

KBP3005 THRU KBP310

SINGLE-PHASE SILICON BRIDGE RECTIFIER

REVERSE VOLTAGE: 50 to 1000 VOLTS
FORWARD CURRENT: 3.0 AMPERE

FEATURES

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

MECHANICAL DATA

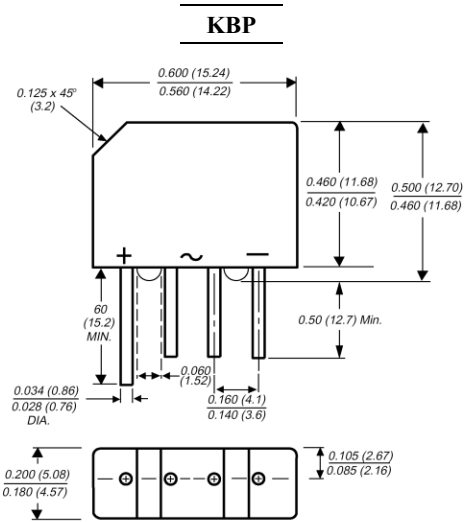
Case: Molded plastic, KBP

Epoxy: UL 94V-O rate flame retardant

Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed

Mounting position: Any

Weight: 0.012ounce, 0.33gram



Dimensions in inches and (millimeters)

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, derate current by 20%.

	Symbols	KBP3005	KBP301	KBP302	KBP304	KBP306	KBP308	KBP310	Units
Maximum Recurrent 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 Rectified Current .375"(9.5mm) Lead Length at $T_A=50^\circ\text{C}$	$I_{(AV)}$	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	80							Amp
Maximum Forward Voltage at 3.0A DC and 25°C	V_F	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$	I_R	10.0 500							uAmp
Typical Junction Capacitance (Note 1)	C_J	25							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	30							°C/W
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	11							°C/W
Operating and Storage Temperature Range	T_J, T_{stg}	-55 to +150							°C

NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.

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RATINGS AND CHARACTERISTIC CURVES

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

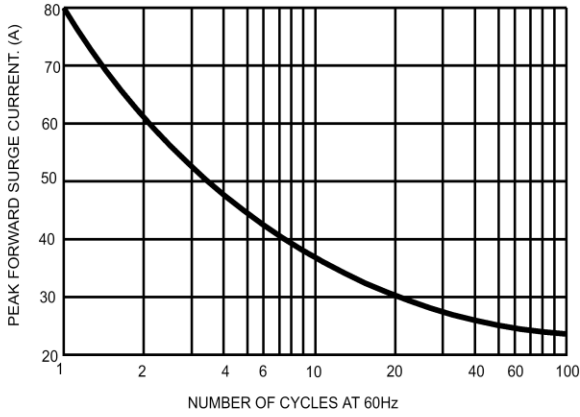


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

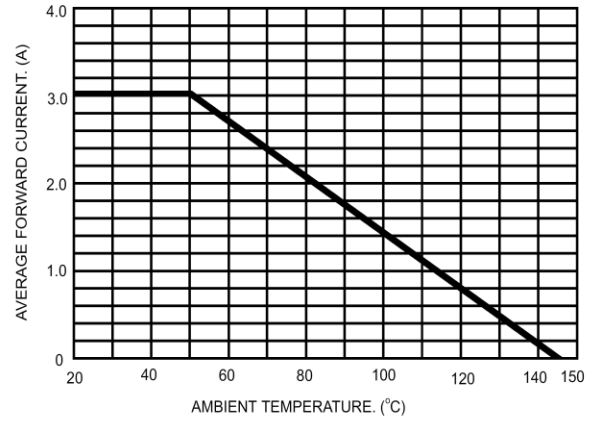


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

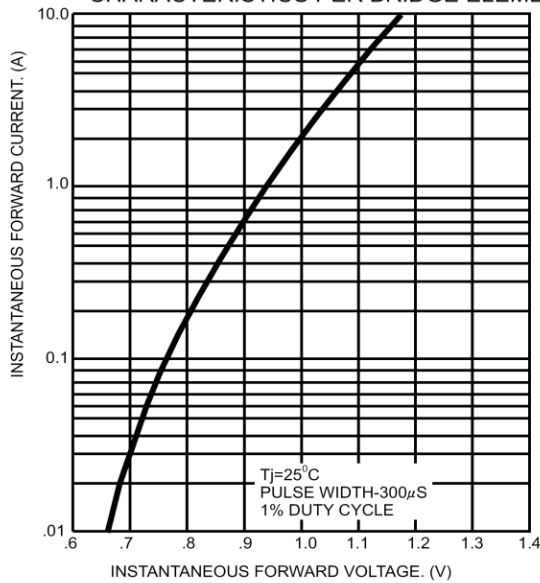


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

