



DATA SHEET

SEMICONDUCTOR

GBPC6005 THRU GBPC610

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

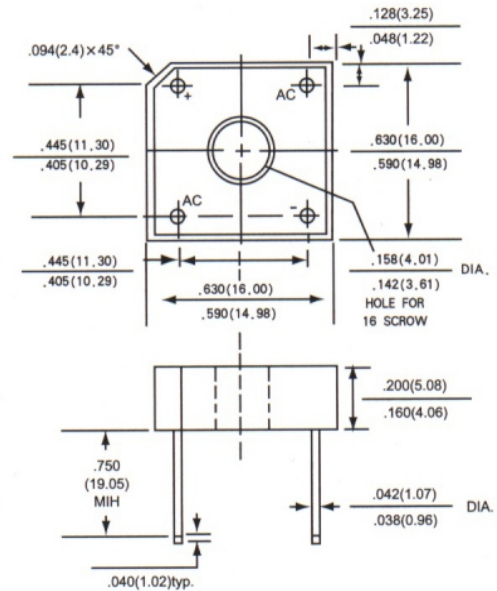


Reverse Voltage - 50 to 1000 Volts Current Voltage - 6.0 Amperes

FEATURES

- Plastic package has underwriters laboratory
- Flammability classification 90V - 0
- Glass passivated chip junction
- High case dielectric with standing voltage of 1500VRMS
- Typical IR less than 0.5 μ A
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed:
- 260/10seconds, 0.375" (9.5mm) lead length at 5 lbs (2.3kg) tension.
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

GBPC6 Unit:inch(mm)



MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 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		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward output current at	TC = 50 (Note 2)	I(AV)	6.0							Amps
	TA = 40 (Note 3)		3.0							
Peak Forward Surge Current single half sine - wave superimposed on rated load (JEDEC method)		IFSM	175							Amps
Maximum Instantaneous Forward Voltage Drop per element per leg 3.0A		VF	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	TA = 25	IR	5.0							uA
	TA = 125		500							
Typical Junction Capacitance per leg at 4.0V, 1MHz		Cj	186			90			pF	
Typical Thermal Resistance per leg (Note 1)		RJl	7.3							/W
		RJA	22							
Operating and Storage Temperature Range		TJ, TSTG	-55 to +150							

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 on 4.0" * 4.0" * 0.11" thick (10.5*10.5*0.3cm) Al. Plate.
3. Unit mounted on P.C.B. at 0.375" (9.5mm) lead with 0.5" * 0.5" (12*12mm) copper pads

DEVICE CHARACTERISTICS

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FIG. 1 - MAXIMUM OUTPUT RECTIFIED CURRENT

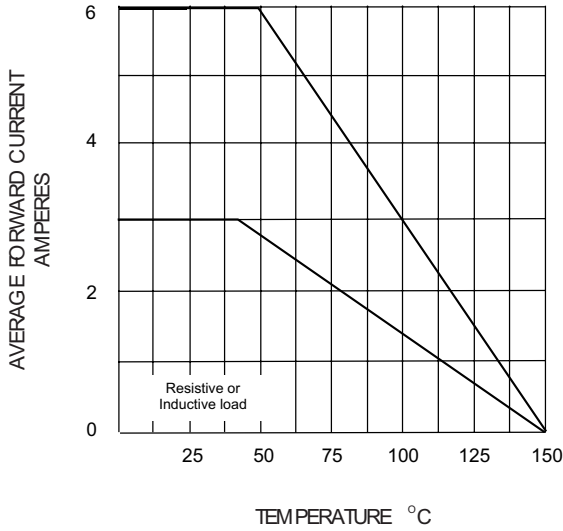


FIG. 2 - Forward Current Deratin Curve

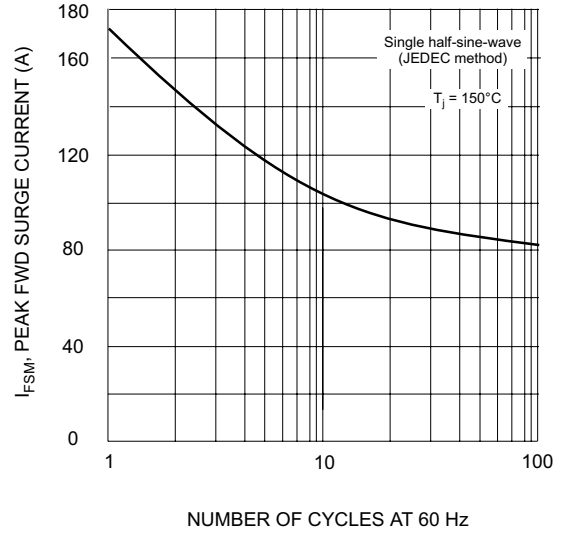


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

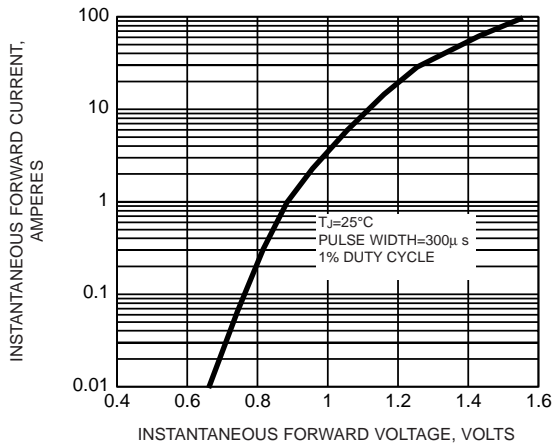


FIG. 4 - Typical Reverse Characteristics

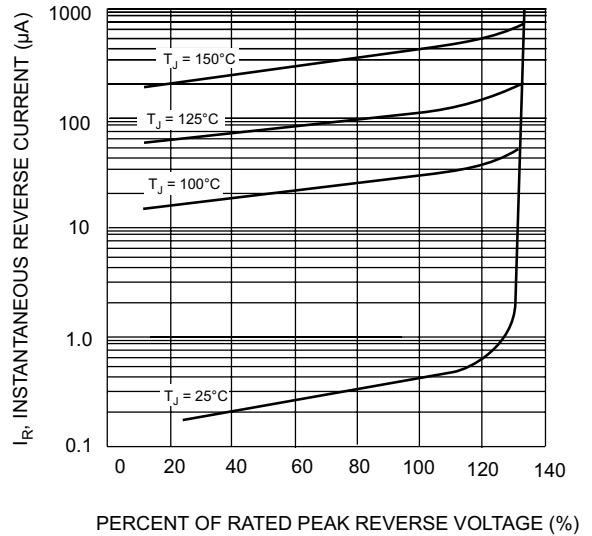


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

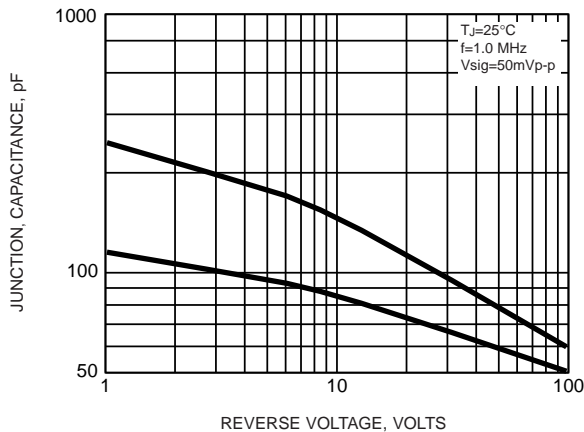


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

