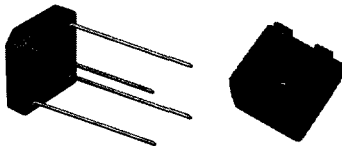
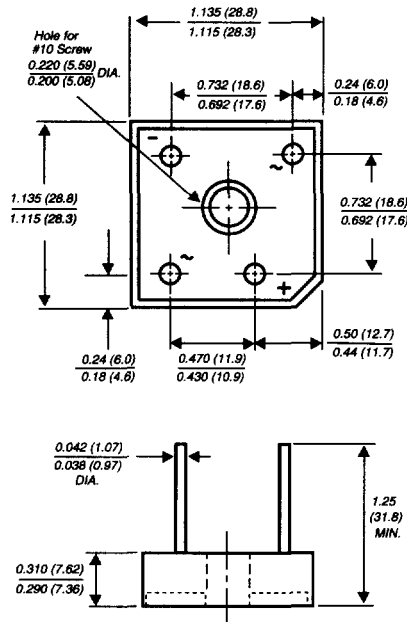


Glass Passivated Single-Phase Bridge Rectifier

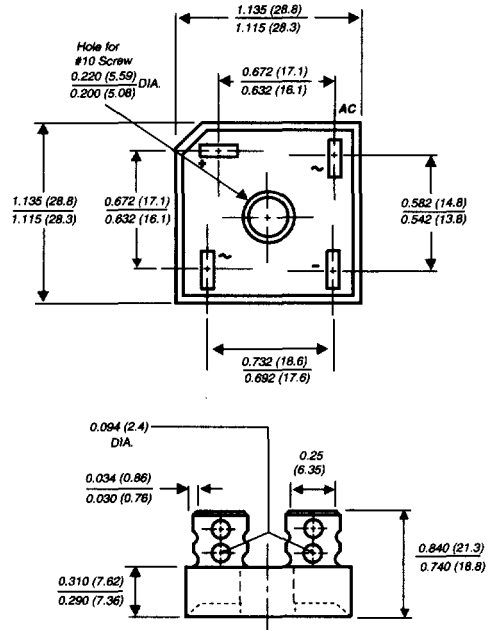
Reverse Voltage 50 and 1000V
Forward Current 12 to 35A



GBPC-W



GBPC



Mechanical Data

Case: Moulded plastic with heatsink integrally mounted in the bridge encapsulation

Terminals: Either plated 0.25" (6.35mm) Faston lugs or plated copper leads 0.040" (1.02mm) diameter. Suffix letter "W" added to indicate wire leads (e.g. GBPC12005W)

Mounting Position: See NOTE 2

Polarity: Polarity symbols molded on body

Mounting Torque: 20 in. - lb. max.

Weight: 0.53 ounce, 15 grams

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- This series is UL listed under the Recognized Component Index, file number E54214
- Integrally molded heatsink provides very low thermal resistance for maximum heat dissipation
- Universal 3-way terminals; snap-on, wire wrap-around, or P.C.B. mounting
- High forward surge current capability
- Glass passivated chip junctions
- Typical I_R less than 0.3µA
- High temperature soldering guaranteed: 260°C/10 seconds at 5lbs. (2.3kg) tension

Glass Passivated Single-Phase Bridge Rectifier

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

		Symbol	GBPC12, 15, 25, 35							Unit
			005	01	02	04	06	08	10	
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current (SEE FIG.1)	GBPC12	$I_{F(AV)}$	12							A
	GBPC15		15							
	GBPC25		25							
	GBPC35		35							
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	GBPC12	I_{FSM}	200							A
	GBPC15		300							
	GBPC25		300							
	GBPC35		400							
Rating (non-repetitive, for t greater than 1ms and less than 8.3ms) for fusing	GBPC12	I^2t	160							A ² sec
	GBPC15		375							
	GBPC25		375							
	GBPC35		660							
RMS isolation voltage from case to leads		V_{ISO}	2500							V
Typical thermal resistance per leg (NOTE 1) GBPC12-25 GBPC35		$R_{\theta JC}$	1.9 1.4							°C/W
Operating junction storage temperature range		T_J, T_{STG}	-55 to +150							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

		Symbols	GBPC12, 15, 25, 35							Units
			005	01	02	04	06	08	10	
Maximum instantaneous forward voltage drop per leg at	GBPC12 $I_F = 6.0A$	V_F	1.1							V
	GBPC15 $I_F = 7.5A$									
	GBPC25 $I_F = 12.5A$									
	GBPC35 $I_F = 17.5A$									
Maximum reverse DC current at rated DC blocking voltage per leg	$T_A = 25^\circ C$	I_R	5.0							μA
	$T_A = 125^\circ C$		500							
Typical junction capacitance per leg at 4V, 1MHz		C_J	300							pF

NOTES:

(1) Thermal resistance from junction to case per leg

(2) Bolt down on heatsink with silicone thermal compound between bridge and mounting surface for maximum heat transfer with #10 screw

Glass Passivated Single-Phase Bridge Rectifier

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 - MAXIMUM OUTPUT RECTIFIED CURRENT

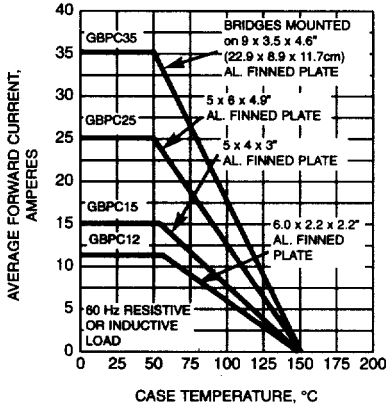


FIG. 2 - MAXIMUM OUTPUT RECTIFIED CURRENT

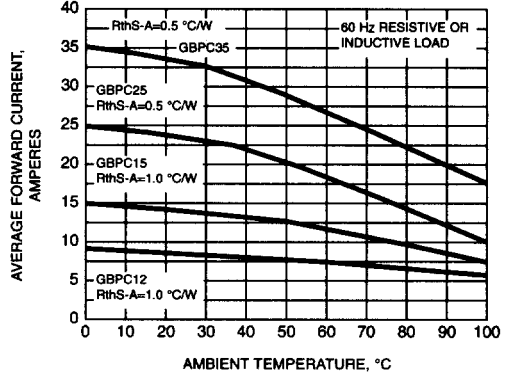


FIG. 3 - MAXIMUM POWER DISSIPATION

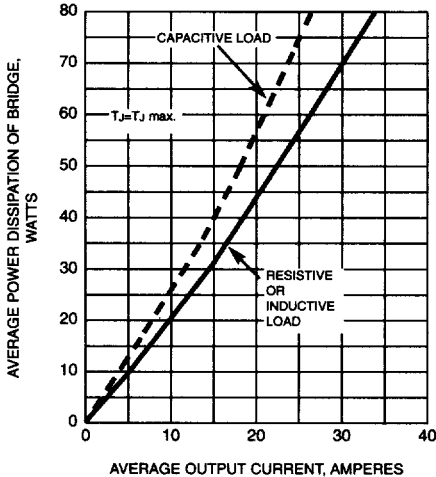
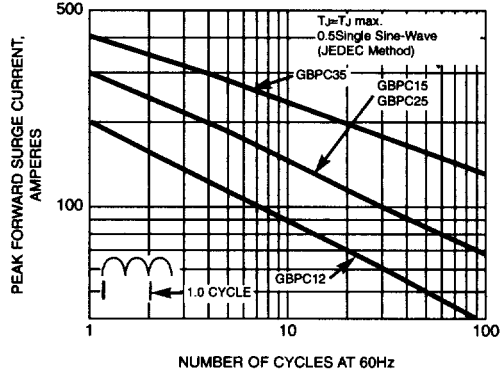


FIG. 4 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG



Glass Passivated Single-Phase Bridge Rectifier

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 5 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

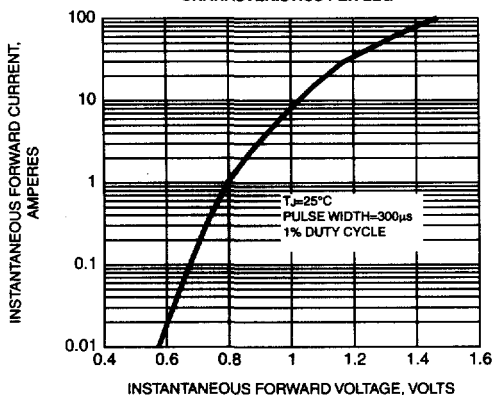


FIG. 6 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS PER LEG

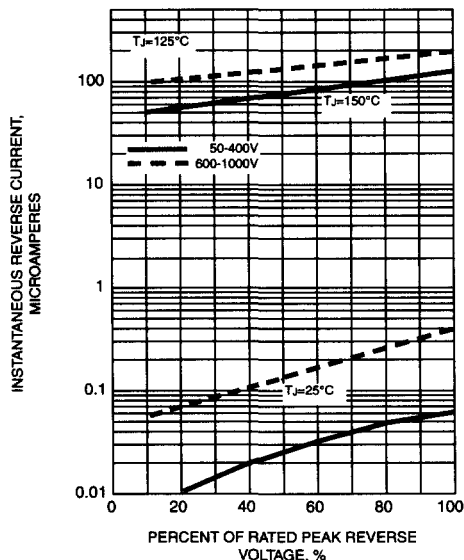


FIG. 7 - TYPICAL JUNCTION CAPACITANCE PER LEG

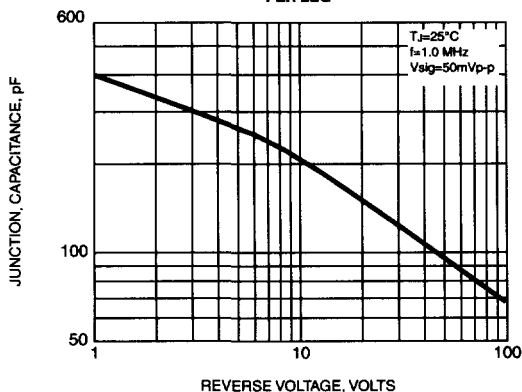
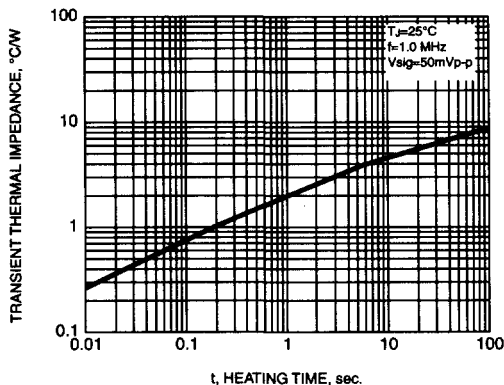


FIG. 8 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



Bridge