



GBP3005 thru GBP310

3 A Single-Phase Bridge Rectifier

FEATURES

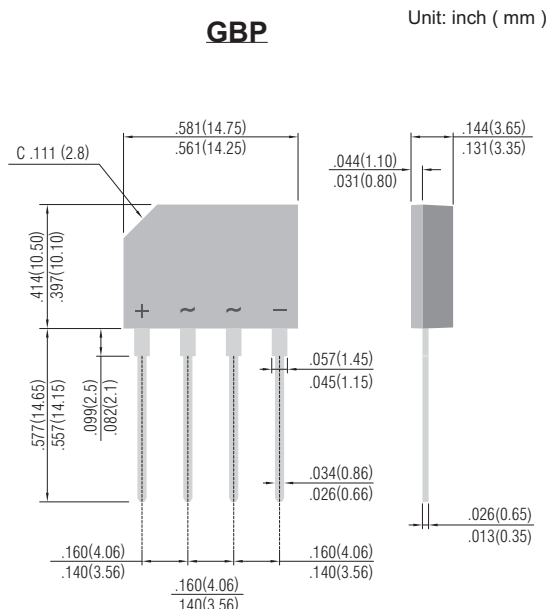
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- Surge overload rating : 70 Amperes peak

MECHANICAL DATA

Terminals: Leads solderable per MIL-STD-202, Method 208

Mounting position: Any

Weight: 0.06 ounce, 1.7 grams



Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.
For Capacitive load derate current by 20%.

Parameter	Symbol	GBP3005	GBP301	GBP302	GBP304	GBP306	GBP307	GBP310	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	1000	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	700	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	1000	1000	V
Maximum average forward rectified output current at TA=50°C	IF(AV)	3							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	70							A
Rating for fusing (t<8.3ms)	I ² t	20							A ² sec
Typical thermal resistance per element (1)	RthJA	10.0							°C / W
Typical junction capacitance per element (2)	Cj	34							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.
For Capacitive load derate by 20 %.

Parameter	Symbol	GBP3005	GBP301	GBP302	GBP304	GBP306	GBP307	GBP310	Unit
Maximum instantaneous forward voltage drop per leg at 1.5A	VF	1.0							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	5.0 500							μA

NOTES:

1. Measured at 1.0MHZ and applied reverse voltage of 4.0 volts
2. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B with 0.47 x 0.47"(12 x 12mm)copper pads.

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

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RATING AND CHARACTERISTIC CURVES

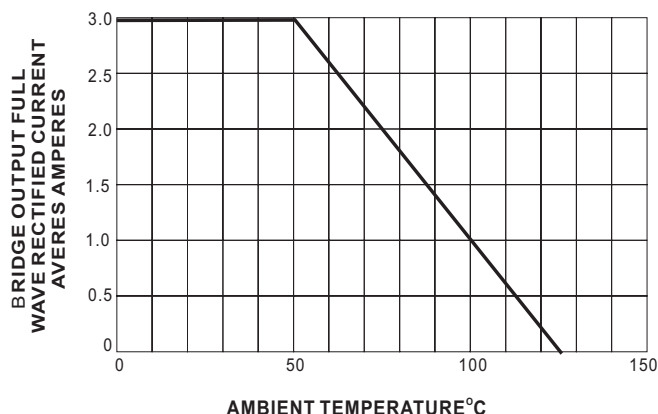


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

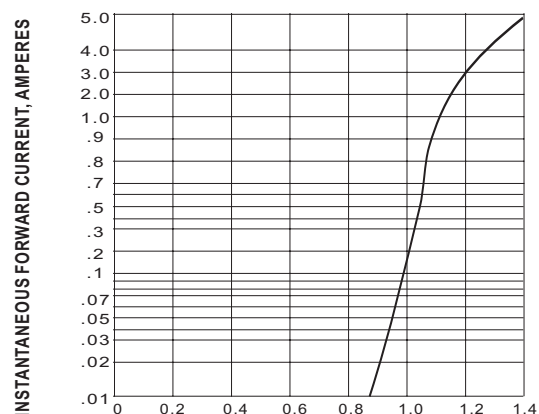


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS (25°C)

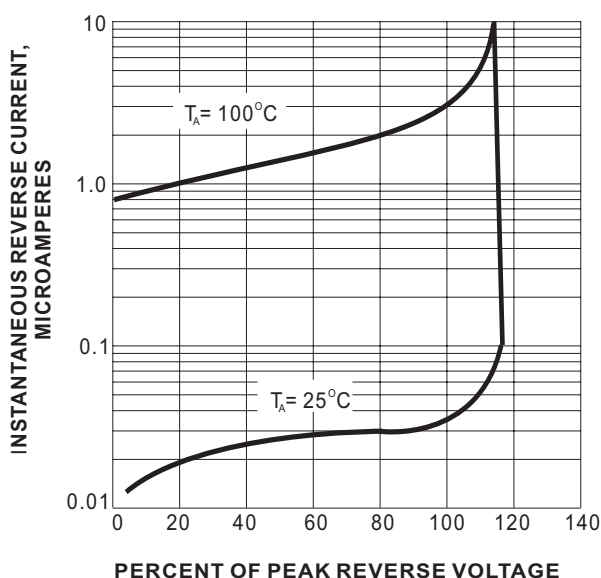


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

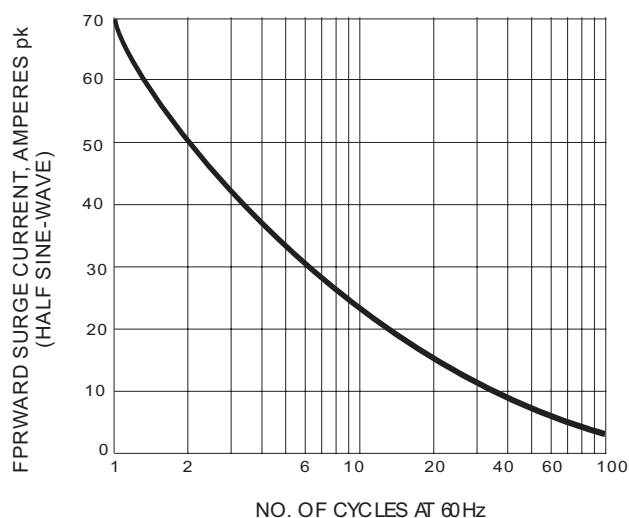


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT