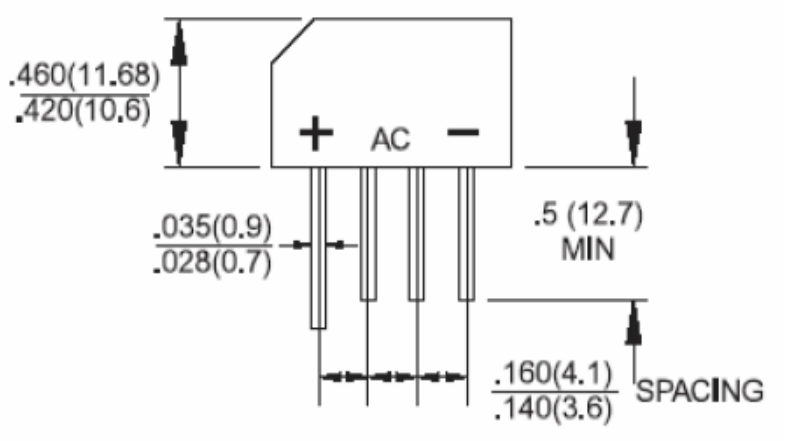
TAIWAN SEMICONDUCTOR

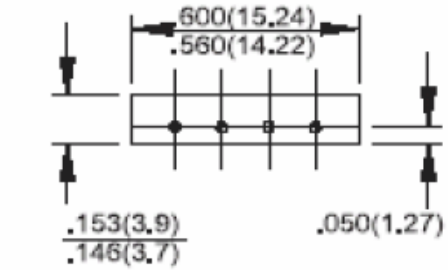
KBP301G - KBP307G

Single Phase 3.0Amps. Glass Passivated Bridge Rectifiers

KBP

Pb RoHS COMPLIANCE





Dimensions in inches and (millimeters)

Features

- ✧ UL Recoganized File #E-326243
- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ High case dielectric strength
- ✧ Plastic material has Underwriters laboratory flammability Classification 94V-0
- ✧ Typical IR less than 0.1uA
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed: 260℃/10 seconds at 5 lbs.,(2.3kg) tension
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208
- ✧ Weight: 1.54 grams (0.055 ounce)
- ✧ Mounting position : Any

Marking Diagram

KBP30XG	= Specific Device Code
G	= Green Compound
Y	= Year
WW	= Work Week

Maximum Ratings and Electrical Characteristics

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

Type Number	Symbol	KBP 301G	KBP 302G	KBP 303G	KBP 304G	KBP 305G	KBP 306G	KBP 307G	Unit
Maximum Repetitive 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 @TA=50℃	$I_{(AV)}$	3							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	80							A
Rating of fusing (t<8.3ms)	I^2T	26.5							A^2S
Maximum Instantaneous Forward Voltage @3.0A	V_F	1.1							V
Maximum DC Reverse Current @T_A=25℃ at Rated DC Block Voltage @ T_A=125 ℃	I_R	10 500							uA
Typical Junction Capacitance per leg (Note 1)	Cj	215							pF
Typical Thermal Resistance (Note 2)	$R_{\theta jA}$ $R_{\theta jL}$	30 11							$^OC/W$
Operating Temperature Range	T_J	- 55 to + 150							^OC
Storage Temperature Range	T_{STG}	- 55 to + 150							^OC

Note 1 : Measured at 1MHz and applied Reverse bias of 4.0V DC

Note 2 : Unit mount on P.C.B. 0.4" x 0.4" (10mmx10mm) Copper pads, 0.375"(9.5mm) lead length

RATINGS AND CHARACTERISTIC CURVES (KBP301G THRU KBP307G)

FIG.1 FORWARD CURRENT DERATING CURVE

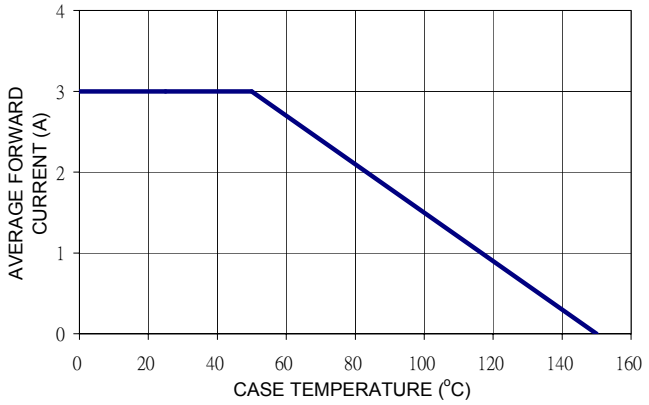


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

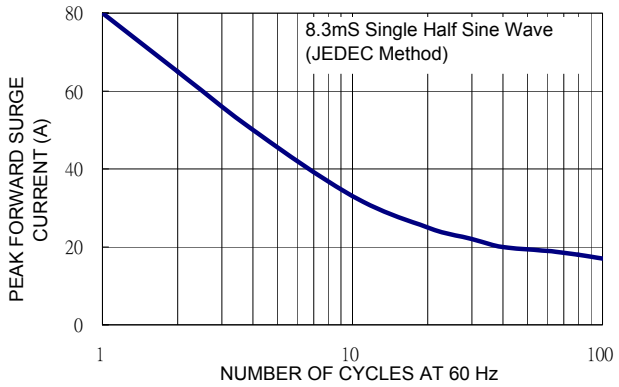


FIG. 3 TYPICAL REVERSE CHARACTERISTICS

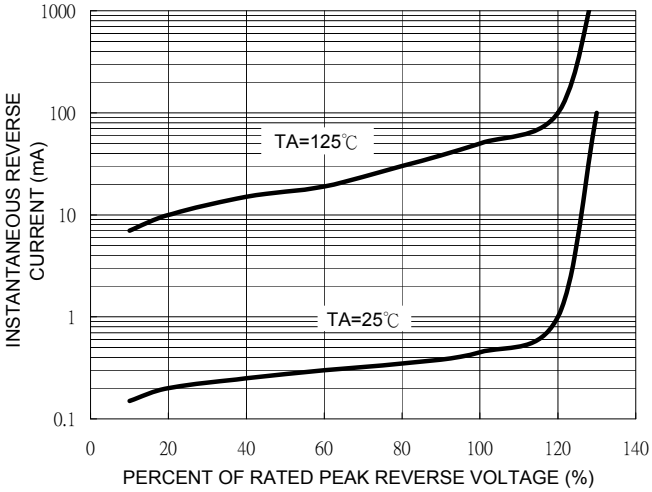


FIG. 4 TYPICAL FORWARD CHARACTERISRICS

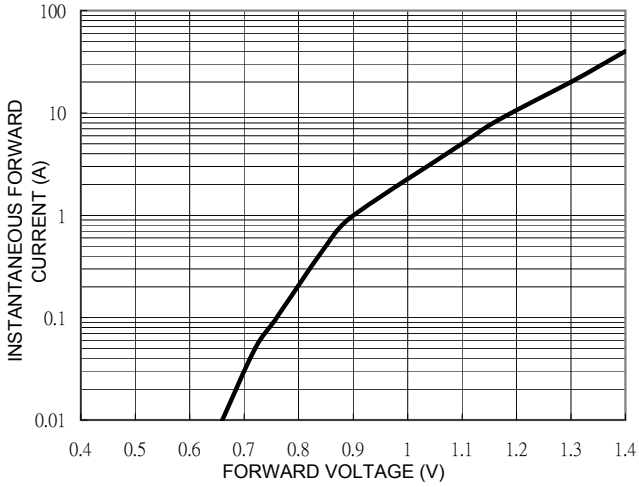


FIG. 5 TYPICAL JUNCTION CAPACITANCE