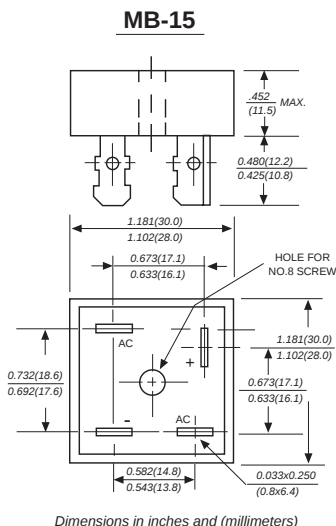


KBPC15005 THRU KBPC1510 AND MB1505 THRU MB1510

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 15.0 Amperes



FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Metal case

Terminals: Plated 0.25 " (6.35mm) lug.

Polarity: Polarity symbols marked on case

Mounting: Thru hole for #8 screw, 20in.-lbs. torque max.

Weight: 1.02 ounce, 29 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

	SYMBOLS	KBPC 15005 MR1505	KBPC 1501 MB151	KBPC 1502 MB152	KBPC 1504 MB154	KBPC 1506 MB156	KBPC 1508 MR158	KBPC 1510 MB1510	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS
Maximum average forward output rectified current at $T_c=55^\circ\text{C}$ (Note 1,2)	$I_{(AV)}$	15							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	300.0							Amps
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	373							A^2s
Maximum instantaneous forward voltage drop per bridge element at 7.5A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	10							μA
		1.0							mA
Isolation voltage from case to leads	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	2.0							$^\circ\text{C/W}$
Operating junction temperature range	T_J	-65 to +150							$^\circ\text{C}$
storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

NOTES:

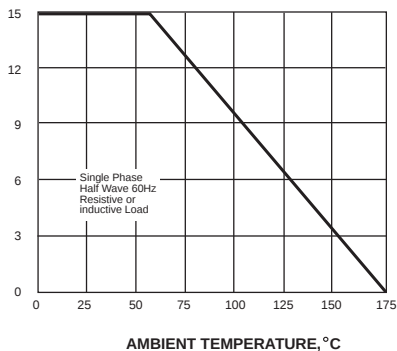
1. Unit mounted on 5 " x 4 " x 3 " thick (12.8cm x 10.2cm x 7.3cm) Al. plate.

2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.

RATINGS AND CHARACTERISTIC CURVES KBPC15005 THRU KBPC1510 AND MB1505 THRU MB1510

AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT,
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

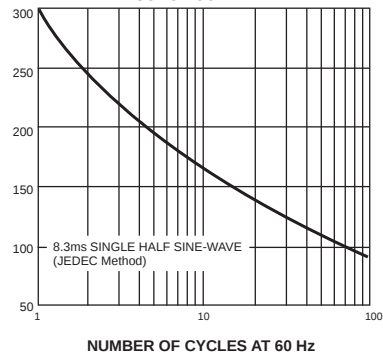
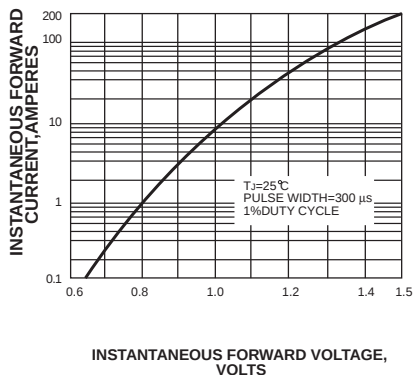


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

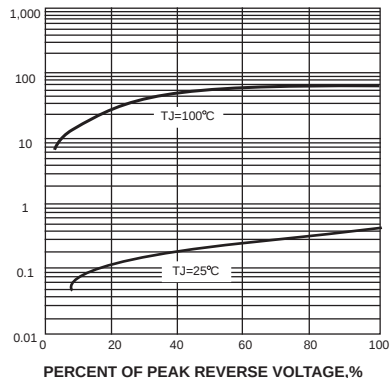
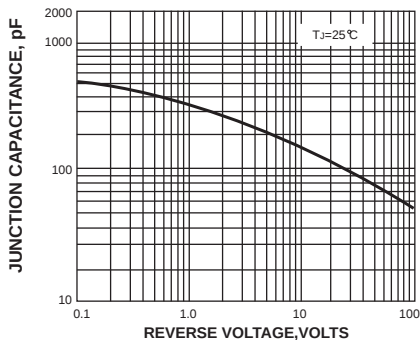


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

