



GBPC5001W THRU GBPC5010W

VOLTAGE RANGE 100to 1000 Volts
CURRENT 50 Ampere



Features

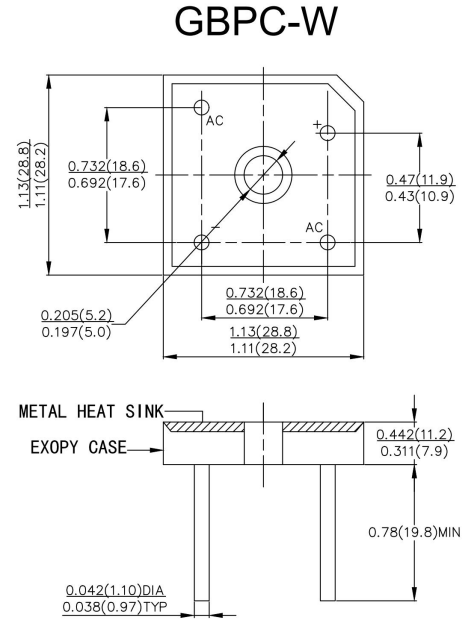
- Rating to 1000V PRV
- High efficiency
- Glass passivated chip junction
- Electrically isolated metal case for maximum heat dissipation
- The plastic material has UL flammability classification 94V-0
- Electrically isolated base-2500 Vlots

Mechanical Data

- Case: Molded plastic with Heatsink internally mounted in the bridge encapsulation
- Polarity: As marked on Body
- Mounting: Hole for # 10 screw
- Weight: 0.47 ounces, 13.4 grams (wire)

Maximum Ratings and Electrical Characteristics

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%



TYPE NUMBER	SYMBOLS	GBPC 5001W	GBPC 5002W	GBPC 5004W	GBPC 5006W	GBPC 5008W	GBPC 5010W	UNIT
Maximum Reverse Peak Repetitive Voltage	V_{RRM}	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current, at $T_C = T_A$	$I_{(AV)}$	50						Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load	I_{FSM}	500						Amps
Rating for Fusing ($t < 8.3ms$) ^(Note1)	I^2t	1037						A ² s
50Hz,R.M.S,t=1min,I _{iso} :1mA(max)	V_{ISO}	3000						Volts
Maximum Instantaneous Forward Voltage drop Per Bridge element 25A	V_F	1.1						Volts
Maximum Reverse Current at rated DC blocking voltage per element	TA=25°C	5.0						μAmps
	TA=125°C	500						
Typical Junction Capacitance Per Element ^(Note2)	C_j	130						pF
Typical Thermal Resistance ^(NOTE 3)	$R_{θJC}$	5.0						°C/W
Operating Temperature Range	T_j	-55 to +150						°C
Storage Temperature Range	T_{STG}	-55 to +150						°C

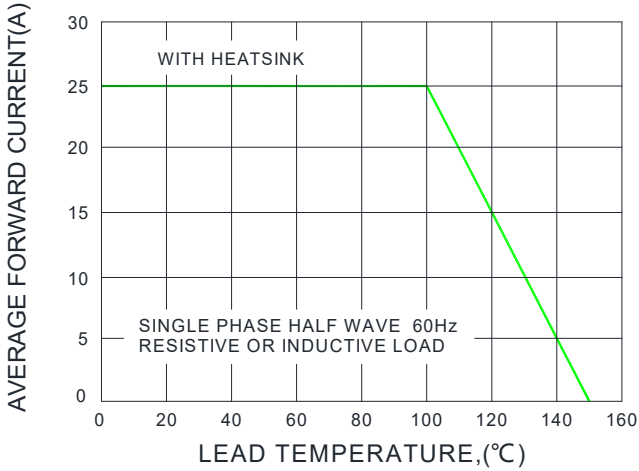
Notes:

1. Measured at non-repetitive,for greater than 1ms and less than 8.3ms.
2. Measured at 1.0MHz and applied reverse voltage of 1.0V DC.
3. Device mounted on 300mm×300mm×1.6mm Cu Plate Heatsink.

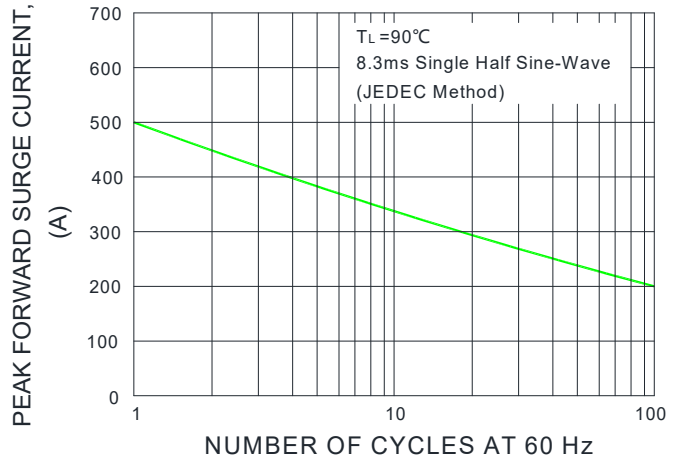


Ratings and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

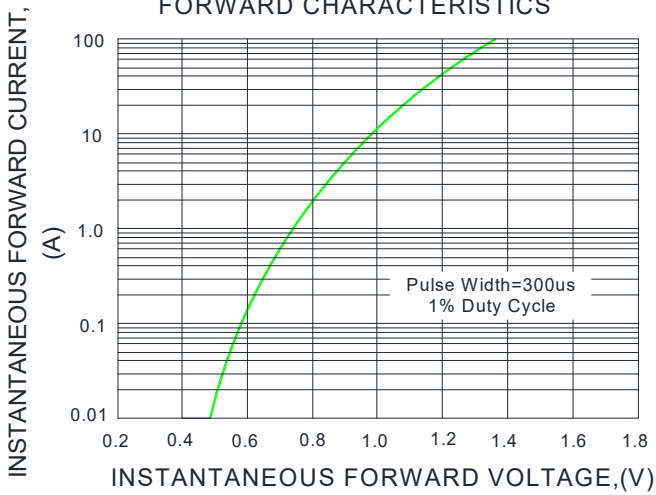
F1G.1-FORWARD CURRENT DERATING CURVE



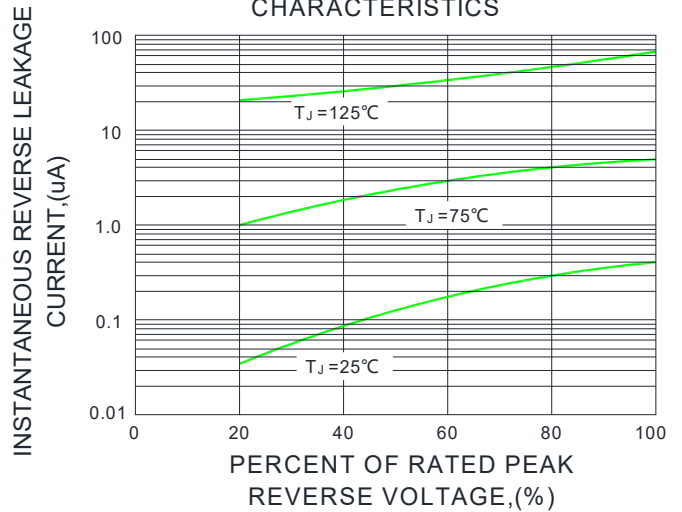
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



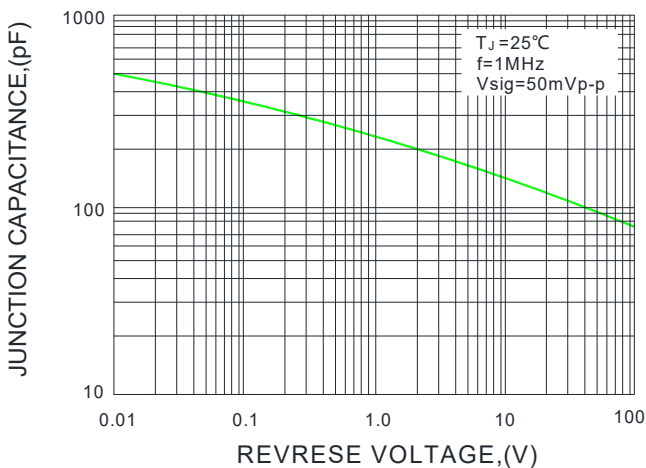
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE





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CURRENT 50 Ampere

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