TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

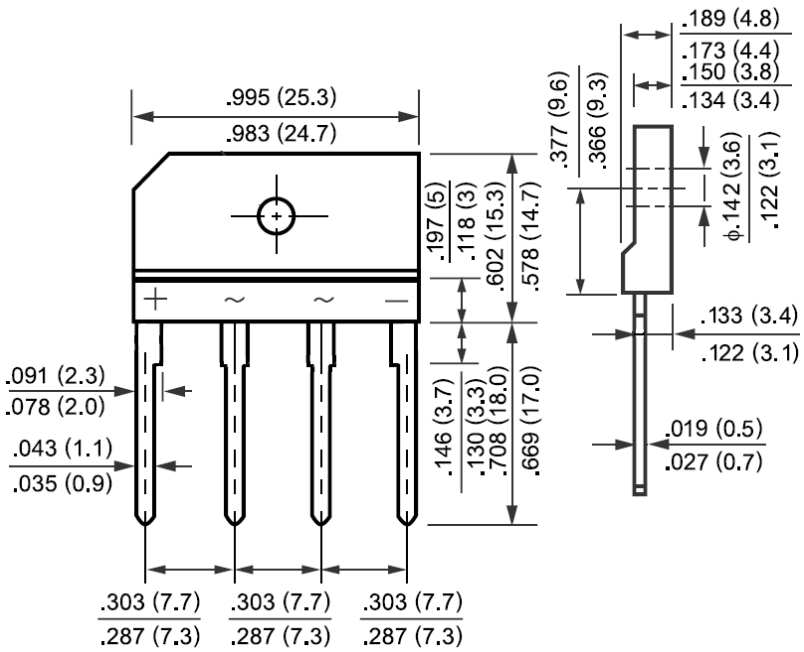
TS6K40 - TS6K80

Single Phase 6.0 AMPS. Glass Passivated Bridge Rectifiers

TS4K

Features

- UL Recognized File # E-326243.
- Glass passivated junction
- Ideal for printed circuit board
- Reliable low cost construction
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Surge overload rating to 150 amperes peak
- High case dielectric strength of 2000V_{RMS}
- High temperature soldering guaranteed: 260℃ / 10 seconds / 0.375"(9.5mm) lead length at 5 lbs (2.3kg) tension
- Green compound with suffix "G" on packing code & prefix "G" on datecode.



Mechanical Data

- Case: Molded plastic
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Weight: 4 grams
- Mounting torque : 5 in. lbs. Max.

Dimensions in inches and (millimeters)

Marking Diagram

P/N	= 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	TS6K40	TS6K60	TS6K80	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	400	600	800	V
Maximum RMS Voltage	V_{RMS}	280	420	560	V
Maximum DC Blocking Voltage	V_{DC}	400	600	800	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	6			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 @ 3 A (Note 1) @ 6 A	V_F	1.0 1.1			V
Maximum DC Reverse Current @ T_A=25 ℃ at Rated DC Blocking Voltage @ T_A=125 ℃	I_R	5 500			uA uA
Typical Thermal Resistance	$R_{\theta JC}$	3			^{O}C/W
Operating Temperature Range	T_J	- 55 to + 150			^{O}C
Storage Temperature Range	T_{STG}	- 55 to + 150			^{O}C

Note 1 : Pulse Test with PW=300 usec, 1% Duty Cycle

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RATINGS AND CHARACTERISTIC CURVES (TS6K40 THRU TS6K80)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

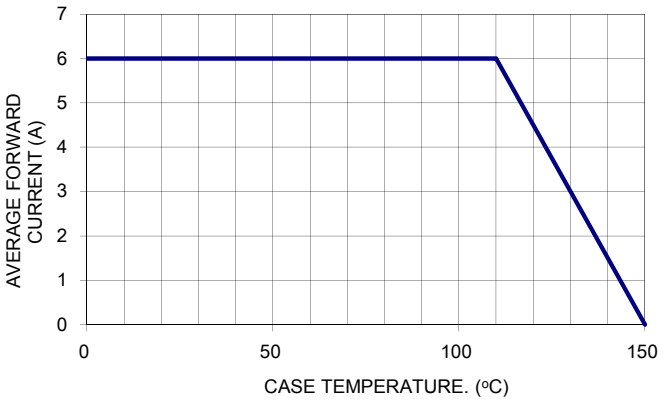

FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

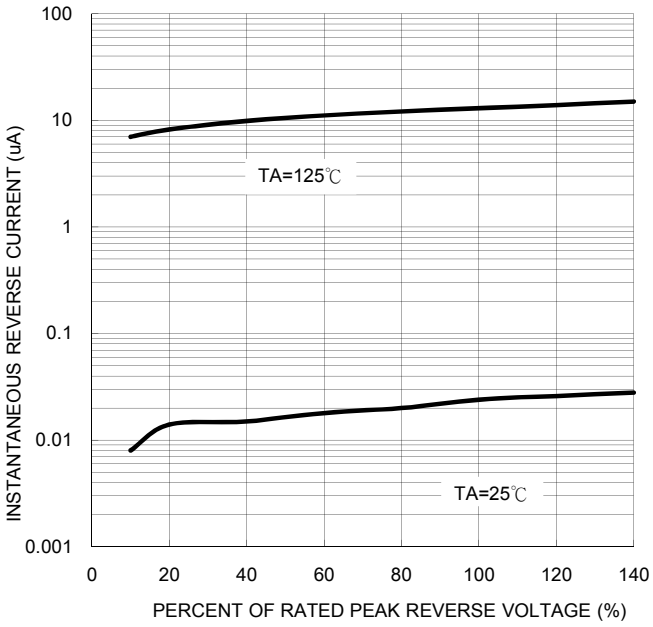

FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

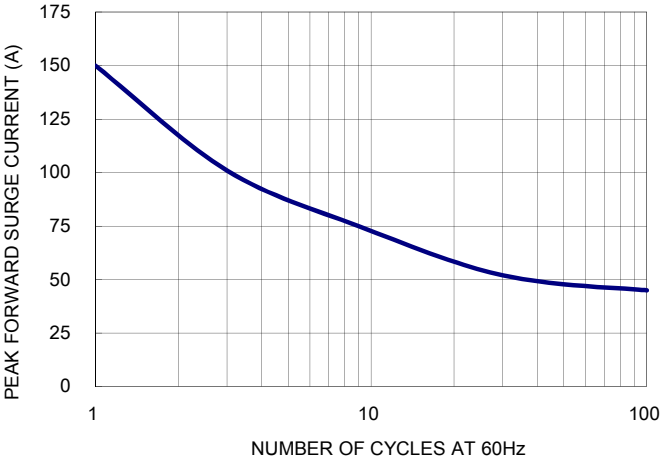

FIG. 4- TYPICAL JUNCTION CAPACITANCE

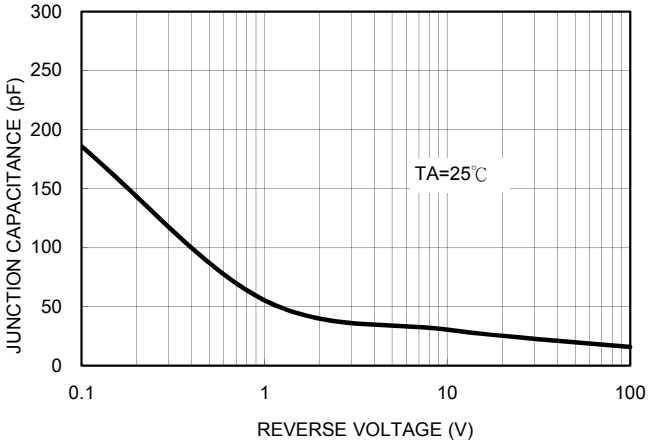

FIG. 5- TYPICAL FORWARD CHARACTERISRICS PER BRIDGE ELEMENT