



GBP4005 thru GBP410

4.0 A Single-Phase Silicon Bridge Rectifier Rectifier Reverse Voltage 50 to 1000V

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°C/5 seconds at 5 lbs (2.3kg) tension

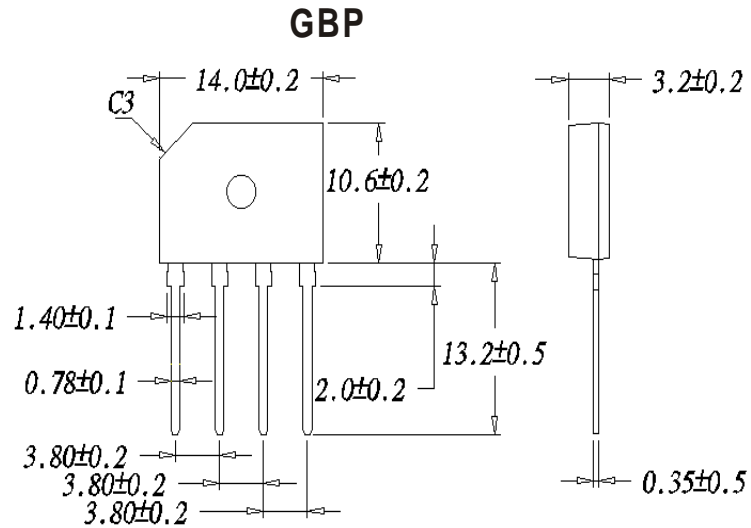
Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 1.35 grams (approx)



Dimensions in inches and (millimeters)

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 4005 | GBP 401 | GBP 402 | GBP 404 | GBP 406 | GBP 408 | GBP 410 | unit |
|---|-----------------|--------------|---------|---------|---------|---------|---------|---------|-----------------------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS bridge input 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 output current at $T_C=100^\circ\text{C}$ (with heatsink) | $I_{F(AV)}$ | 4.0 | | | | | | | A |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 135 | | | | | | | A |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 75 | | | | | | | A^2sec |
| Typical thermal resistance per element (1) | $R_{\theta JA}$ | 10.0 | | | | | | | $^\circ\text{C} / \text{W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -55 to + 150 | | | | | | | $^\circ\text{C}$ |

Electrical Characteristics

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

| Parameter | Symbol | GBP 4005 | GBP 401 | GBP 402 | GBP 404 | GBP 406 | GBP 408 | GBP 410 | Unit |
|---|--------|------------|---------|---------|---------|---------|---------|---------|---------------|
| Maximum instantaneous forward voltage drop per leg at 4.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC reverse current at rated $T_A = 25^\circ\text{C}$ DC blocking voltage per element $T_A = 125^\circ\text{C}$ | I_R | 10 1000 | | | | | | | μA |

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

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

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Fig. 1 Derating Curve for Output Rectified Current

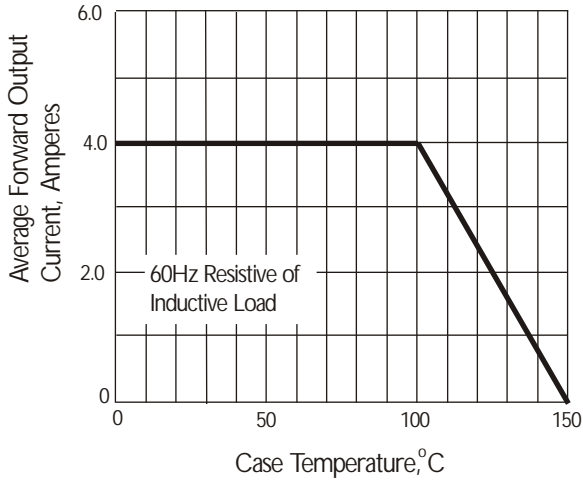


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

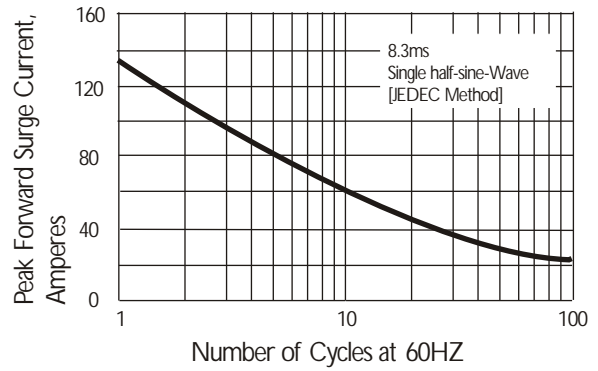


Fig. 3 Typical Instantaneous Forward Characteristics

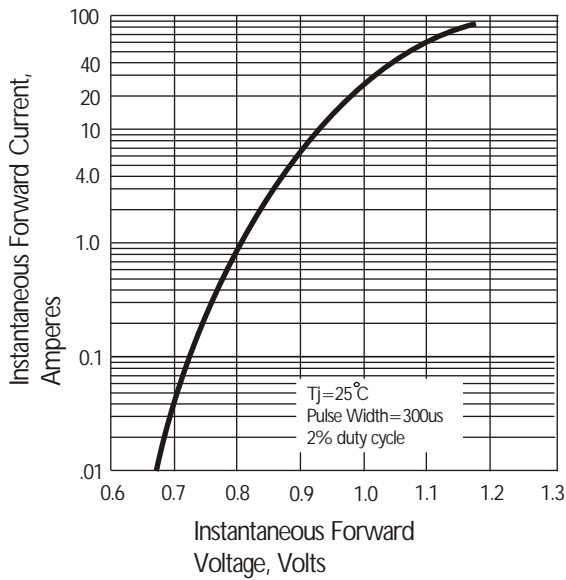


Fig. 4 Typical Reverse Characteristics



Fig. 5 Typical Junction Capacitance

