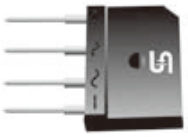
TAIWAN SEMICONDUCTOR

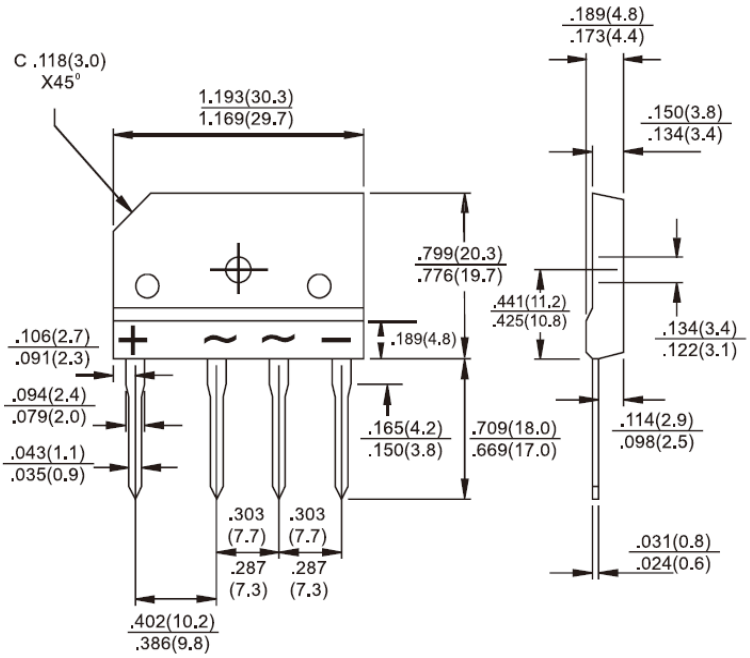
TS6P01G - TS6P07G

Single Phase 6.0 AMPS. Glass Passivated Bridge Rectifiers

RoHS COMPLIANCE



TS-6P



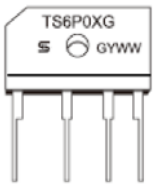
Features

- UL Recoganized File # E-326243
- Glass passivated junction
- Ideal for printed circuit board
- High case dielectric strength of 2000V_{RMS}
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Typical IR less than 0.1 uA
- High surge current capability to 150A
- 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. Leads solderable per MIL-STD-202 Method 208
- Weight: 7.15 grams
- Mounting torque : 8.17 in. lbs. Max.

Dimensions in inches and (millimeters)



Marking Diagram

TS6P0XG	= 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	TS6P 01G	TS6P 02G	TS6P 03G	TS6P 04G	TS6P 05G	TS6P 06G	TS6P 07G	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_C=110℃	$I_{F(AV)}$	6							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Rating of fusing (t < 8.3mS)	I^2t	93							A^2S
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A @ 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	10 500							uA uA
Typical Junction Capacitance Per Leg (Note 2)	Cj	53							pF
Typical Thermal Resistance	$R_{\theta JC}$	1.8							$^OC/W$
Operating Temperature Range	T_J	- 55 to + 150							^OC
Storage Temperature Range	T_{STG}	- 55 to + 150							^OC

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

Note 2 : Measured at 1MHz applied Reverse bias of 4.0V DC.

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RATINGS AND CHARACTERISTIC CURVES (TS6P01G THRU TS6P07G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

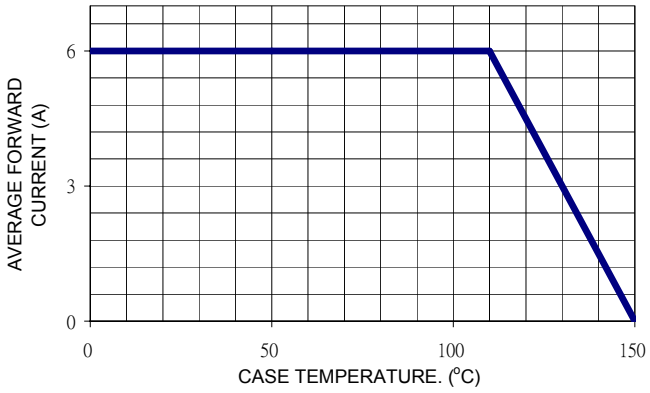

FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

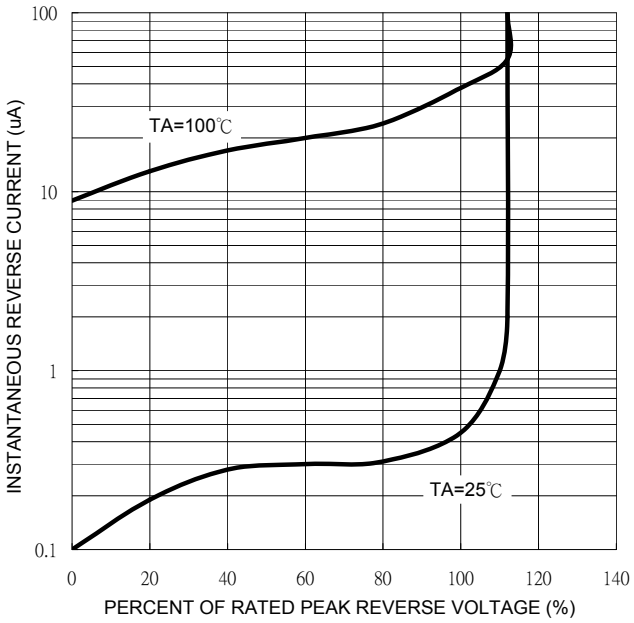

FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

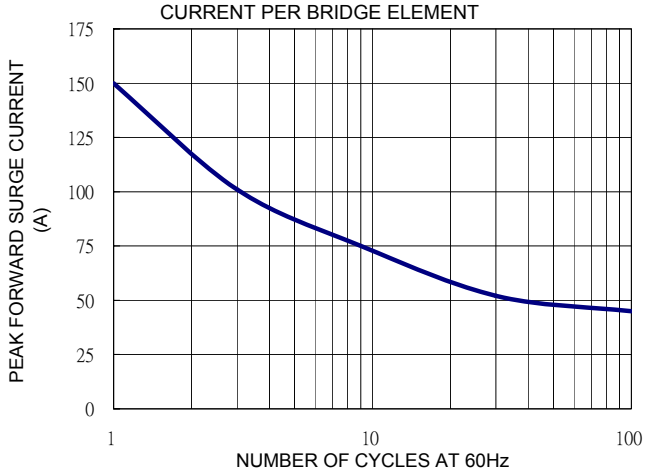

FIG. 4- TYPICAL JUNCTION CAPACITANCE

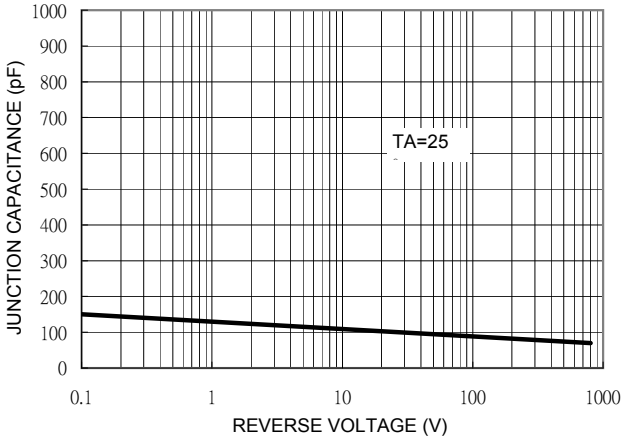

FIG. 5- TYPICAL FORWARD CHARACTERISRICS PER BRIDGE ELEMENT

