

Bridge Rectifiers

GBP4005—GBP410

Features

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Glass passivated chip junction
- ◆ High forward surge capability



Mechanical Data

Case: GBP Molded plastic body

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

High temperature soldering guaranteed: 260°C/10 seconds

Mounting Position: Any

Maximum Ratings & Electrical Characteristics

Ratings at $T_A = 25^\circ\text{C}$ unless otherwise specified

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 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
Average forward rectified output current		I _{F(AV)}	4.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	80							A
Rating for fusig (t<8.3ms)		I ² t	26.5							A ² sec
Maximum instantaneous forward voltage dropper leg at 2A		V _F	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg	T _J =25℃	I _R	5.0							uA
	T _J =125℃		500							

Thermal Characteristics

Typical thermal resistance per leg (Note 1)	$R_{\theta JA}$	32	$^\circ\text{C/W}$
	$R_{\theta JL}$	15	
Operating junction temperature range	T_J	-55 to +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Note

(1) Units mounted on PCB with 0.47×0.47(12×12mm) Copper Pads

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

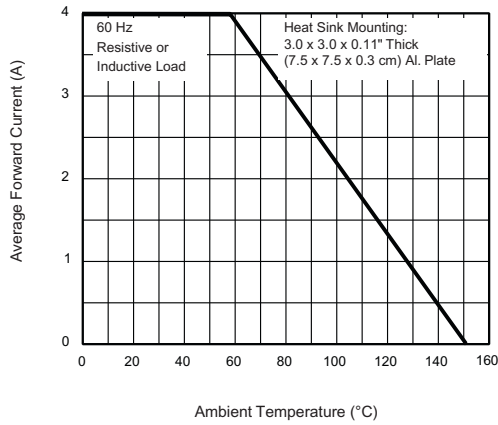


Figure 1. Forward Current Derating Curve

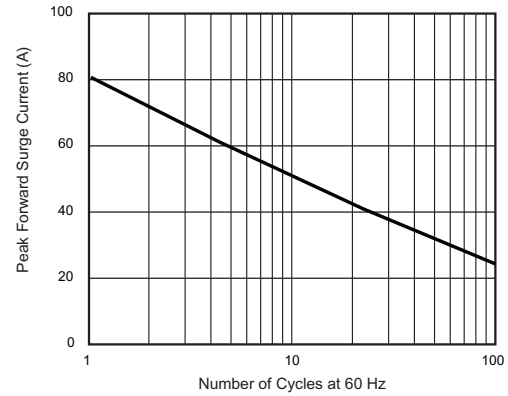


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

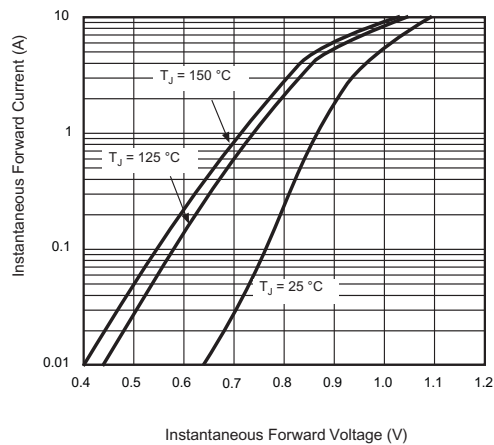


Figure 3. Typical Forward Characteristics Per Diode

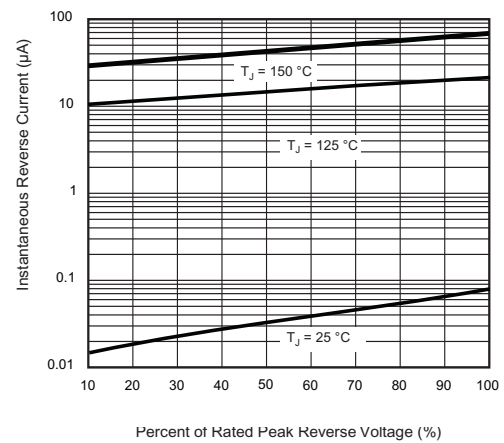


Figure 4. Typical Reverse Leakage Characteristics Per Diode

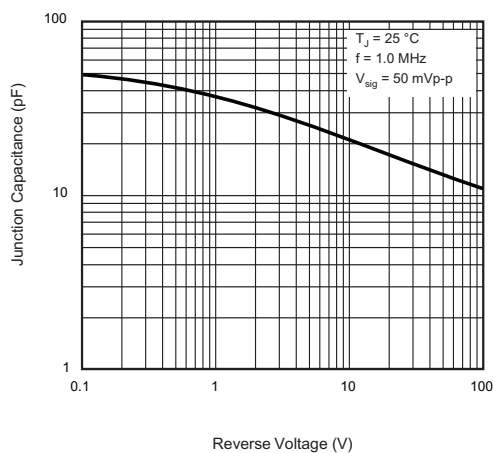


Figure 5. Typical Junction Capacitance Per Diode

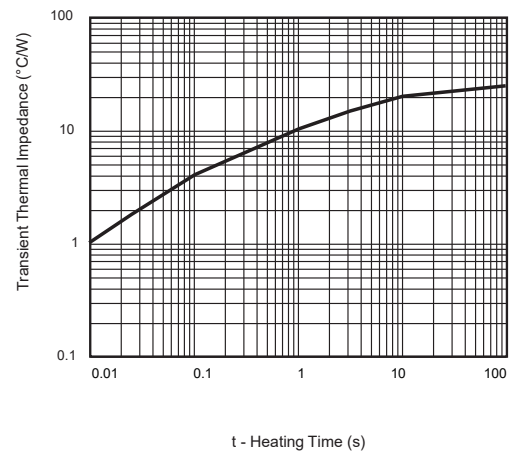
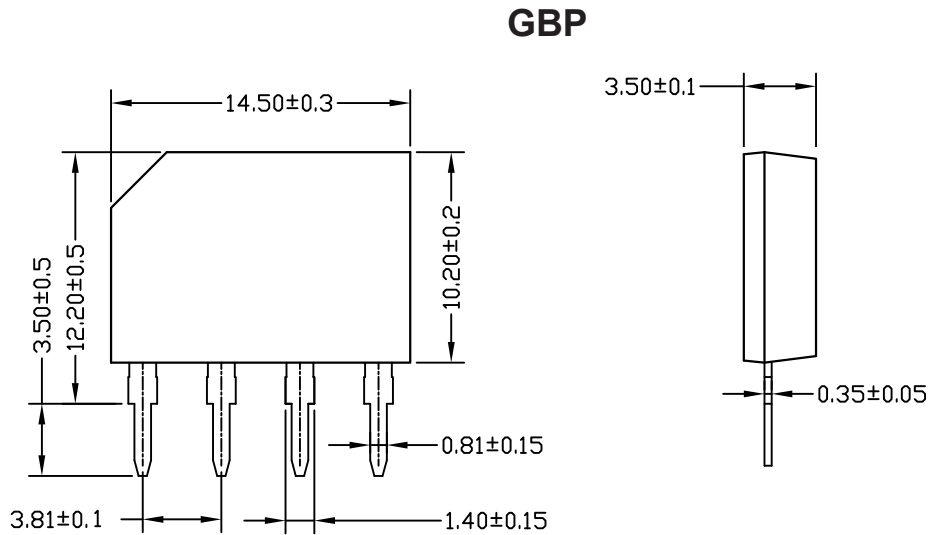


Figure 6. Typical Transient Thermal Impedance Per Diode

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Package Outline Dimensions(unit:mm)



Ordering Information

Part No.	Marking	Package	Shipping	
GBP4005	GBP4005	GBP	500PCS /inner box	5000PCS /Box
GBP401	GBP401	GBP	500PCS /inner box	5000PCS /Box
GBP402	GBP402	GBP	500PCS /inner box	5000PCS /Box
GBP404	GBP404	GBP	500PCS /inner box	5000PCS /Box
GBP406	GBP406	GBP	500PCS /inner box	5000PCS /Box
GBP408	GBP408	GBP	500PCS /inner box	5000PCS /Box
GBP410	GBP410	GBP	500PCS /inner box	5000PCS /Box