

SILICON BRIDGE RECTIFIERS

KMB12F THRU KMB11F

VOLTAGE RANGE 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

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



MECHANICAL DATA

- **Case:** MBF molded plastic body over Schottky barrier chips

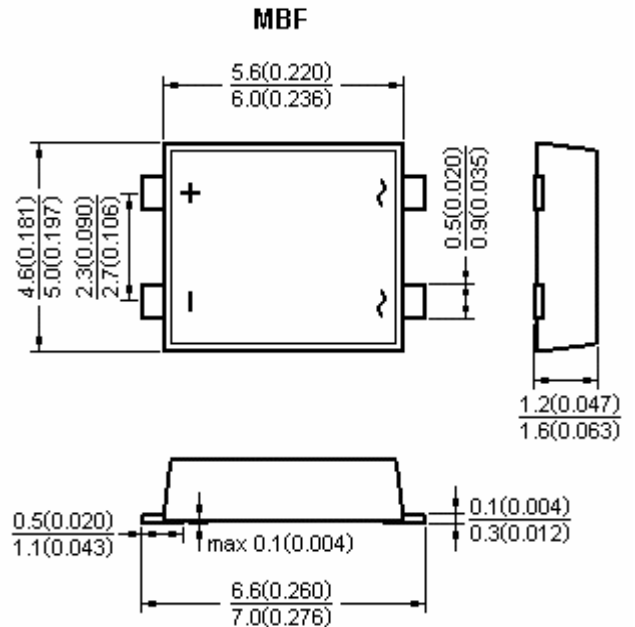
- **Polarity:** Polarity symbols marked on body

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

($T_A = 25^\circ\text{C}$ unless otherwise not)

	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 $T_A = 25^\circ\text{C}$ at Rated DC blocking voltage $T_A = 100^\circ\text{C}$	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.



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

Fig.1 Forward Current Derating Curve

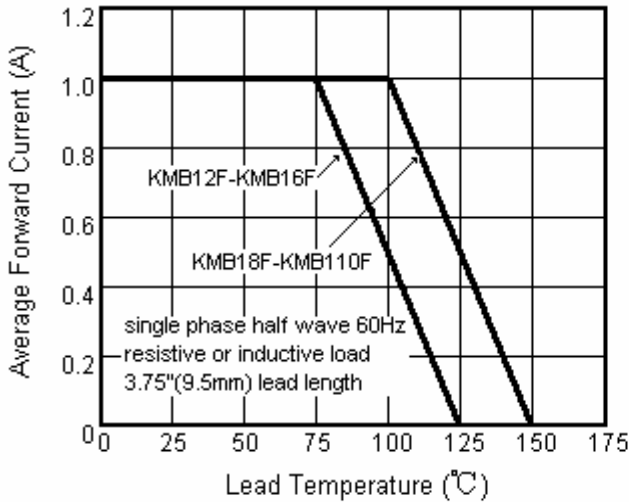


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

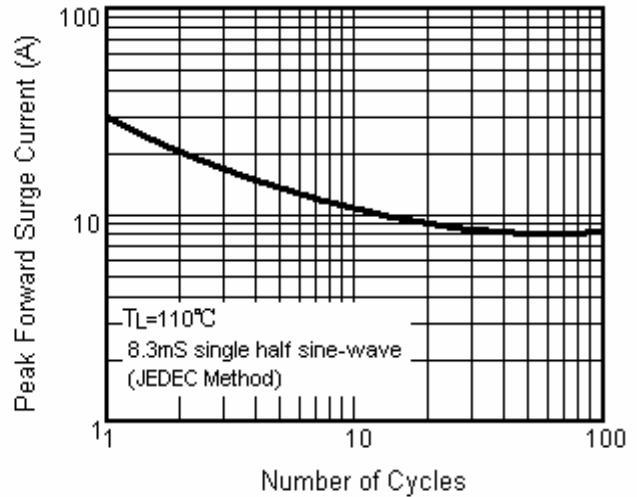


Fig.3 Typical Instantaneous Forward Characteristics

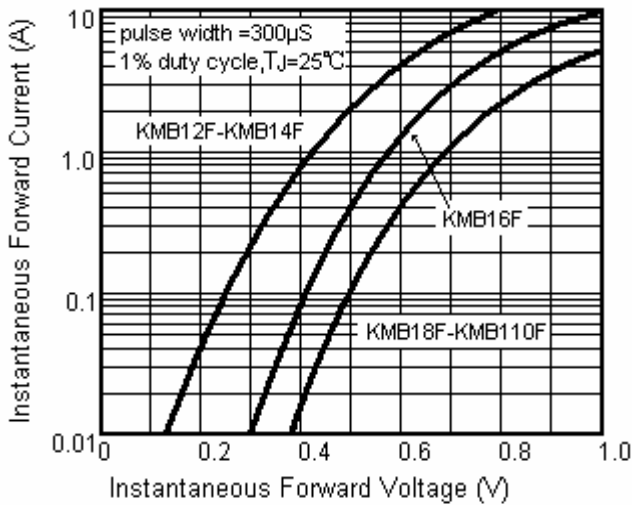


Fig.4A Typical Reverse Characteristics

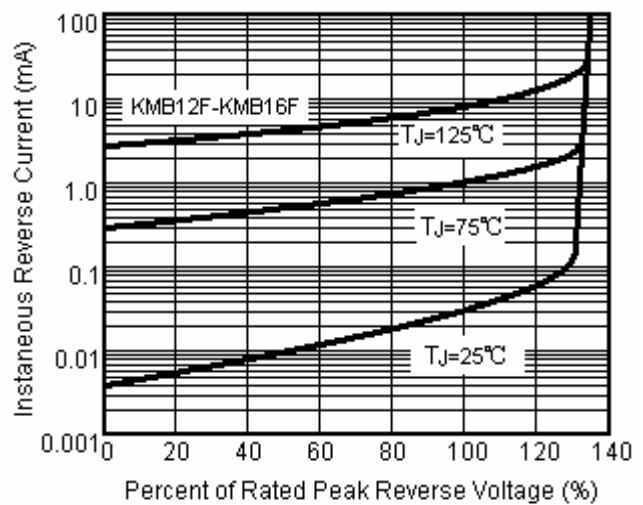


Fig.5 Typical Junction Capacitance

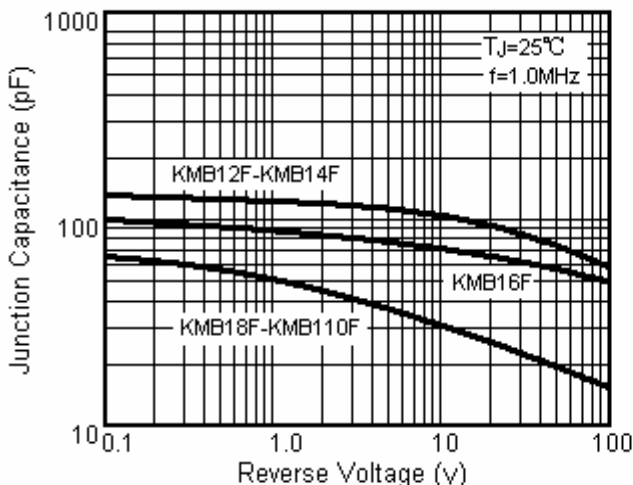


Fig.4B Typical Reverse Characteristics

