GBP6005 thru GBP610

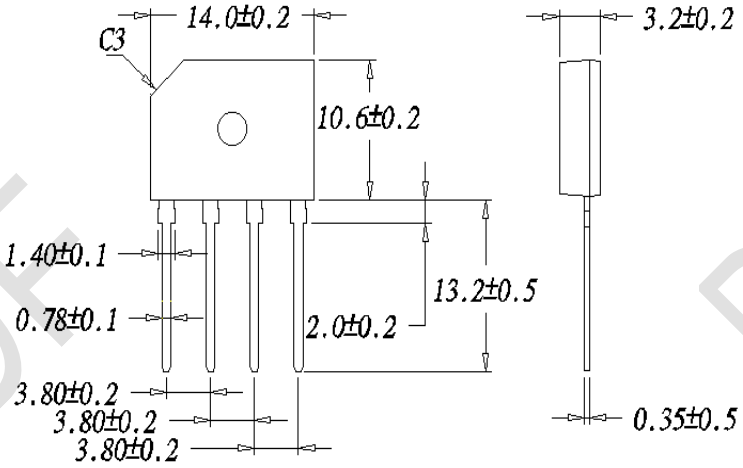
6.0 A Single-Phase Silicon Bridge Rectifier

Rectifier Reverse Voltage 50 to 1000V

GBP

Features

- Ideal for printed circuit board mounting
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 260℃/5 seconds at 5 lbs (2.3kg) tension



Dimensions in inches and (milimeters)

Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique
Terminals: Plated leads solderable per MIL-STD-202, Method 208
Mounting Position: Any

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	GBP 6005	GBP 601	GBP 602	GBP 604	GBP 606	GBP 608	GBP 610	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input 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 output current at TC=100°C (with heatsink)	IF(AV)	6.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	150							A
Rating for fusing (t<8.3ms)	I^2t	125							A^2sec
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							℃

Electrical Characteristics

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

Parameter	Symbol	GBP 6005	GBP 601	GBP 602	GBP 604	GBP 606	GBP 608	GBP 610	Unit
Maximum instantaneous forward voltage drop per leg at 3.0A	VF	1.1							V
Maximum DC reverse current at rated TA =25°C **DC blocking voltage per element TA =125°C**	IR	10 500							μA

Notes: (1)Thermal resistance from Junction to Ambemt on P.C.board mounting.

Rating and Characteristic Curves (TA = 25°C Unless otherwise noted)
GBP6005 thru GBP610

Fig. 1 Derating Curve for Output Rectified Current

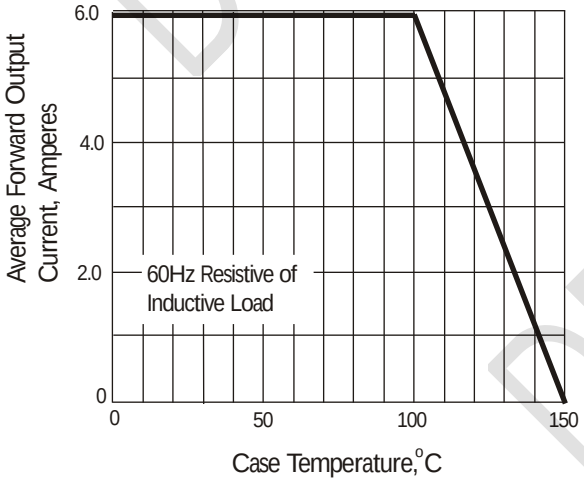


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

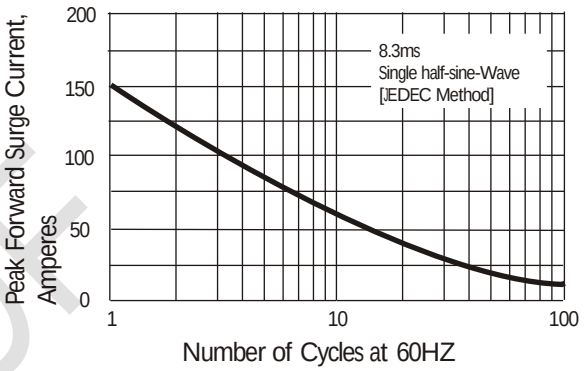


Fig. 3 Typical Instantaneous Forward Characteristics

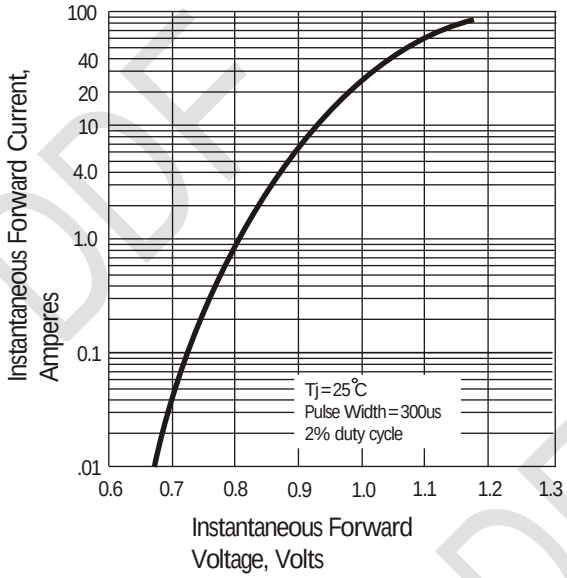


Fig. 4 Typical Reverse Characteristics

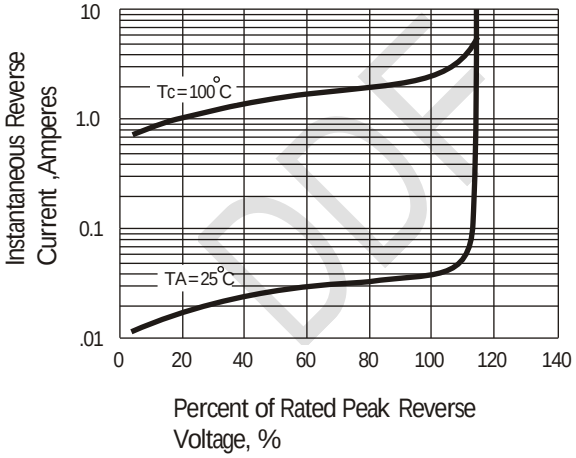


Fig. 5 Typical Junction Capacitance

