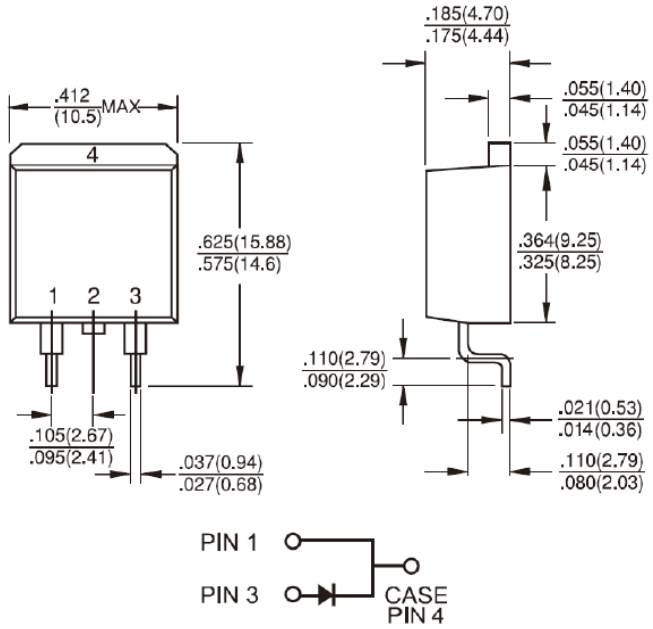
TAIWAN SEMICONDUCTOR

RoHS COMPLIANCE

GPAS1001 - GPAS1007

10.0 AMPS. Glass Passivated Rectifiers

D^2PAK



Features

- ✧ Glass passivated chip junction
- ✧ High efficiency, Low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Cases: D^2PAK Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering guaranteed: 260℃/10 seconds at terminals
- ✧ Weight: 1.7 grams

Dimensions in inches and (millimeters)

Marking Diagram

GPAS100X	= 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	GPAS 1001	GPAS 1002	GPAS 1003	GPAS 1004	GPAS 1005	GPAS 1006	GPAS 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	$I_{F(AV)}$	10							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	150							A
Maximum Instantaneous Forward Voltage (Note 1) @ 10 A	V_F	1.1							V
Maximum DC Reverse Current @ T_A=25 ℃ at Rated DC Blocking Voltage @ T_A=125 ℃	I_R	5 100							uA
Typical Junction Capacitance (Note 2)	Cj	50							pF
Typical Thermal Resistance	$R_{\theta JA}$	2.5							°C/W
Operating Temperature Range	T_J	- 65 to + 150							°C
Storage Temperature Range	T_{STG}	- 65 to + 150							°C

Note1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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RATINGS AND CHARACTERISTIC CURVES (GPAS1001 THRU GPAS1007)

FIG.1- MAXMUM FORWARD CURRENT DERATING CURVE

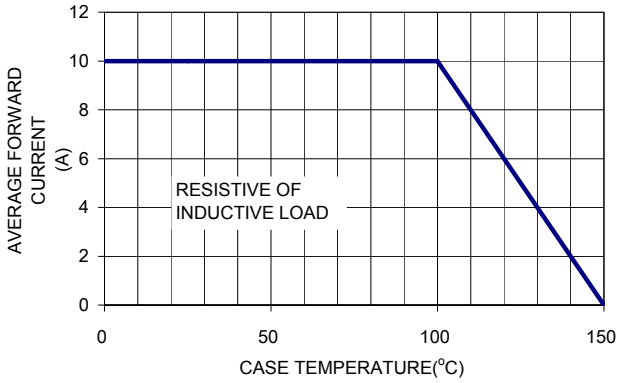

FIG. 2- TYPICAL REVERSE CHARACTERISTICS

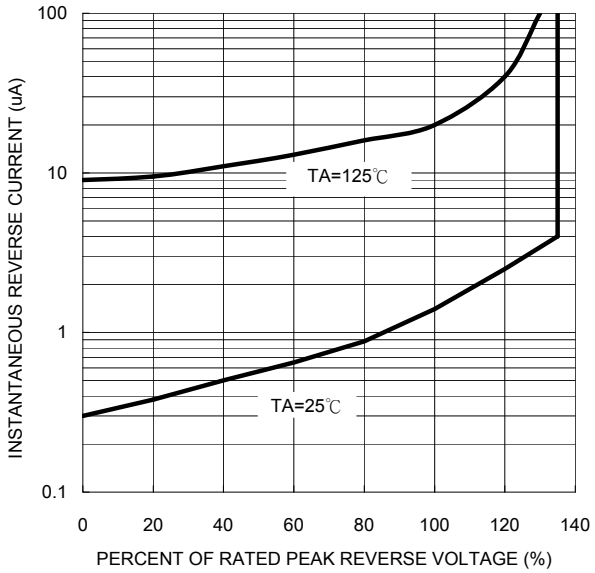

FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

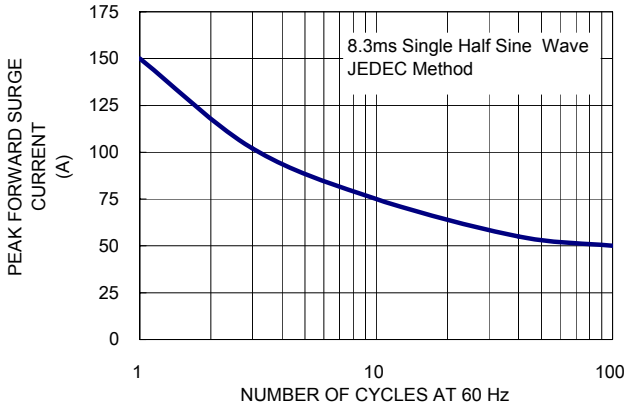

FIG. 4- TYPICAL JUNCTION CAPACITANCE

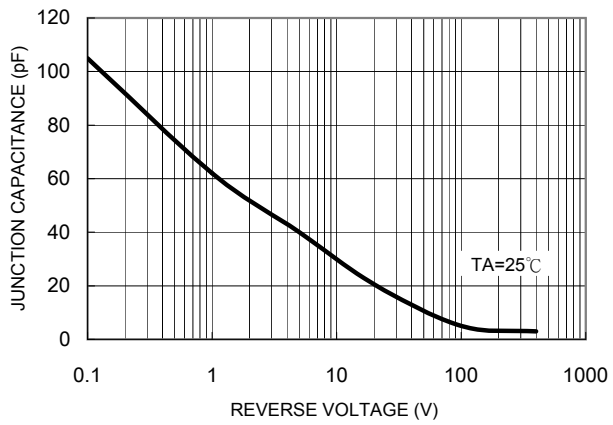

FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS