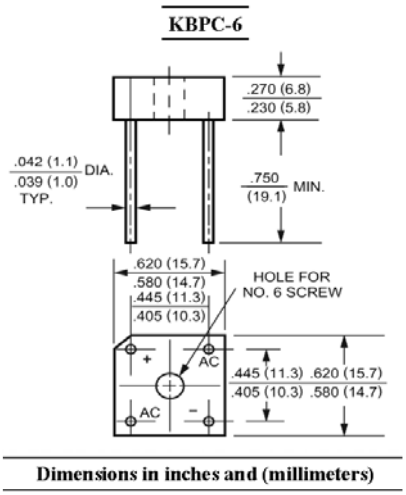
KBPC6005 THRU KBPC610

SINGLE PHASE SILICON BRIDGE RECTIFIER
Reverse Voltage: 50 to 1000 V
Forward Current: 6 A

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: Molded plastic, KBPC-6
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed
- Mounting Position: Any

Maximum Ratings and Electrical Characteristics

Ratings 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	Symbols	KBPC6005	KBPC601	KBPC602	KBPC604	KBPC606	KBPC608	KBPC610	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 Current T_C = 50 °C	$I_{F(AV)}$	6							A
Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	200							A
Maximum Forward Voltage Per Element at 3 A	V_F	1							V
Maximum Reverse Current at T_a = 25 °C	I_R	10							μA
Rated DC Blocking Voltage T_a = 100 °C		500							
Typical Junction Capacitance [1]	C_J	186							pF
Typical Thermal Resistance [2]	$R_{\theta JA}$	22							°C/W
Typical Thermal Resistance [3]	$R_{\theta JC}$	7.3							°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 V

[2] Unit mounted on 5.5 X 6 X 0.11" (14 X 15 X 0.3 cm) thick 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

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

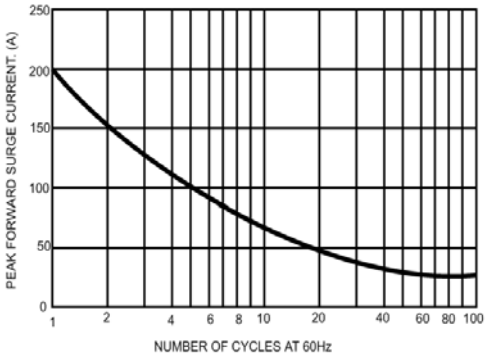

FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

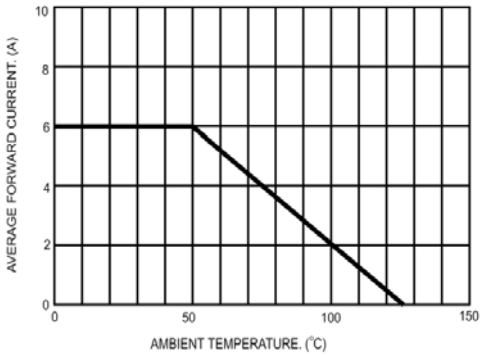

FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

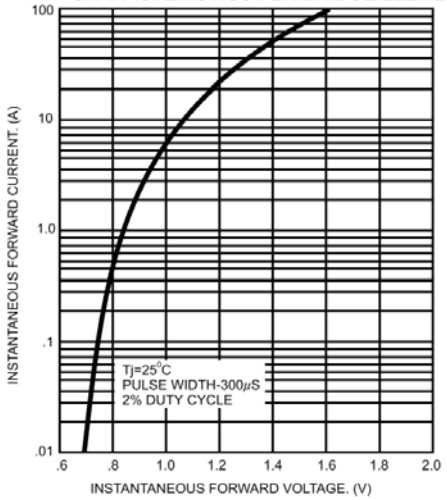

FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT