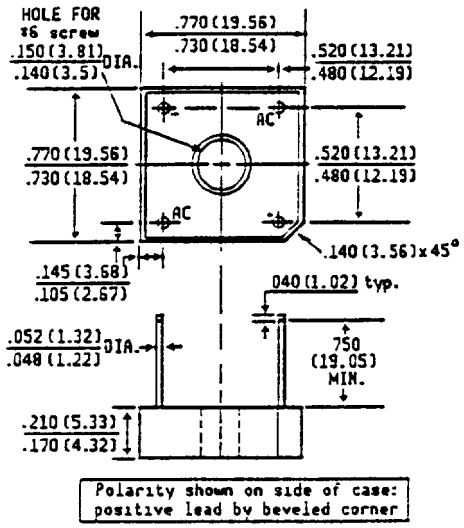
211-242
211-254
211-2606

GBPC8005 THRU GBPC810

GLASS PASSIVATED SINGLE - PHASE SILICON BRIDGE RECTIFIER

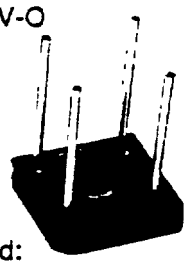
VOLTAGE - 50 to 1000 Volts *CURRENT - 8.0 Amperes*

FEATURES



Dimensions in inches and (millimeters)

- Glass passivated chip junctions
- Plastic matenal used carries Underwriters Laboratory flammability recognition 94V-O
- High case dielectric strength
- Typical I_R less than 0.5 μ A
- High surge current capability
- Ideal for printed circuit boards
- High temperature soldering guaranteed: 265° C /10 seconds at 5lbs., (2.3 kg) tension



MECHANICAL DATA

Case: Reliable construction utilizing molded plastic technique

Terminals: Leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Mounting: Thru hole for #6 screw

Weight: 0.15 ounces, 4.4 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
60 Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

	SYMBOLS	GBPC 8005	GBPC 801	GPBC 802	GBPC 804	GBPC 806	GBPC 808	GBPC 810	UNITS
Maximum Recurrent 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 $T_C = 50°C$ (Note 1)	$I_{(AV)}$				8.0				Amps
at $T_A = 40°C$ (Note 2)	$I_{(AV)}$				3.0				Amps
Peak Forward Surge Current Single sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}				200				Amps
Rating for fusing (t<8.3ms)	I^2t				160				A^2s
Maximum Instantaneous Forward Voltage Drop per element at 4.0 Amperes	V_F				1.0				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per Bridge Element $T_A = 25°C$	I_R				10.0				μA
$T_A = 125°C$	I_R				500				μA
Typical Junction Capacitance per element (Note 3)	C_J				100				pf
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$				6.0				°C/W
Operating Temperature Range	T_J				-55 to +150				°C
Storage Temperature Range	T_{STG}				-55 to +150				°C

NOTES: 1. Unit mounted on 8.6" sq. x .24" thick (22 x 22 x 0.6 cm) Al. plate.
2. Unit mounted on P.C. board at .375", 9.5mm lead lengths.
3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

GENERAL INSTRUMENT

RATINGS AND CHARACTERISTIC CURVES GBPC8005 THRU GBPC810

FIG. 1 - OERATING CURVE
OUTPUT RECTIFIED CURRENT

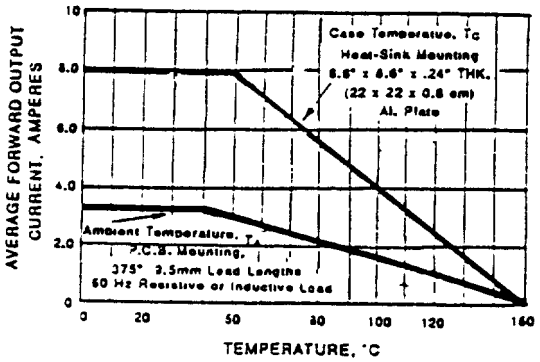


FIG. 2 - MAXIMUM NON-REPETITIVE
PEAK FORWARD SURGE CURRENT

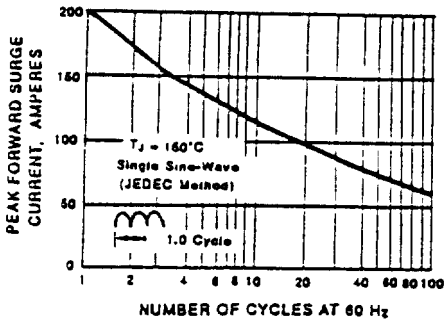


FIG. 3 - TYPICAL
REVERSE CHARACTERISTICS

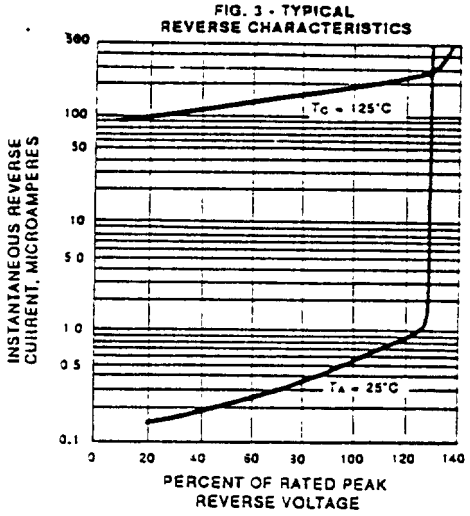


FIG. 4 - TYPICAL FORWARD VOLTAGE
CHARACTERISTICS PER ELEMENT

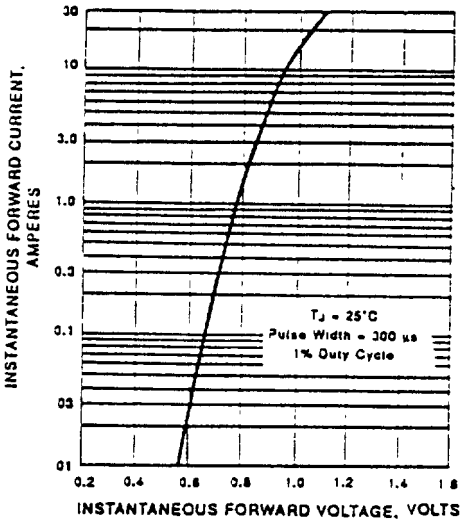


FIG. 5 - TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

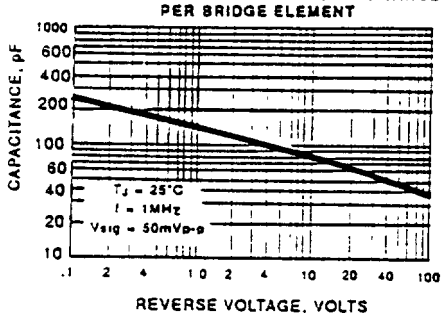
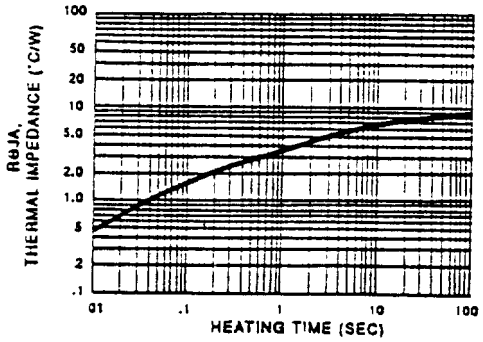


FIG. 6 - TYPICAL TRANSIENT
THERMAL IMPEDANCE



GENERAL INSTRUMENT CORPORATION
Power Semiconductor Division Headquarters: 600 West John Street, CS620, Hicksville, N.Y. 11802-1620, (516)933-3333 • TWX 310-376-8690 • FAX: 516-933-3881
North Eastern Regional Sales Office: 120 Andrews Road, Hicksville, N Y 11801-1702, (516)933-3200 • TWX· 310-376-7238 • FAX: 516-433-4412
South Eastern Regional Sales Office: 6855 Jimmy Carter Blvd., Suite 2250, Norcross, GA 30071, (404)446-1265 • TWX: 510-101-3222 • FAX, 404-446-1286
Central Regional Sales Office: 85 W Algonquin Road, Suite 300, Arlington Heights, IL 60005, (708)364-5880 • TWX 910-222-0431 • FAX 708-364-0649
Western Regional Sales Office: 21601 Vanowen Street, Suite 205, Canoga Park, CA 91303, (818)992-0982 • TWX, 910-322-1980 • FAX, 818-992-1658
INTERNATIONAL SALES OFFICES
Germany, Austria and Switzerland General Instrument Deutschland GmbH, Freischützstraße 96,8000 München 81, W. Germany, Tel· (0-89)95997-0 • Telex: 524523 • FAX: 9-011-49-89-957-0489
France General Instrument France, 9/11 Rue G. Enesco, 94008 Creteil, Tel: 33(1)43771263 • Telex: 262435 • FAX: (33) 143991524
Italy General Instrument Italia S.R L., Via Cantu 11-20092 Cinisello Balsamo, Milano, Tel: 02/66010274-66010285-66010287 • Telex· 320348 • FAX· 02/66010324
United Kingdom General Instrument (UK) Limited, Power Semiconductor Div , Chelworth Industrial Estate, Cricklade, Swindon, Wiltshire, England SN6 6HQ, • Tel: (0793)752307 • FAX: (0793) 751419
Power Semiconductor Div - Semitron Industries Limited, Chelworth Industrial Estate, Cricklade, Swindon, Wiltshire, England SN6 6HQ, • Tel: (0793) 751151 • FAX: (0793)751808• Telex: 44848
Taiwan General Instrument of Taiwan, Ltd., 233 Pao Chiao Road, Hsin Tien, Taipei, Taiwan, Tel: 9113860 • FAX: 9-011-8862-917-5991
Japan General Instrument Japan, Ltd., 5F4-1-13 Toranomon, Minato-Ku, Tokyo, Japan 105, Tel· (03)437-0281 • FAX 9-011-81-3434-3938(GIJ)
Hong Kong General Instrument Hong Kong Ltd., Rm 1104-1107, Tower B, Mandarin Plaza, 14 Science Museum Rd., Tsimshatsui East, Kowloon, Hong Kong, Tel. 3-7226577 • Telex: 54606 GIHKHX • FAX: (852) 3-7239239

GENERAL INSTRUMENT