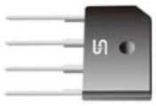
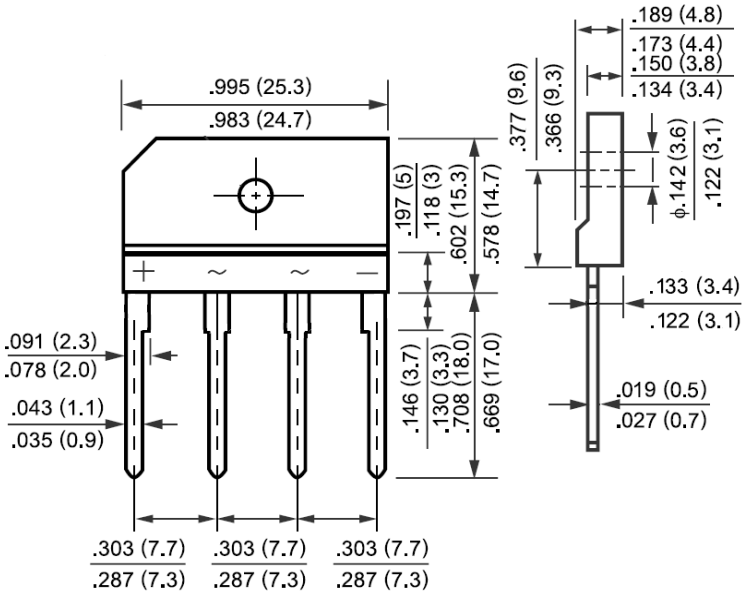
TAIWAN SEMICONDUCTOR

TS10K40 - TS10K80

Single Phase 10.0 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}
- Isolated voltage from case to lead over 2500 volts
- 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	TS10K40	TS10K60	TS10K80	Unit
Maximum Repetitive 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	$I_{F(AV)}$	10			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) @ 5 A @10 A	V_F	1.0 1.1			V
Maximum Reverse Current @ Rated VR T_A=25 ℃ T_A=125 ℃	I_R	10 500			uA
Typical Thermal Resistance	$R_{\theta JC}$	2.3			°C/W
Operating Temperature Range	T_J	- 55 to + 150			°C
Storage Temperature Range	T_{STG}	- 55 to + 150			°C

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

TAIWAN SEMICONDUCTOR

RATINGS AND CHARACTERISTIC CURVES (TS10K40 THRU TS10K80)

FIG.1 FORWARD CURRENT DERATING CURVE

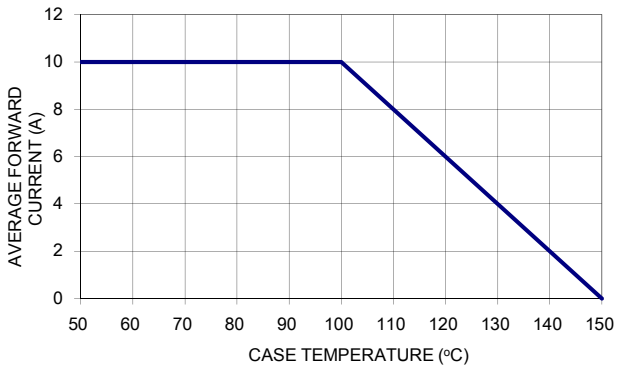


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

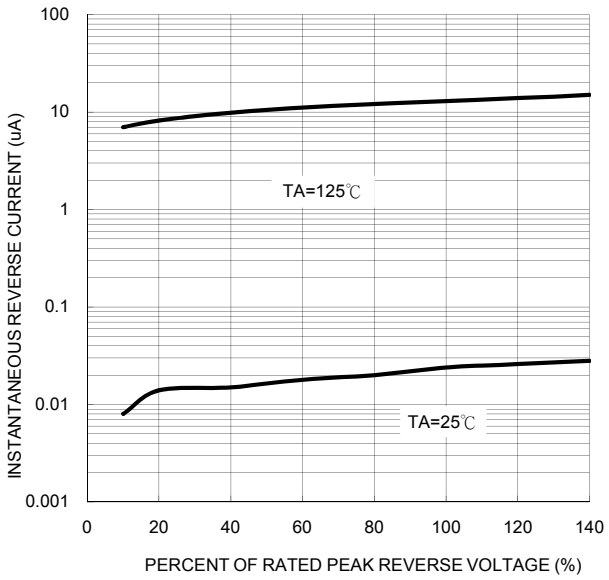


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

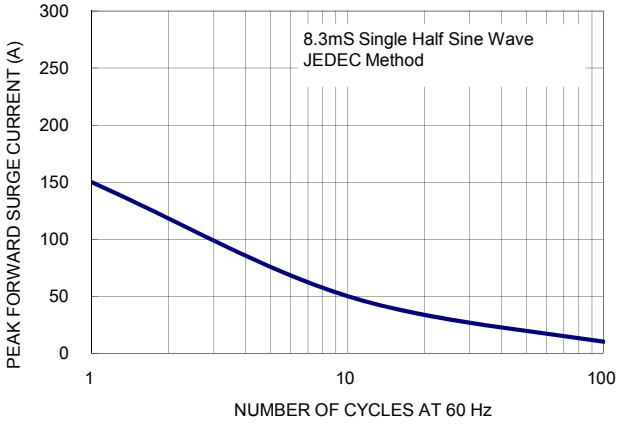


FIG. 4 TYPICAL JUNCTION CAPACITANCE

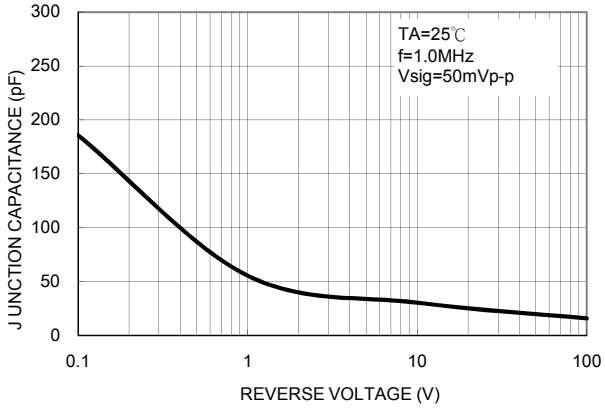
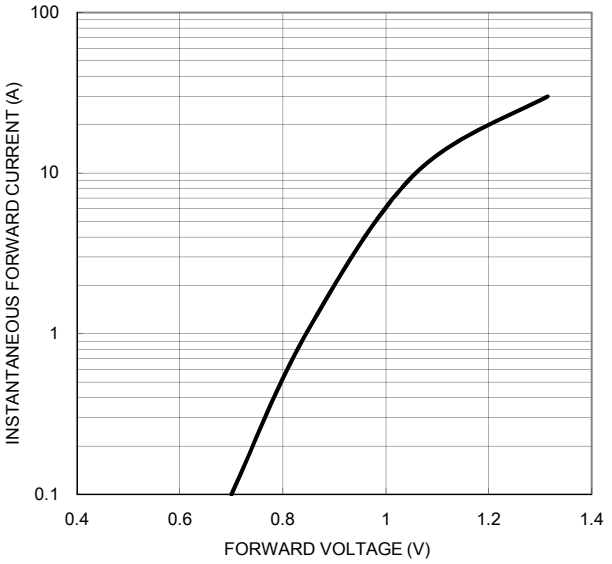


FIG. 5 TYPICAL FORWARD CHARACTERISRICS



Version:C12