TAIWAN SEMICONDUCTOR

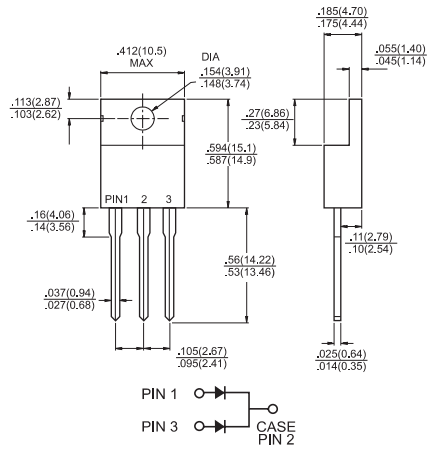
RoHS COMPLIANCE

GP1001 - GP1007

10.0 AMPS. Glass Passivated Rectifiers

TO-220AB





Dimensions in inches and (millimeters)

Features

- ✧ Glass passivated chip junction.
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss

Mechanical Data

- ✧ Cases: TO-220AB molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free. solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260 °C /10 seconds .16",(4.06mm) from case.
- ✧ Weight: 2.24 grams

Maximum Ratings and Electrical Characteristics

Rating at 25 °C 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	GP 1001	GP 1002	GP 1003	GP 1004	GP 1005	GP 1006	GP 1007	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 .375"(9.5mm) Lead Length @T_C = 100 °C	$I_{(AV)}$	10.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125							A
Maximum Instantaneous Forward Voltage @5.0A	V_F	1.1							V
Maximum DC Reverse Current @ T_C=25 °C at Rated DC Blocking Voltage @ T_C=125 °C	I_R	5.0 200							uA uA
Typical Junction Capacitance (Note 1)	Cj	30							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JC}$	3.0							°C/W
Operating and Storage Temperature Range	T_J ,T_{STG}	- 65 to + 150							°C

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
2. Thermal Resistance from Junction to Case Mounted on Heatsink size 2" x 3" x 0.25" Al-Plate.

RATINGS AND CHARACTERISTIC CURVES (GP1001 THRU GP1007)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

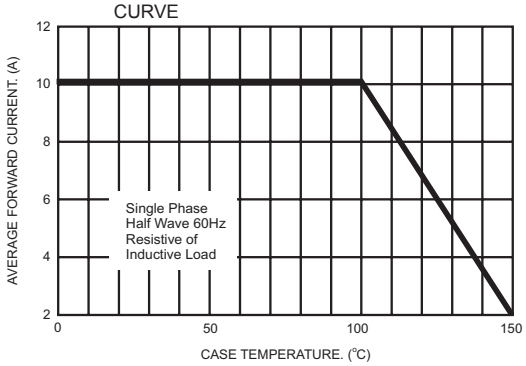


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

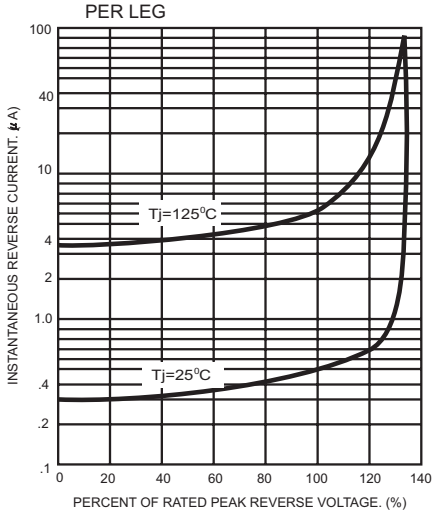


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

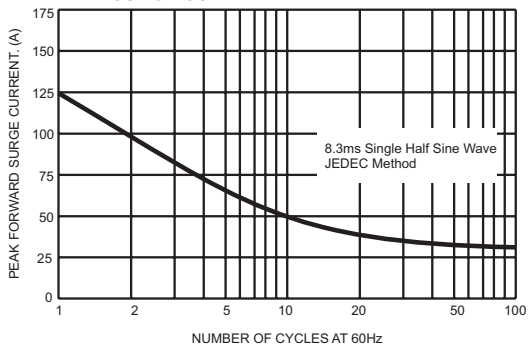


FIG.4- TYPICAL JUNCTION CAPACITANCE

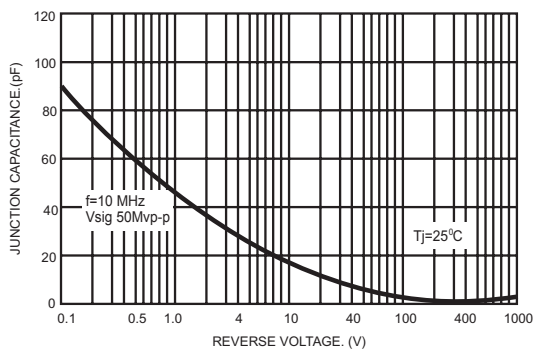


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

