TAIWAN SEMICONDUCTOR

TS20P01G - TS20P07G

Single Phase 20.0 AMPS. Glass Passivated Bridge Rectifiers

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 0.1uA
- ✧ High surge current capability to 250A
- ✧ 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. Leads solderable per MIL-STD-202, Method 208
- ✧ Weight: 7.15 grams
- ✧ Mounting Torque : 8.17 in. lbs. Max.

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
TS20P01G	TS-6P	15 / TUBE	D2	D2G

Maximum Ratings and Electrical Characteristics

Rating at 25 ℃ ambient temperature unless otherwise specified.

Parameter	Symbol	TS20P 01G	TS20P 02G	TS20P 03G	TS20P 04G	TS20P 05G	TS20P 06G	TS20P 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	$I_{F(AV)}$	20							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC mrthod)	I_{FSM}	250							A
Rating of fusing (t < 8.3mS)	I^2t	259							A^2S
Maximum Instantaneous Forward Voltage @ 10 A (Note 1) @ 20 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	140							pF
Typical Thermal Resistance	$R_{\theta JC}$	0.8							$^OC/W$
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 and applied Reverse bias of 4.0V DC.

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RATINGS AND CHARACTERISTICS CURVES (TS20P01G THRU TS20P07G)

FIG.1 MAXIMUM DERATING CURVE FOR OUTPUT CURRENT

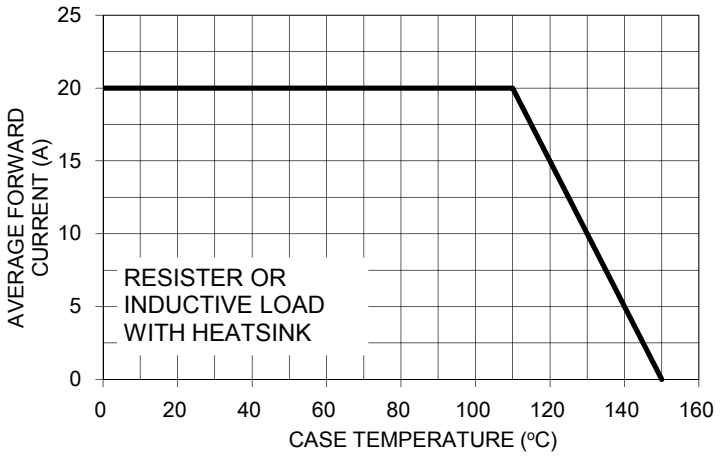


FIG. 2 MAXIMUM FORWARD SURGE CURRENT PER LEG

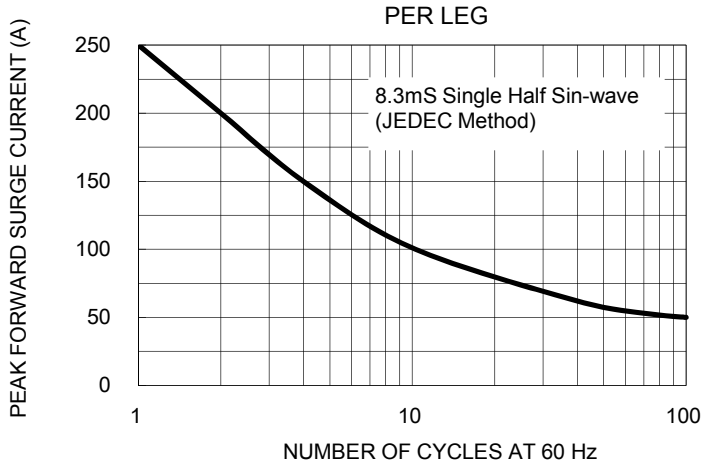


FIG. 3 TYPICAL REVERSE CHARACTERISTICS PER LEG

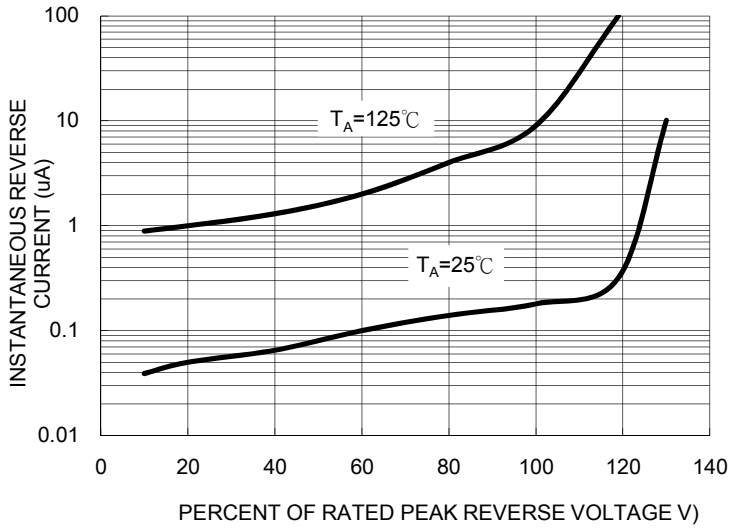


FIG. 4 TYPICAL FORWARD CHARACTERISTICS PER LEG

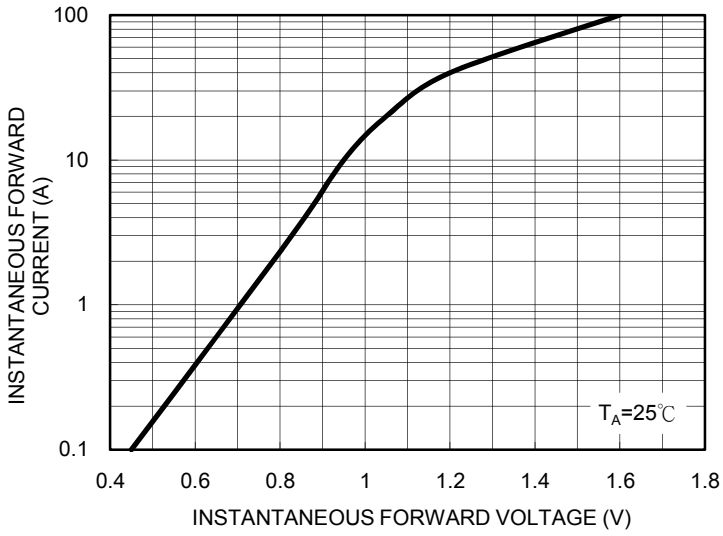
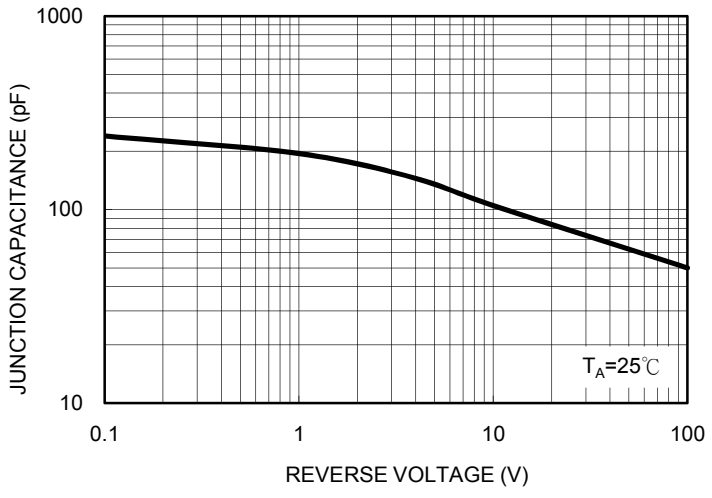


FIG. 5 TYPICAL JUNCTION CAPACITANCE



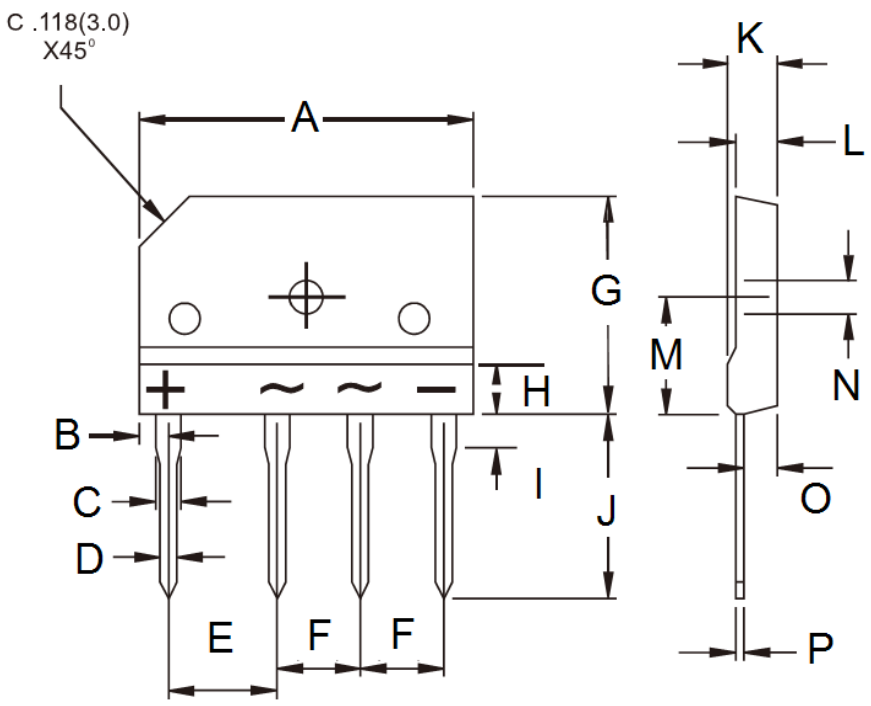
Version:J13

Ordering information

Part No.	Package	Packing	Packing code	Packing code (Green)
TS20P0xG	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 "1" 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
F = Factory Code