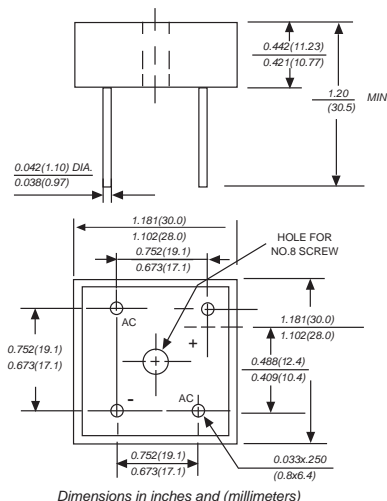


KBPC15005W THRU KBPC1510W AND MB1505W THRU MB1510W SILICON BRIDGE RECTIFIERS

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

KBPC-W/MB-25W



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, at 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Metal case
Terminals: Lead 0.040" (1.02mm) diameter.
Polarity: Polarity symbols marked on case
Mounting: Thru hole for #8 screw, 20in.-lbs. torque max.
Weight: 0.93 ounce, 26.4 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 current capacitive load, derate by 20%.

	SYMBOLS	KBPC 15005W MR1505W	KBPC 1501W MB151W	KBPC 1502W MB152W	KBPC 1504W MB154W	KBPC 1506W MB156W	KBPC 1508W MR158W	KBPC 1510W MB1510W	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	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							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-65 to +150							$^\circ\text{C}$
storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

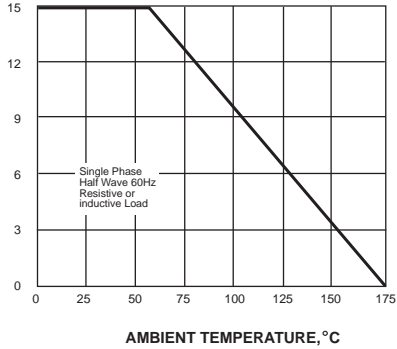
NOTES:

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 KBPC15005W THRU KBPC1510W AND MB1505W THRU MB1510W

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

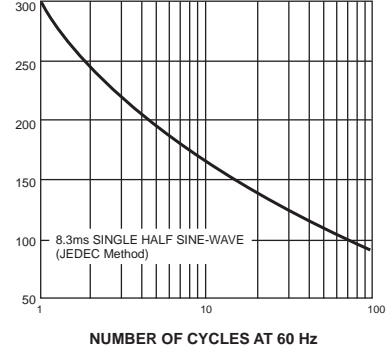


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

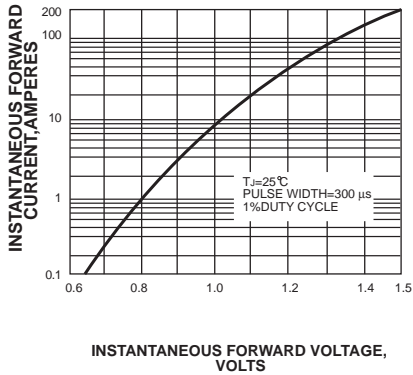


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

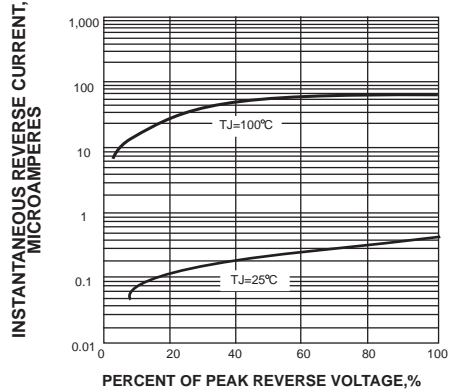
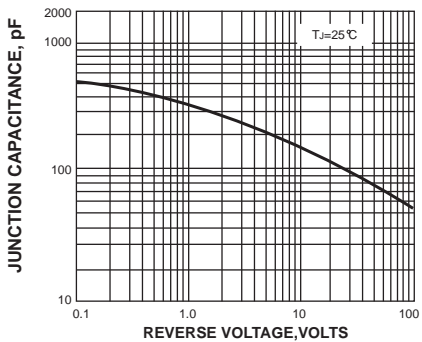


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

