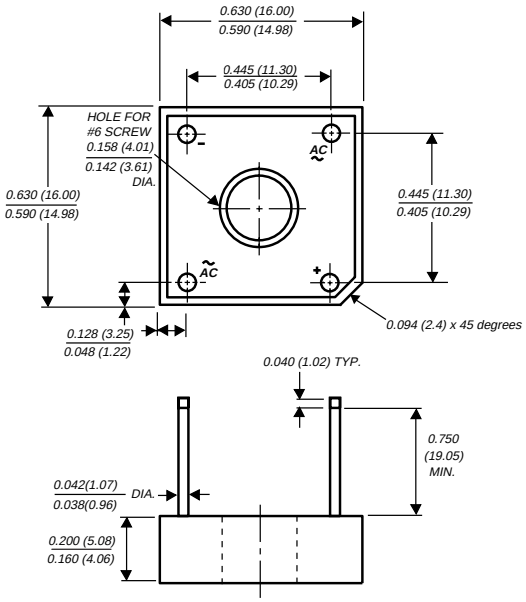
GBPC6005 THRU GBPC610

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

***Reverse Voltage** - 50 to 1000 Volts* ***Forward Current** - 6.0 Amperes*

Case Style GBPC

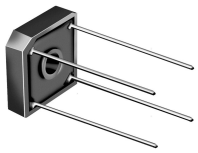


Polarity shown on side of case: Positive lead by beveled corner

Dimensions in inches and (millimeters)

FEATURES

- Plastic package has carries Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under recognized under Component Index, file number E54214
- Glass passivated chip junctions
- High case dielectric strength of 1500 V_{RMS}
- Typical I_R less than 0.5µA
- High forward surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3 kg) tension



MECHANICAL DATA

Case: Molded plastic body over passivated junction

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

Mounting Position: Any (NOTE 1)

Mounting Torque: 5.0 in. - lb. max.

Weight: 0.1 ounce, 2.8 grams

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	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS bridge input 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 rectified output current at T_C=50°C (NOTE1, 2) / T_A=40°C (NOTE 3)	$I_{(AV)}$	6.0 / 3.0							Amps
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175.0							Amps
Rating for fusing (t<8.3ms)	I^2t	127.0							A^2sec
Maximum instantaneous forward voltage drop per leg at 3.0 Amperes	V_F	1.0							Volts
Maximum DC reverse current at rated DC blocking voltage per leg T_A=25°C / T_A=125°C	I_R	5.0 / 500.0							µA
Typical junction capacitance per leg (NOTE 4)	C_J	186.0				90.0			pF
Typical thermal resistance per leg (NOTE 3) / (NOTE 2)	$R_{\Theta JA}$ / $R_{\Theta JC}$	22.0 / 7.3							°C/W
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

NOTES:

(1) Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer with #6 screw

(2) Unit mounted on 5.5 x 6.0 x 0.11" thick (14 x 15 x 0.3cm) Al. Plate

(3) Unit mounted on P.C.B. at 0.375" (9.5mm) lead length with 0.5 x 0.5" (12 x 12mm) copper pads

(4) Measured at 1 MHz and applied reverse voltage of 4.0 Volts

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RATINGS AND CHARACTERISTICS CURVES GBPC6005 THRU GBPC610

FIG. 1 - DERATING CURVE OUTPUT RECTIFIED CURRENT

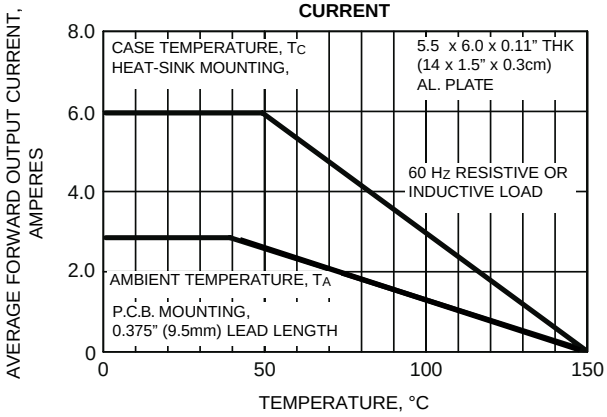


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

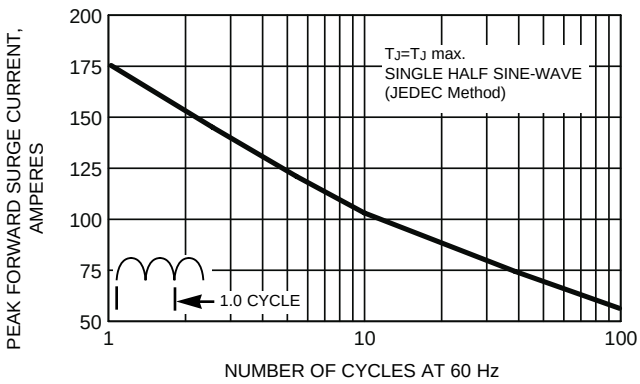


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS PER LEG

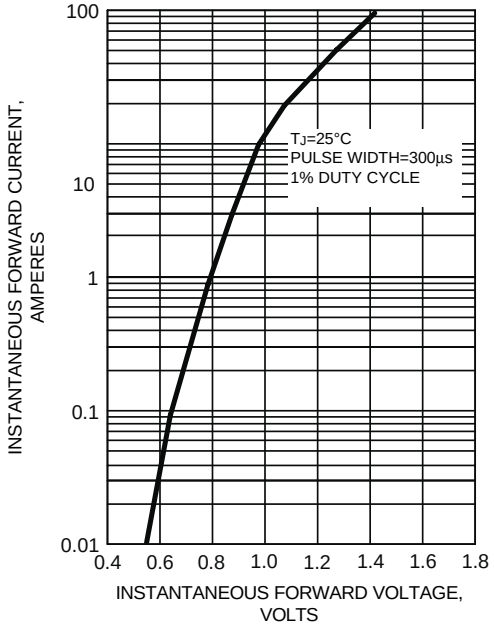


FIG. 3 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

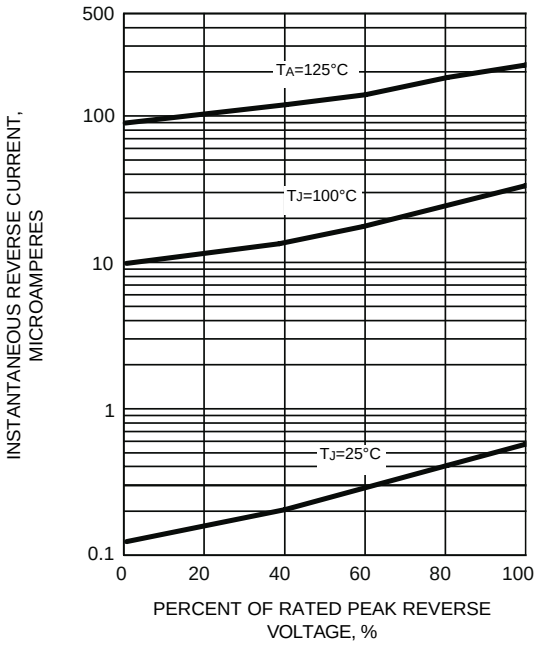


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

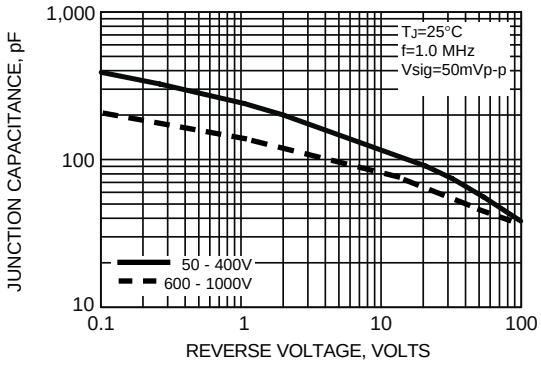
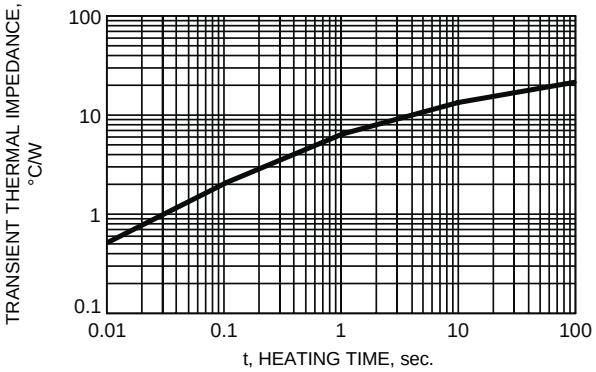


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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