KBU10005 THRU KBU1010

Single-Phase Silicon Bridge Rectifier

Reverse Voltage: 50 - 1000 V

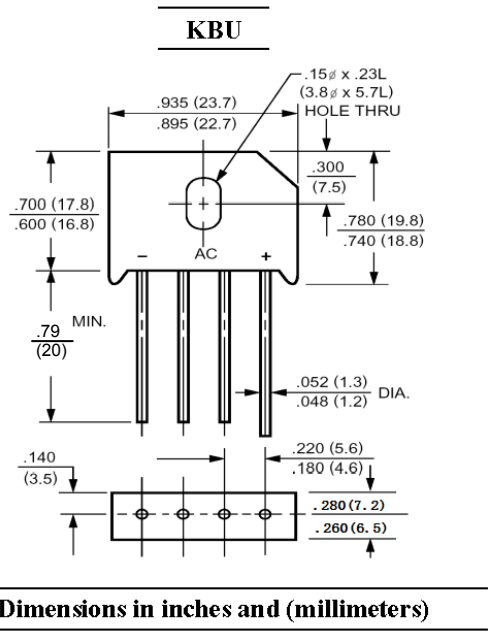
Forward Current: 10 A

Features

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

Mechanical Data

- Case: Molded plastic, KBU
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: leads solderable per MIL-STD-202, Method 208 guaranteed
- Mounting Position: Any



Dimensions in inches and (millimeters)

Absolute Maximum Ratings and Characteristics

Ratings at T_a = 25 ℃ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	KBU10005	KBU1001	KBU1002	KBU1004	KBU1006	KBU1008	KBU1010	Units
	Marking	KBU10005	KBU1001	KBU1002	KBU1004	KBU1006	KBU1008	KBU1010	-
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 0.375"(9.5 mm) Lead Length at T_a = 55 °C	$I_{(AV)}$	10							A
Peak Forward Surge Current 8.3 ms Single Half-Sine -Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	175							A
Maximum Forward Voltage at 10 A	V_F	1.1							V
Maximum Reverse Current T_a = 25 °C at Rated DC Blocking Voltage T_a = 100 °C	I_R	10 500							μA
Typical Thermal Resistance [1]	$R_{\theta JA}$	18							℃/W
Typical Thermal Resistance [2]	$R_{\theta JC}$	3							℃/W
Operating and Storage Temperature Range	T_J ,T_{Stg}	- 55 to + 150							℃

[1] Units mounted in free air, no heatsink, P.C.B at 0.375" (9.5 mm) lead length with 0.5 X 0.5" (12 X 12 mm) copper pads.
[2] Units mounted on a 3 X 3 X 0.11" (7.5 X 7.5 X 0.3 cm) thick Al. plate heatsink.

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

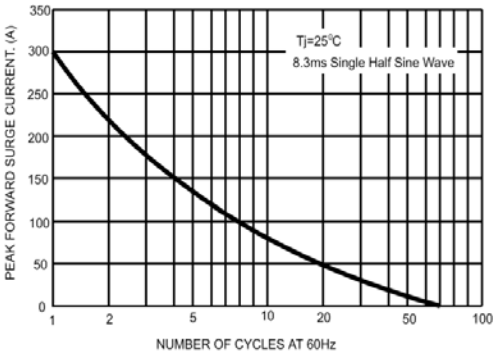


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

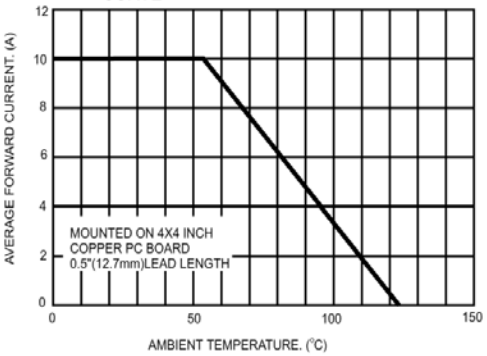


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

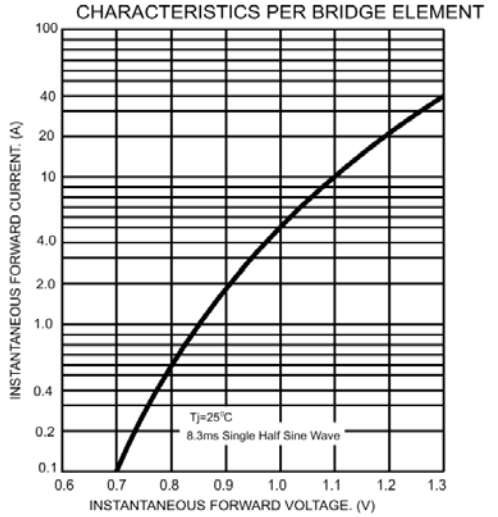


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT