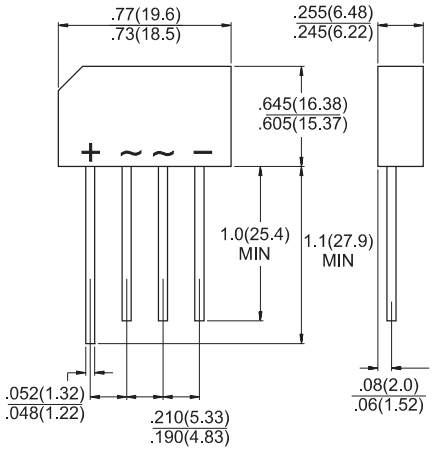
TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

KBL401G - KBL407G

Single Phase 4.0 AMPS.
Glass Passivated Bridge Rectifiers

KBL



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 / 0.375" (9.5mm) lead length at 5 lbs. (2.3 Kg) tension
- ✧ Leads solderable per MIL-STD-202, Method 208

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	KBL 401G	KBL 402G	KBL 403G	KBL 404G	KBL 405G	KBL 406G	KBL 407G	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	$I_{(AV)}$	4.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage @ 2.0A @ 4.0A	V_F	1.0 1.1							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)	$R_{\theta JA}$ $R_{\theta JL}$	19 2.4							°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 0.6" x 0.6"" (16mm x 16mm) Copper Pads.

RATINGS AND CHARACTERISTIC CURVES (KBL401G THRU KBL407G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

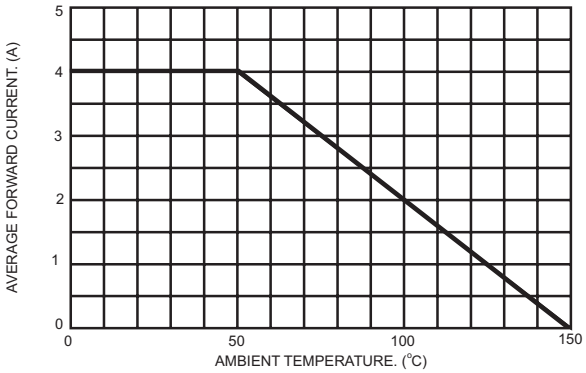


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

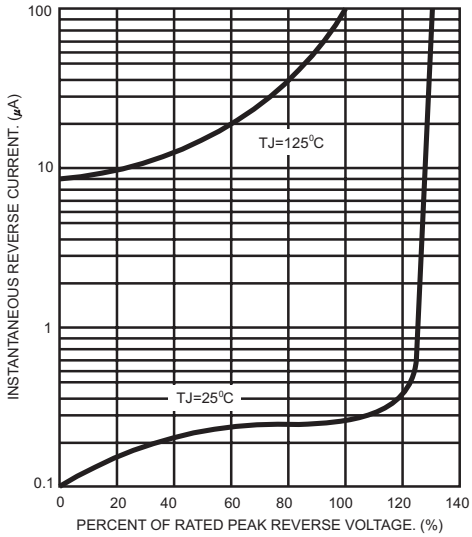


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

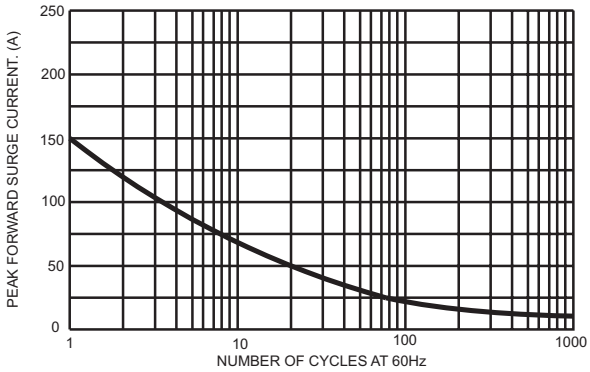


FIG.4- TYPICAL JUNCTION CAPACITANCE

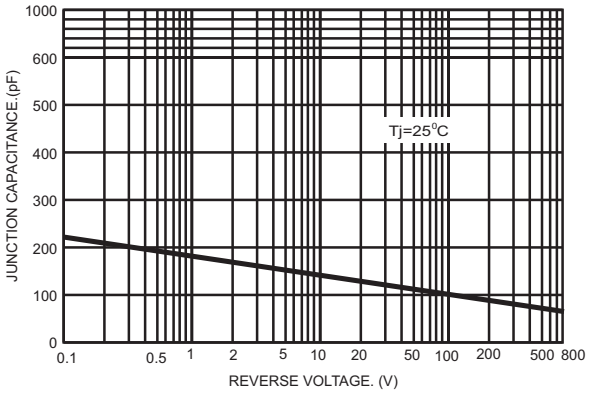


FIG.5- TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT