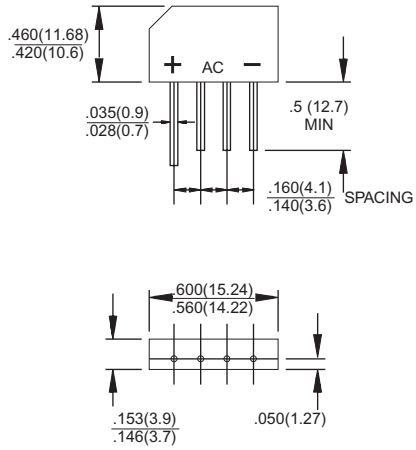
TAIWAN SEMICONDUCTOR

KBP101G - KBP107G

Single Phase 1.0 AMP. Glass Passivated Bridge Rectifiers

KBP

RoHS COMPLIANCE



Dimensions in inches and (millimeters)

Features

- ✧ UL Recognized File # E-96005
- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ Reliable low cost construction
- ✧ High surge current capability
- ✧ High temperature soldering guaranteed: 260°C / 10 seconds at 5 lbs., (2.3 kg) tension
- ✧ Leads solderable per MIL-STD-202, Method 208
- ✧ Small size, simple installation

Maximum Ratings and Electrical 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%

Type Number	Symbol	KBP 101G	KBP 102G	KBP 103G	KBP 104G	KBP 105G	KBP 106G	KBP 107G	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 @T_A = 50°C	$I_{(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	1.0							V
Maximum DC Reverse Current @ T_A=25°C at Rated DC Blocking Voltage @ T_A=125°C	I_R	10 500							uA uA
Typical Thermal resistance (Note)	$R_{\theta JA}$ $R_{\theta JL}$	28 10							°C/W
Operating Temperature Range	T_J	-55 to +150							°C
Storage Temperature Range	T_{STG}	-55 to +150							°C

Note: Thermal Resistance from Junction to Ambient and from Junction to lead Mounted on P.C.B. With 0.2" x 0.2" (5mm x 5mm) Copper Pads.

RATINGS AND CHARACTERISTIC CURVES (KBP101G THRU KBP107G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

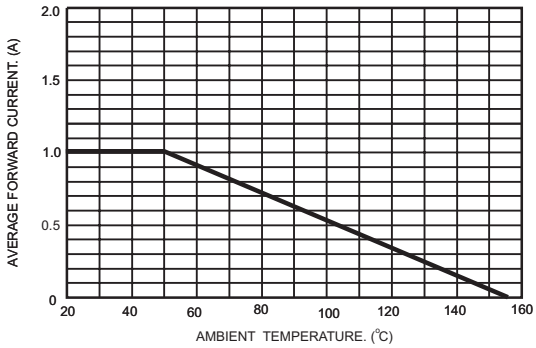


FIG.2- TYPICAL REVERSE CHARACTERISTICS

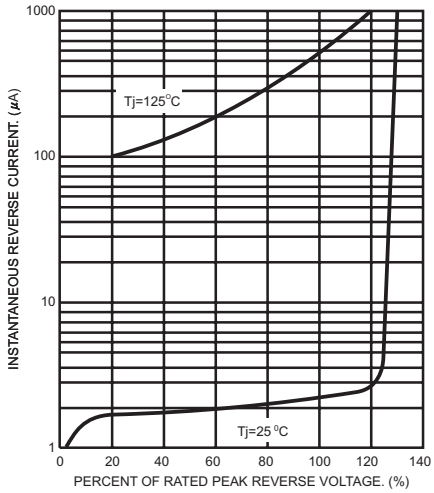


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

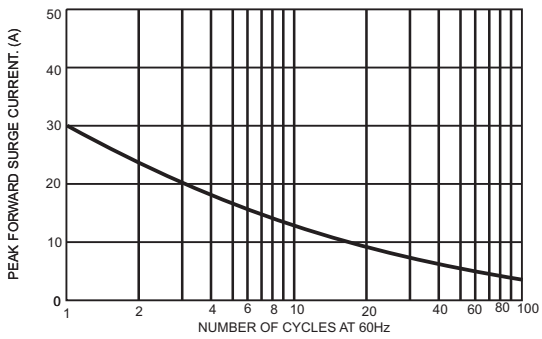


FIG.4- TYPICAL JUNCTION CAPACITANCE

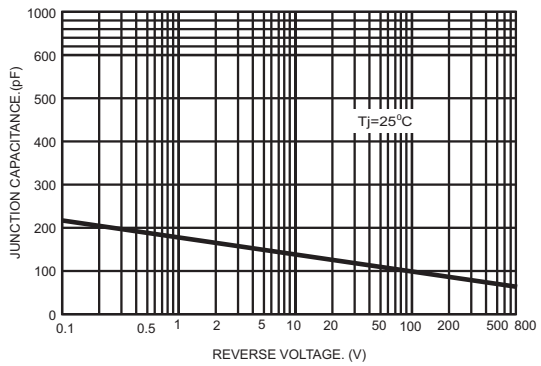


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT