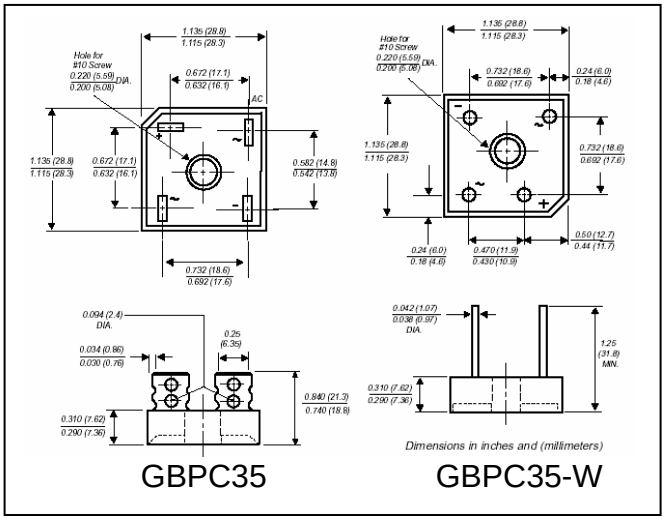
SINGLE PHASE BRIDGE RECTIFIER

GBPC25005 THRU GBPC2510

VOLTAGE RANGE **50 to 1000 Volts**
CURRENT **25.0 Ampere**

FEATURES

- Plastic package has UL flammability classification 94V-0
- Integrally molded heatsink provides very low thermal resistance for maximum heat dissipation
- High forward surge capacity
- Glass passivated chip junction
- High isolation voltage from case to lugs
- High temperature soldering guaranteed: 260^{O}C / 10 seconds
- Available in either lug package (GBPC25005) or wire lead package (GBPC2500W)



MECHANICAL DATA

- Case: Molded plastic with integrally mounted heatsink
- Terminal: Plated 0.25" (6.35mm) lug or plated 0.040" (1.02mm) diameter lead
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #10 screw, 20 in-lbs Torque max. See Note 1
- Weight: 0.53 ounce, 15.0 gram – GBPC35 and GBPC35-W

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25^{O}C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	GBPC 25005	GBPC 2501	GBPC 2502	GBPC 2504	GBPC 2506	GBPC 2508	GBPC 2510	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 Rectified Current (See Fig 1)	$I_{(AV)}$	25							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	300							Amps
Rating for Fusing (t<8.3mS)	I^2t	375							A^2s
Maximum Instantaneous Forward Voltage drop per Bridge element 12.5A	V_F	1.1							Volts
Maximum DC Reverse Current at Rated $T_A = 25\ ^{O}C$	I_R	5.0							µA
DC Blocking Voltage per element $T_A = 125\ ^{O}C$		500							µA
Isolation Voltage from case to lug or lead	V_{ISO}	2500							Volts
Typical Junction Capacitance per leg (Measured at 1.0MHz and applied reverse voltage of 4.0V)	C_J	300							pF
Typical Thermal Resistance per leg	$R_{\theta JC}$	1.9							^{O}C/W
Operating Junction Temperature Range	T_J	(-55 to +150)							^{O}C
Storage Temperature Range	T_{STG}	(-55 to +150)							^{O}C

Notes:

1. Bolt down on heat-sink with silicon thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw

RATINGS AND CHARACTERISTIC CURVES GBPC25005 THRU GBPC2510

FIG.1–MAXIMUM OUTPUT RECTIFIED CURRENT

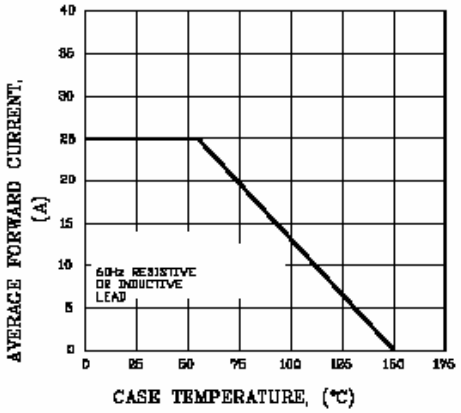
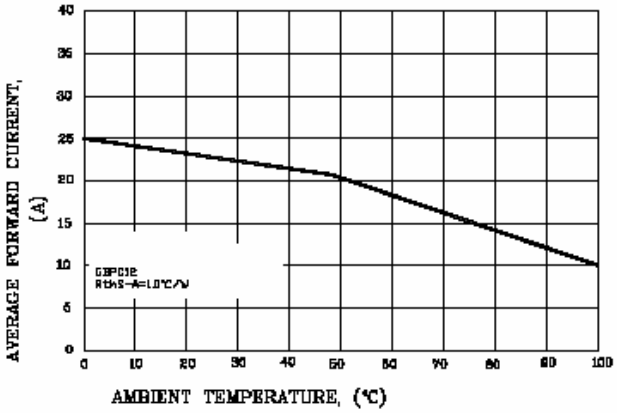


FIG.2–MAXIMUM OUTPUT RECTIFIED CURRENT



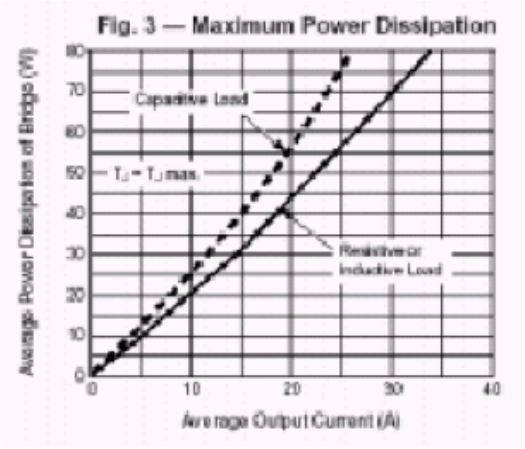


FIG.2–MAXIMUM NON–REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG