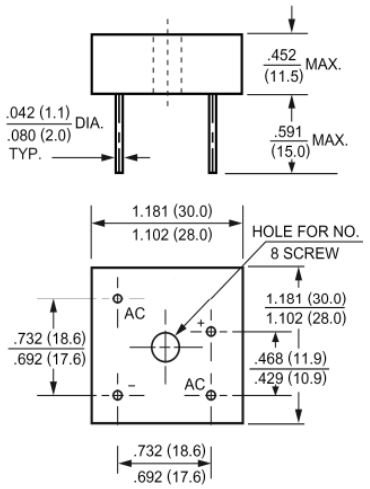
KBPC10005W~KBPC1010W

SINGLE-PHASE SILICON BRIDGE RECTIFIERS

REVERSE VOLTAGE: 50 V to 1000 V

FORWARD CURRENT: 10 A

KBPCW



Dimensions in inches and (millimeters)

Features

- Reliable low cost construction
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

Mechanical Data

- Case: KBPCW

Absolute Maximum Ratings and Characteristics

Rating at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbol	KBPC 10005W	KBPC 1001W	KBPC 1002W	KBPC 1004W	KBPC 1006W	KBPC 1008W	KBPC 1010W	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T_C = 50 °C	$I_{(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC)	I_{FSM}	200							A
Maximum Forward Voltage at 5 A DC and 25 °C	V_F	1.2							V
Maximum Reverse Current at T_A = 25 °C at Rated DC Blocking Voltage T_A = 100 °C	I_R	10 500							μA
Typical Junction Capacitance [1]	C_J	200							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	25							°C/W
Typical Thermal Resistance [3]	$R_{\theta JC}$	5							°C/W
Operating and Storage Temperature Range	T_J,T_{Stg}	- 55 to + 125							°C

[1] Measured at 1 MHz and applied reverse voltage of 4 VDC.

[2] Unit mounted on 8.6 X 8.6 X 0.24" thick (22 X 22 X 0.6 cm) Al, Plate.

[3] Unit mounted on P.C.B. at 0.375" (9.5 mm) lead length with 0.5 x 0.5" (12 x 12 mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

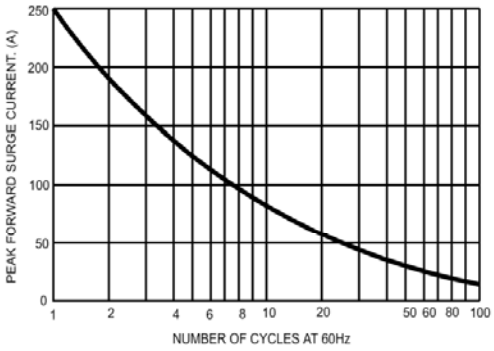


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

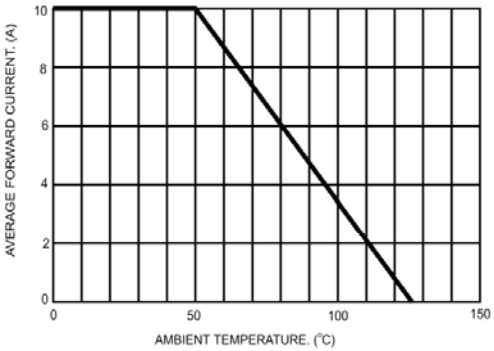


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

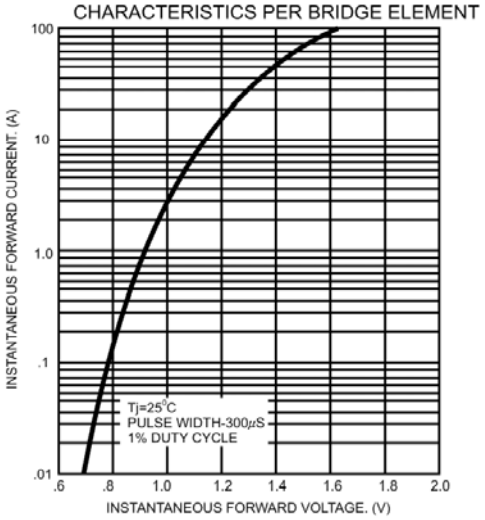


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT