TAIWAN SEMICONDUCTOR

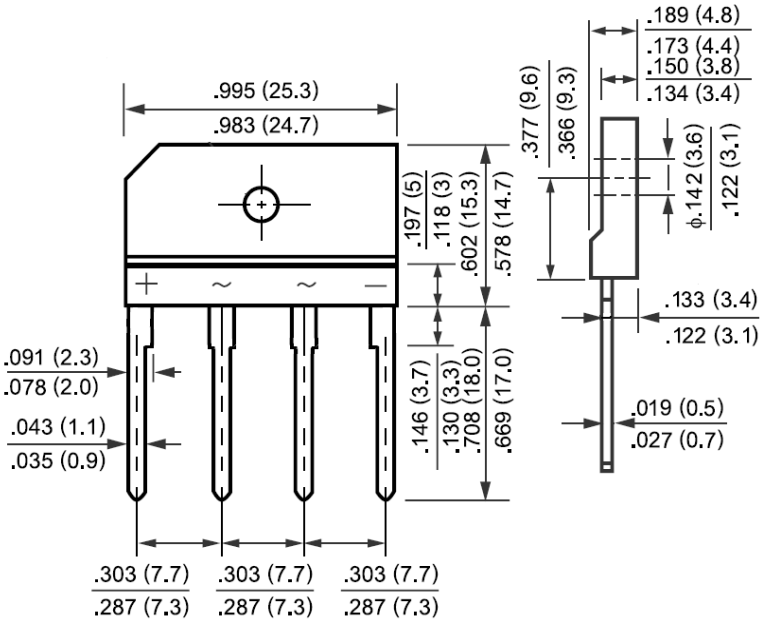
TS4K40 - TS4K80

Single Phase 4.0 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 120 amperes peak
- ✧ High case dielectric strength of 2000V_{RMS}
- ✧ 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
- ✧ 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	TS4K40	TS4K60	TS4K80	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	$I_{F(AV)}$	4			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	120			A
Rating of fusing (t<8.3ms)	I^2t	60			A^2S
Maximum Instantaneous Forward Voltage @ 2 A (Note 1) @ 4 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 Thermal Resistance	$R_{\theta JC}$	5.5			$^OC/W$
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

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RATINGS AND CHARACTERISTIC CURVES (TS4K40 THRU TS4K80)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE PER BRIDGE ELEMENT

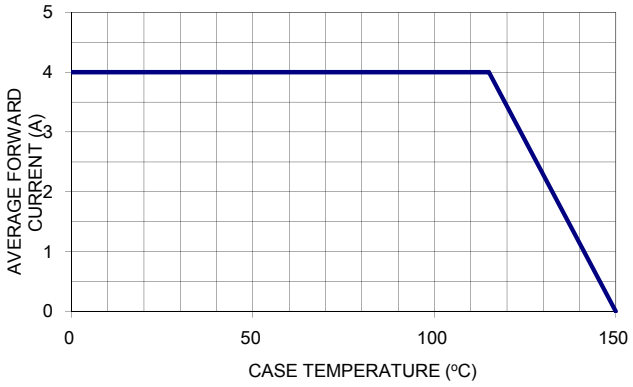

FIG. 2- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

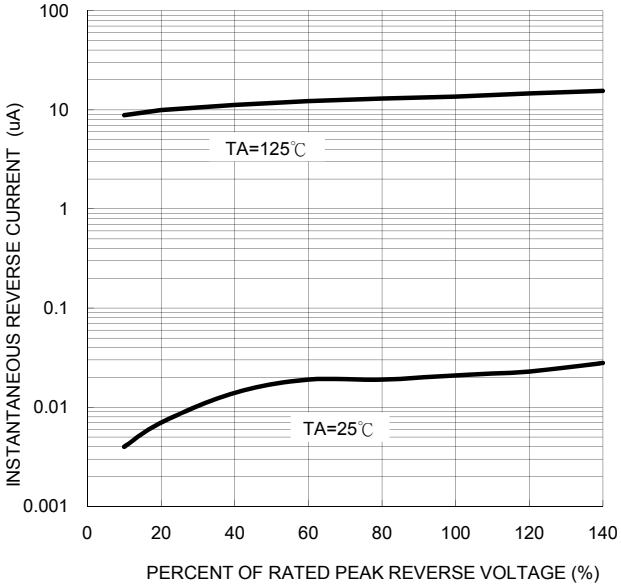

FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

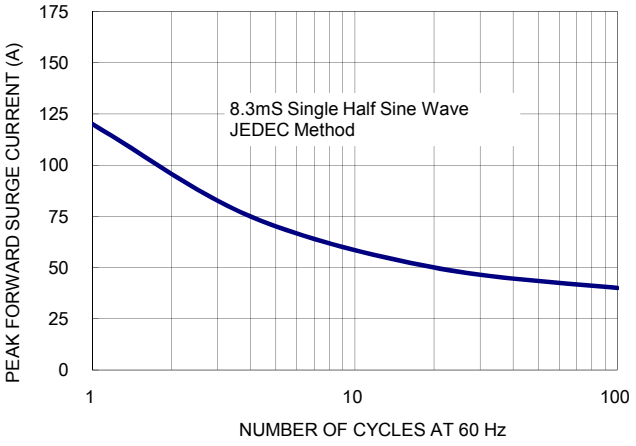

FIG. 4- TYPICAL JUNCTION CAPACITANCE

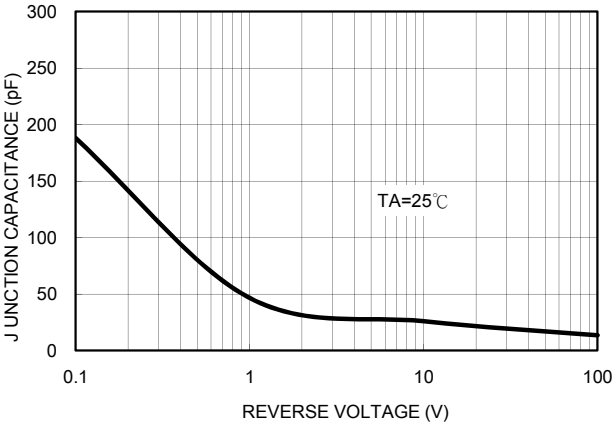

FIG. 5- TYPICAL FORWARD CHARACTERISRICS PER BRIDGE ELEMENT