TAIWAN SEMICONDUCTOR

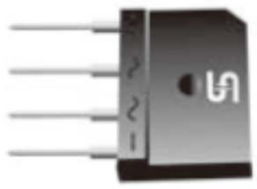
The Smartest Choice

TS50P05G - TS50P07G

Single Phase 50.0 AMPS.

Glass Passivated Bridge Rectifiers

TS-6P



Pb-Free

RoHS COMPLIANT

Features

- ✧ UL Recognized File # E-326243
- ✧ Glass passivated junction
- ✧ Ideal for printed circuit board
- ✧ Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- ✧ Typical IR less than 0.1uA
- ✧ High surge current capability to 400A
- ✧ ESD capability PASS AEC-Q101 level H3B
- ✧ ESD capability PASS IEC6100-4-2 level 4
- ✧ High temperature soldering guaranteed: 260℃/10 seconds
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: Molded plastic body
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Weight: 7.3 grams
- ✧ Mounting Torque : 8.17 in-lbs Max.

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
TS50P05G	TS-6P	15 / TUBE	C2	C2G

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	TS50P05G	TS50P06G	TS50P07G	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	600	800	1000	V
Maximum Average Forward Rectified Current (Note 2)	$I_{F(AV)}$	50			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC mrthod)	I_{FSM}	400			A
Rating of fusing (t<8.3ms)	I^2T	664			A^2S
Maximum Instantaneous Forward Voltage @ 25 A (Note 1)	V_F	1.1			V
Maximum Reverse Current @ Rated VR T_A=25 ℃ T_A=100 ℃	I_R	10 200			uA
Typical Thermal Resistance (Note 2)	$R_{\theta jC}$	3.7			$^OC/W$
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 : Mount on Heatsink size of 4" x 6" x 0.25" Al-Plate

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RATINGS AND CHARACTERISTIC CURVES (TS50P05G THRU TS50P07G)

FIG.1 FORWARD CURRENT DERATING CURVE

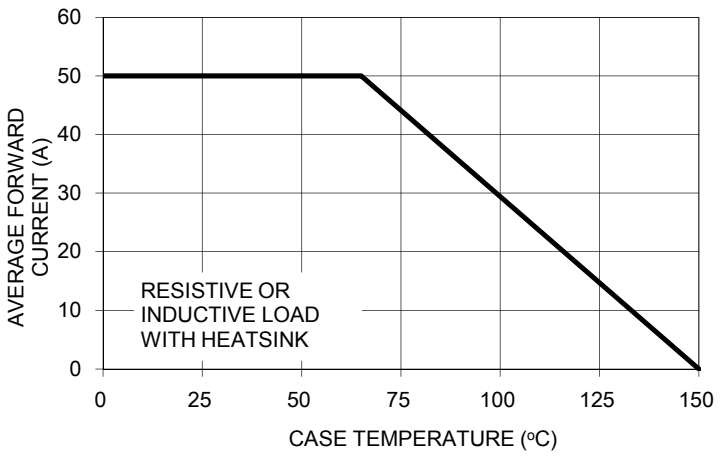


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

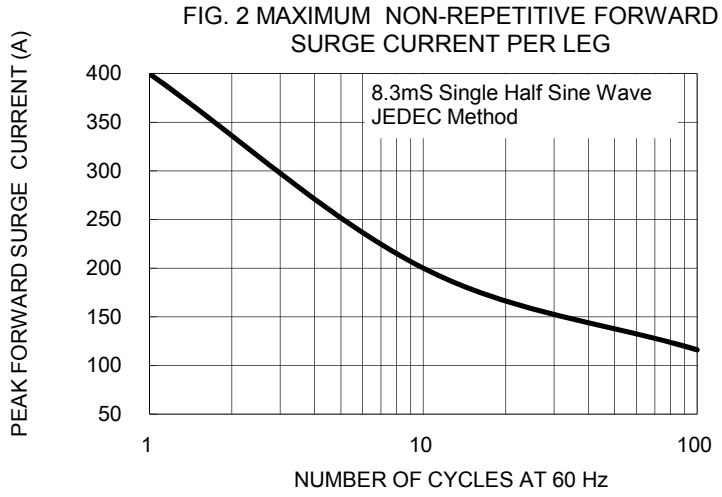


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

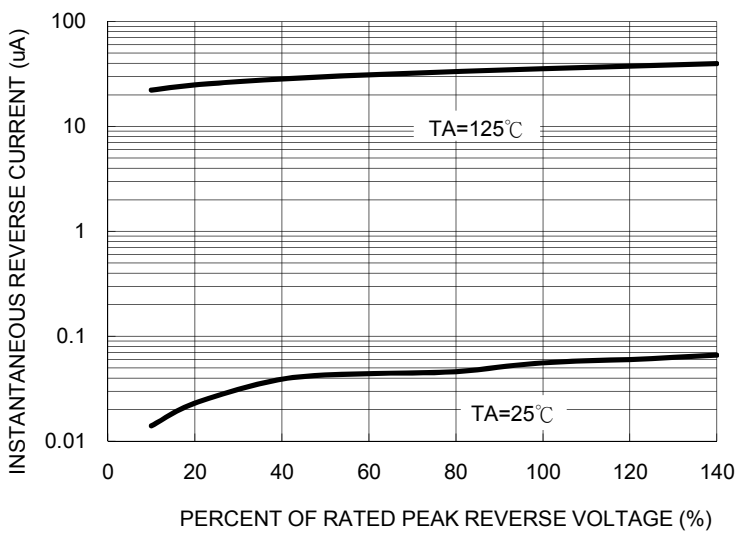


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

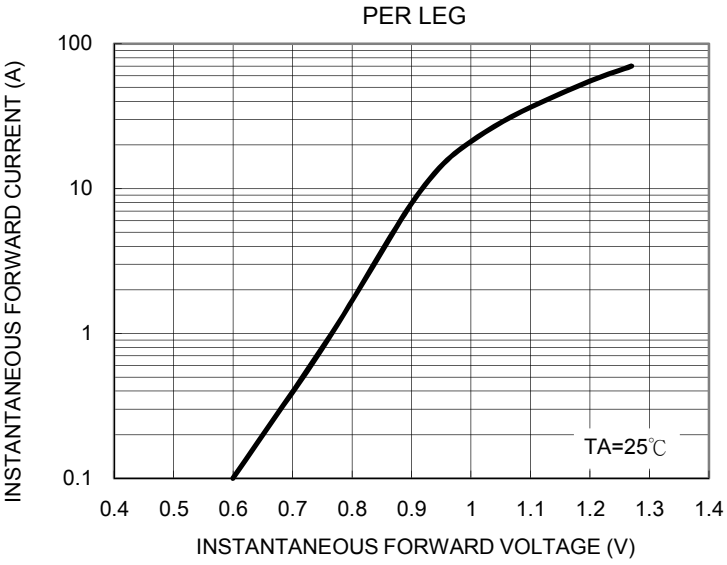
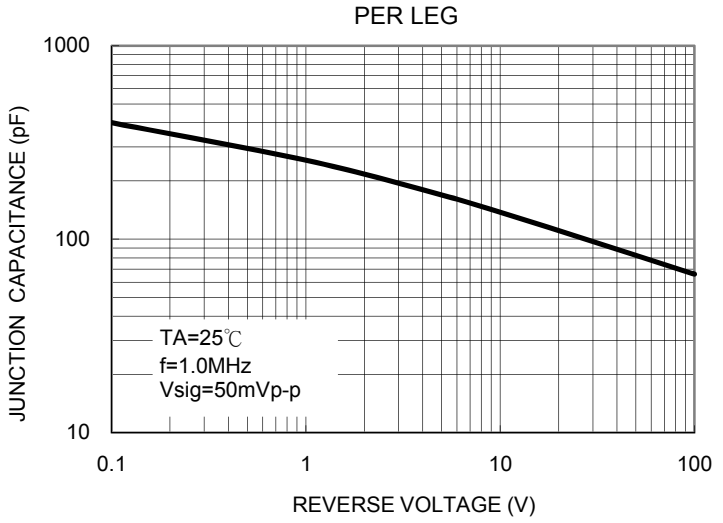


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG



Version:B13

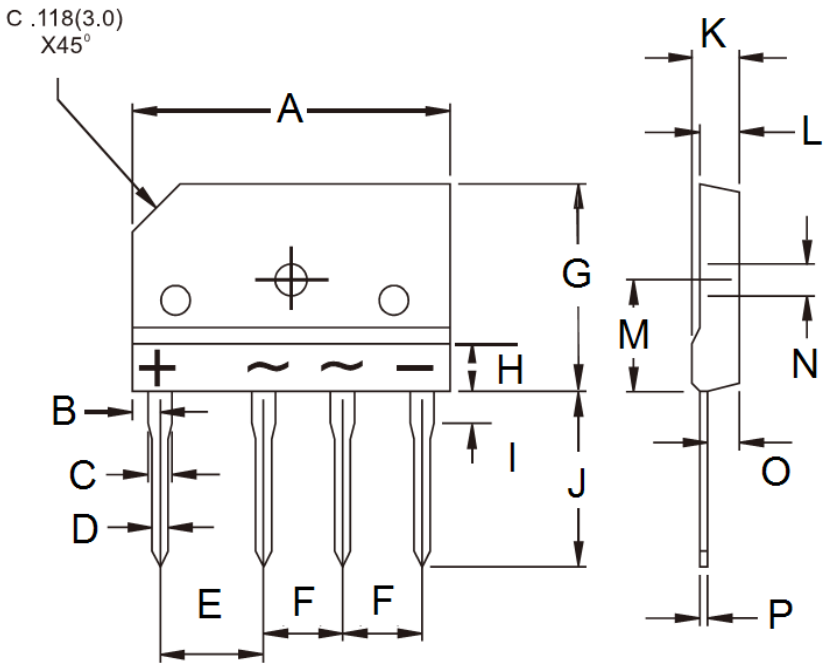
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Ordering information

Part No.	Package	Packing	Packing code	Packing code (Green)
TS50P0xG (Note)	TS-6P	15 / TUBE	C2	C2G
	TS-6P	Forming	X0	X0G
	TS-6P	15 / TUBE (Auto)	D2	D2G
	TS-6P	Forming	X2	X2G

Note: "x" is Device Code from "5" thru "7".

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	29.70	30.30	1.169	1.193
B	2.30	2.70	0.091	0.106
C	2.00	2.40	0.079	0.094
D	0.90	1.10	0.035	0.043
E	9.80	10.20	0.386	0.402
F	7.30	7.70	0.287	0.303
G	19.70	20.30	0.776	0.799
H	-	4.80	-	0.189
I	3.80	4.20	0.150	0.165
J	17.00	18.00	0.669	0.709
K	4.40	4.80	0.173	0.189
L	3.40	3.80	0.134	0.150
M	10.80	11.20	0.425	0.441
N	3.10	3.40	0.122	0.134
O	2.50	2.90	0.098	0.114
P	0.60	0.70	0.024	0.028

Marking Diagram



P/N = Specific Device Code
G = Green Compound
YWW = Date Code