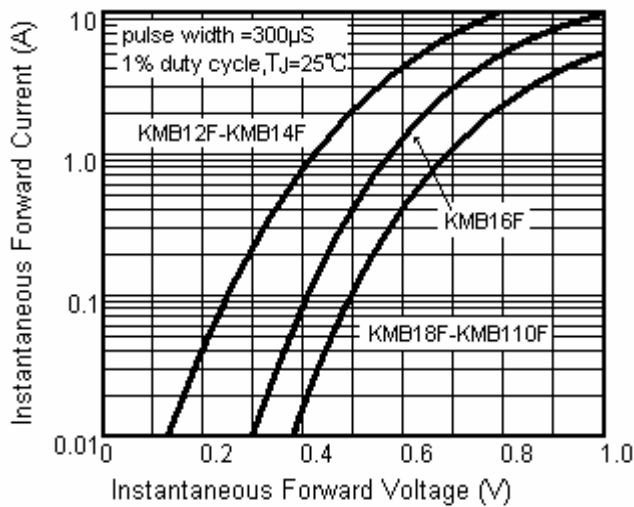
**Fig.1 Forward Current Derating Curve**



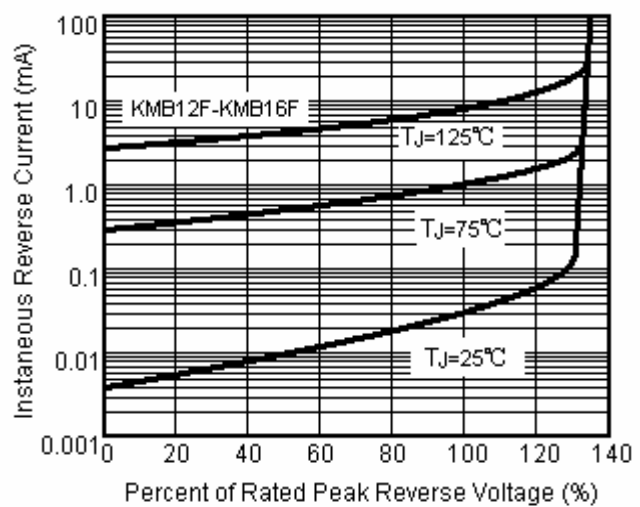
**Fig.2 Maximum Non-Repetitive Peak Forward Surge Current**



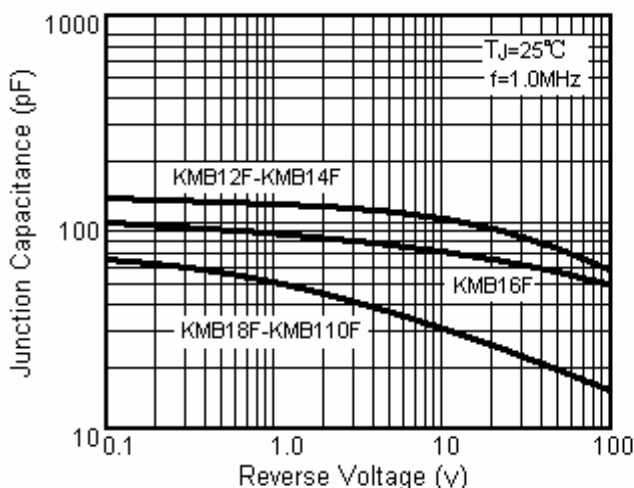
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4A Typical Reverse Characteristics**



**Fig.5 Typical Junction Capacitance**



**Fig.4B Typical Reverse Characteristics**

