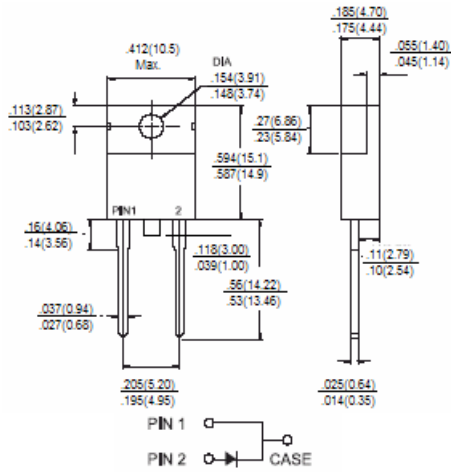
TAIWAN SEMICONDUCTOR

GPA1601 - GPA1607

16.0 AMPs. Glass Passivated Rectifiers

TO-220AC



Dimensions in inches and (millimeters)

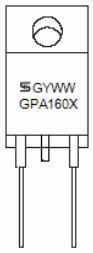
Features

- ✧ Glass Passivated chip junction
- ✧ High efficiency, Low VF
- ✧ High Current capacity
- ✧ High reliability
- ✧ High Surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.

Mechanical Data

- ✧ Cases: TO-220AC Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Terminal : 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 gram

Marking Diagram



GPA160X= 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	GPA 1601	GPA 1602	GPA 1603	GPA 1604	GPA 1605	GPA 1606	GPA 1607	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified @Tc = 100℃	I(AV)	16.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	IFSM	250							A
Maximum Instantaneous Forward Voltage @ 16.0A	VF	1.1							V
Maximum DC Reverse Current @ T_A=25℃ at Rated DC Blocking Voltage @ TA=125℃	IR	10 250							uA
Typical Junction Capacitance (Note 1)	Cj	100							pF
Typical Thermal Resistance (Note 2)	RθJC	2.0							°C/W
Operating Temperature Range	TJ	-65 to +150							°C
Storage Temperature Range	TSTG	-65 to +150							°C

Note 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

2. Mount on P.C. Board with 3"x5" x0.25" Al-plate

RATINGS AND CHARACTERISTIC CURVES (GPA1601 THRU GPA1607)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

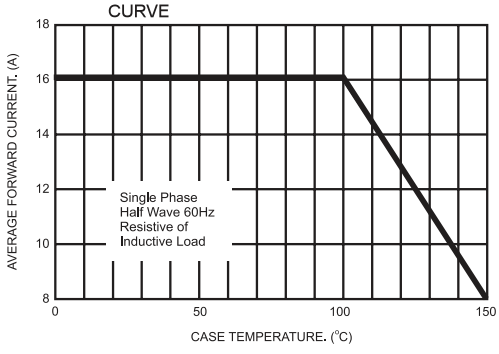


FIG.2- TYPICAL REVERSE CHARACTERISTICS

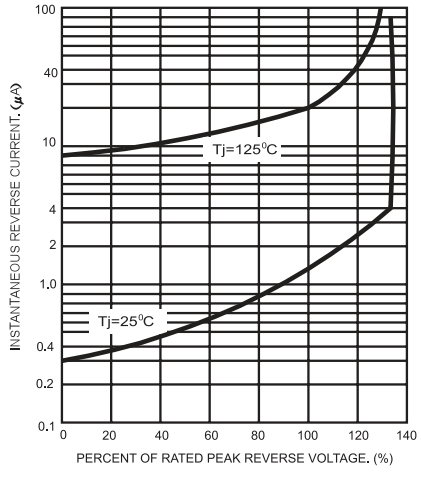


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

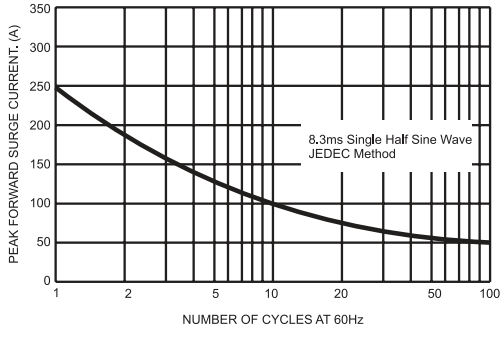


FIG.4- TYPICAL JUNCTION CAPACITANCE

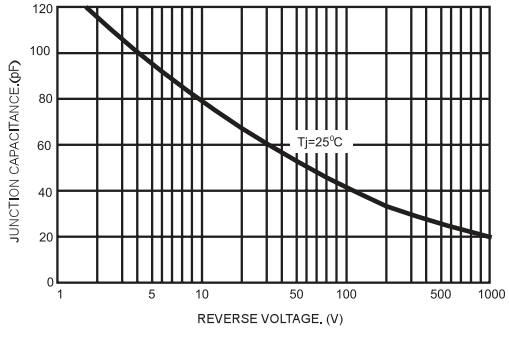


FIG.5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS