GM GarboMicro Semiconductor

GBP406 thru GBP410

GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE – 600 to 1000 Volts
FORWARD CURRENT – 4.0 Ampere

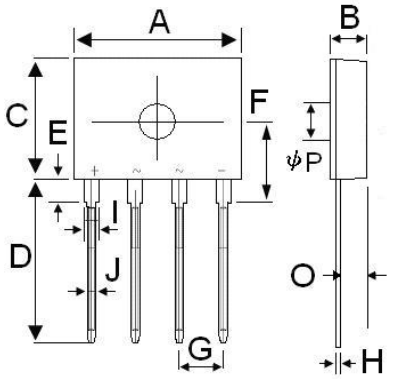
FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94-0
- UL recognized file#E95060

MECHANICAL DATA

- Case Material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Polarity indicator: As marked on body
- Weight: 1.33 grams

GBP



GBP		
Dim.	Min.	Max.
A	14.2	14.7
B	2.9	3.3
C	10.1	10.7
D	13.8	14.4
E	1.8	2.2
F	6.65	7.25
G	3.71	3.91
H	0.4	0.6
I	1.20	1.40
J	0.64	0.84
O	1.8	2.4
P	3.1 ϕ	3.3 ϕ
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
Ratings at 25℃ ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	GBP406	GBP408	GBP410	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 with Heat-sink @TC=90℃ Rectified Current without Heat-sink @TA = 25 ℃	$I_{(AV)}$	4.0 2.1			A
Peak Forward Surge Current @ Tj = 25 ℃ 8.3ms single half sine-wave @ T_J = 125℃	I_{FSM}	135 120			A
Peak Forward Surge Current @ Tj = 25 ℃ 1.0ms single half sine-wave @ T_J = 125℃	I_{FSM}	330 300			A
Maximum Forward Voltage at 2.0A DC	V_F	1.0			V
Maximum DC Reverse Current @ T_J = 25℃ at Rated DC Blocking Voltage @ T_J = 125℃	I_R	5 500			uA
I^2t Rating for fusing (3ms≦t≦8.3)	I^2t	60			A^2S
Typical Junction Capacitance (Note 1)	C_J	40			pF
Typical Thermal Capacitance (Note 2)	$R\Theta_{JC}$	7.5			℃/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150			℃

Note :

(1) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
(2) Device mounted on 50mm x 50mm x 2.0mm Cu Plate Heatsink

RATING AND CHARACTERISTIC CURVES
GBP406 thru GBP410

FIG.1- FORWARD CURRENT DERATING CURVE

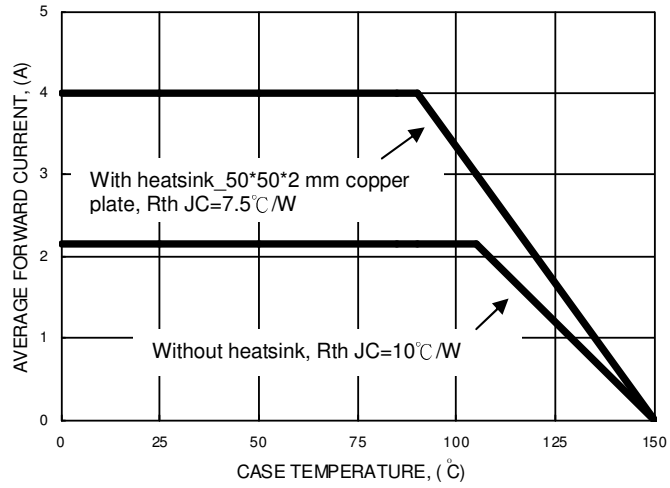


FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

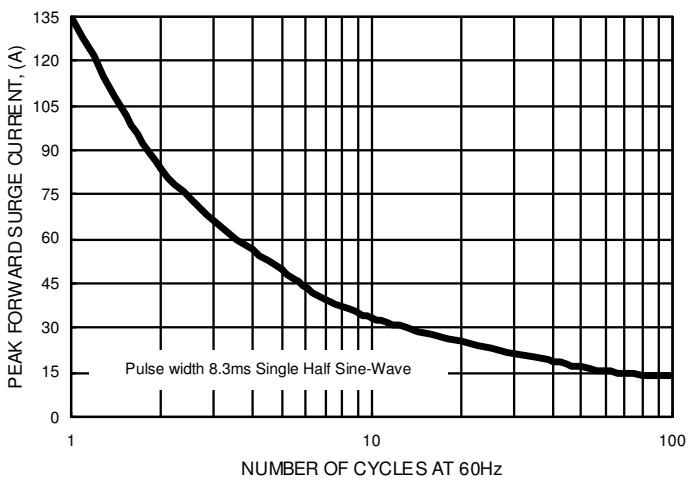


FIG.3- TYPICAL FORWORD CHARACTERISTICS

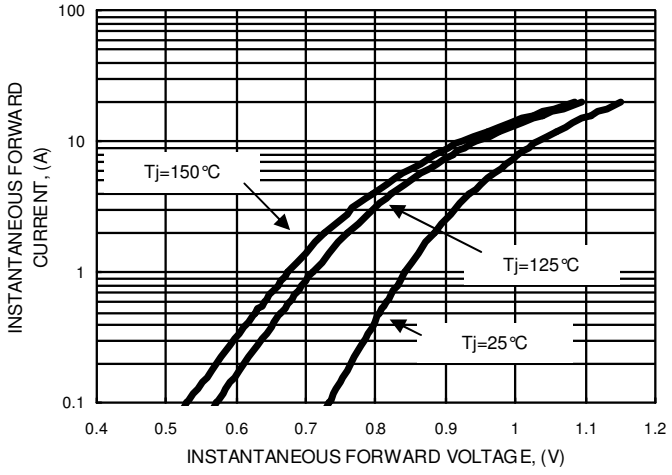


FIG.4- TYPICAL JUNCTION CAPACITANCE

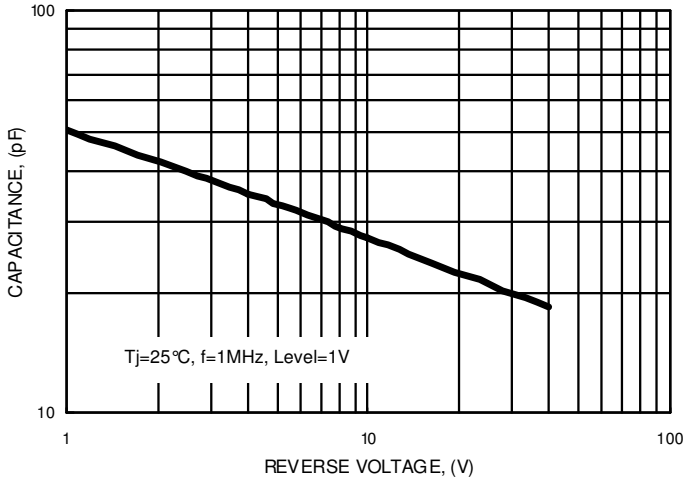


FIG.5- TYPICAL REVERSE CHARACTERISTICS

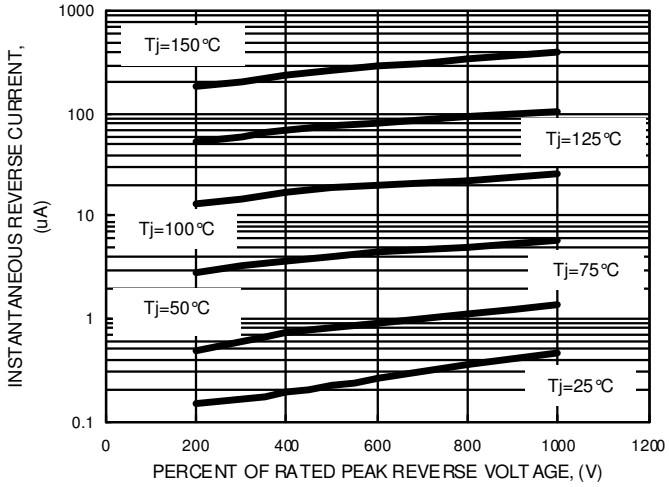


FIG.6_NON-REPETITIVE SURGE CURRENT

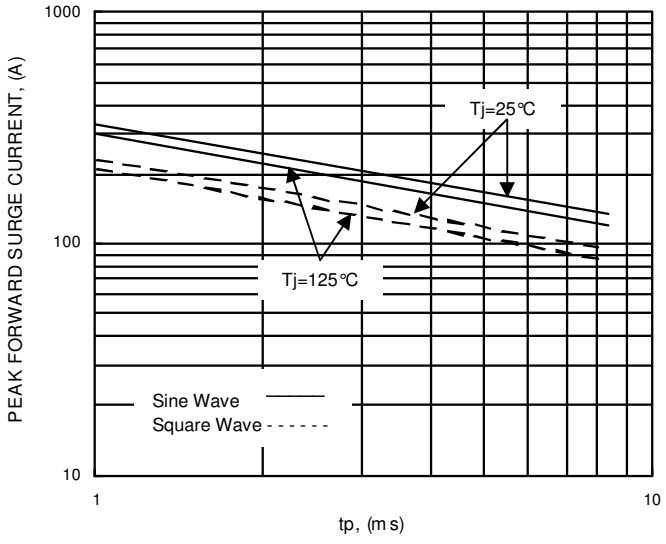
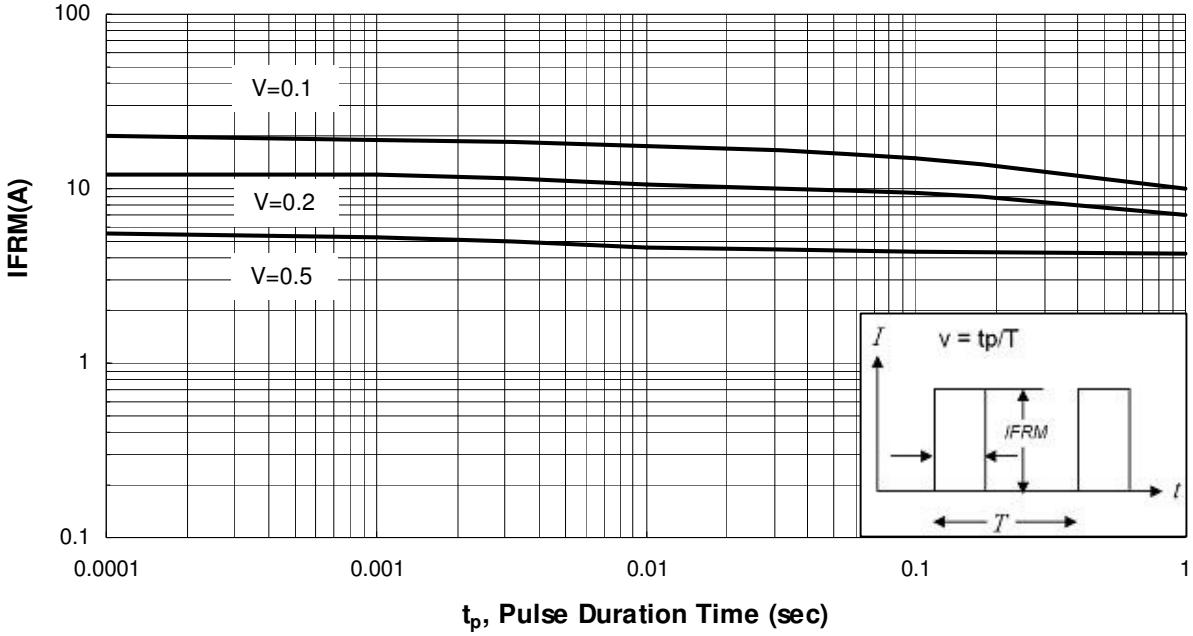


Fig.7 - Admissible Repetitive Peak Forward Current vs. Pulse Duration



t_p, Pulse Duration Time (sec)