

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

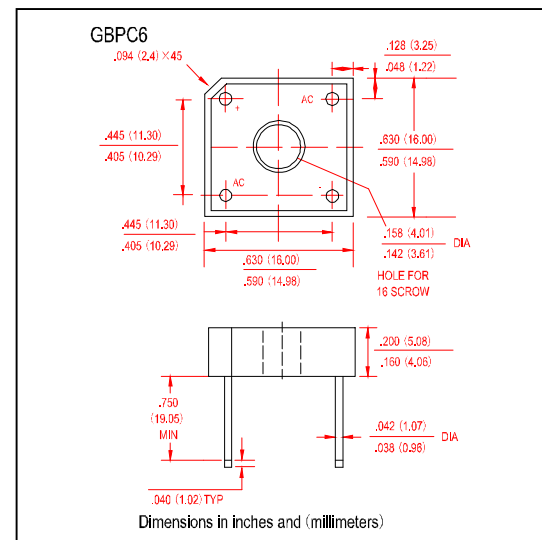
GBPC6005 THRU GBPC610

FEATURES

- Plastic package has underwriters laboratory
- Flammability classification 94V-0
- Glass passivated ship junction
- High case dielectric with standing voltage of 1500V_{RMS}
- Typical I_r less than 0.5 μA
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed 260/10 seconds, 0.375" (9.5mm) lead length at 5 lbs (2.3kg) tension

MECHANICAL DATA

- Case: Epoxy, Molded Plastic body over passivated junctions
- Terminal: Plated leads solderable per MIL-STD-750 method 2026
- Mounting position: Any (Note 1)
- Weight: 0.1 ounce, 2.8 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

	SYMBOLS	GBPC 6005	GBPC 601	GBPC 602	GBPC 604	GBPC 606	GBPC 608	GBPC 610	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward output current at	T _C =50°C (Note 2)	6.0							Amps
	T _A =40°C (Note 3)	3.0							
Peak Forward Surge Current single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	125							Amps
Maximum Instantaneous Forward Voltage Drop Per element per leg 3.0A	V _F	1.0							Volts
Rating for Fusing (t < 8.3ms)	I ² t	1.0							A ² s
Maximum DC Reverse Current at rated DC Blocking Voltage per leg	T _A = 25°C	5.0							μA
	T _A = 125°C	500							
Typical Junction Capacitance per leg at 4.0V, 1 MHz	C _j	186				90			pF
Typical Thermal Resistance per leg (NOTE 1)	R _{θJL}	7.3							°C/W
	R _{θJA}	22							
Operating and Storage Temperature Range	T _J , T _{STG}	(-55 to +150)							°C

- Notes:**
1. Bolt down on heatsink with silicon thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw.
 2. Unit mounted 5.0" x 6.0" x 0.11" thick (10.5 x 10.5 x 0.3cm) A1. Plate.
 3. Unit mounted on P.C.B. at 0.375" (9.5mm) lead with 0.5" x 0.5" (12 x 12mm) copper pads

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RATINGS AND CHARACTERISTICS CURVES GBPC6005 THRU GBPC610

FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

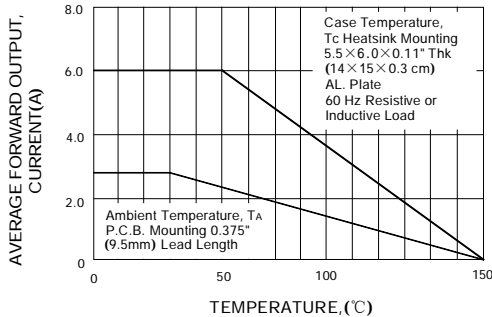


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

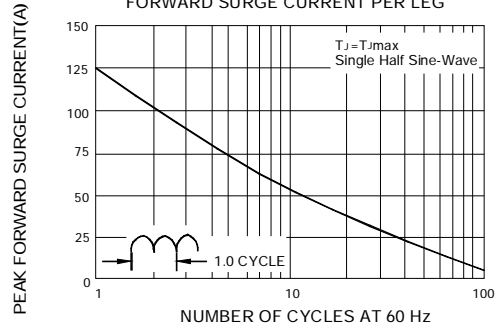


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS PER LEG

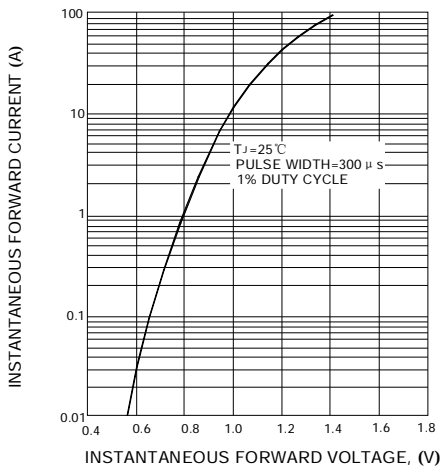


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

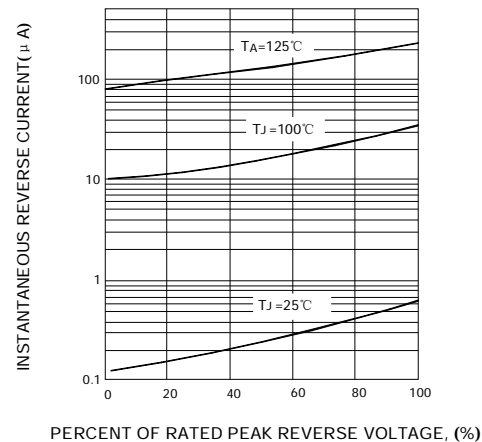


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

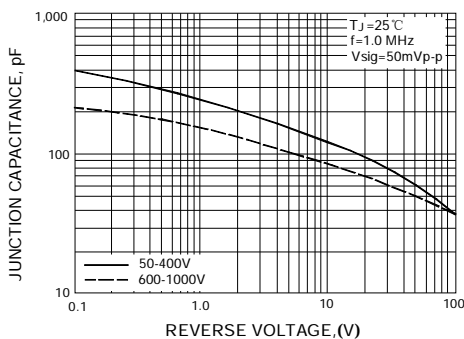


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

