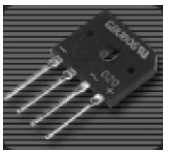
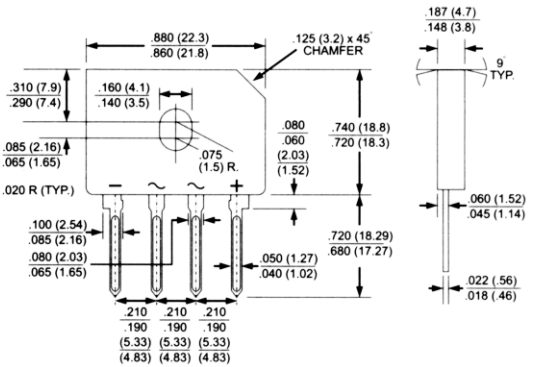
GBU6005 thru GBU610

Glass Passivated Single-Phase Bridge Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 6.0 Amperes

Features

- Surge overload rating - 175 Amperes peak
- Ideal for printed circuit boards
- Reliable low cost construction utilizing molded plastic technique
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Mounting Position: Any





Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

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

Parameter	Symbols	GBU6005	GBU601	GBU602	GBU604	GBU606	GBU608	GBU610	Units
Maximum recurrent 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 (with heatsink Note 2) rectified output current @T_C=100°C (without heatsink)	$I_{F(AV)}$	6.0 2.8							Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	175.0							Amps
Max. instantaneous forward voltage drop at 3.0A DC	V_F	1.0							Volt
Maximum DC reverse current @T_J=25°C at rated DC blocking voltage per element @T_J=125°C	I_R	5.0 500.0							uA
Rating for fusing (t<8.3ms)	I^2t	127							A^2sec
Typical junction capacitance per element (Note 1)	C_J	50							pF
Typical thermal resistance (Note 2)	$R_{\theta JC}$	2.2							°C/W
Operating temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Notes: 1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
2. Device mounted on 75mm x 75mm x 1.6mm Cu plate heatsink

RATINGS AND CHARACTERISTIC CURVES

(T_A = 25°C unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

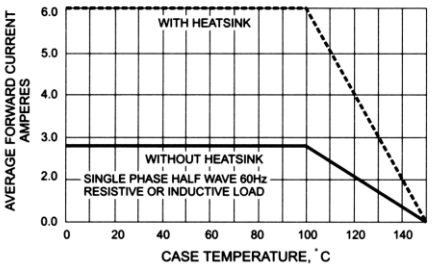


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

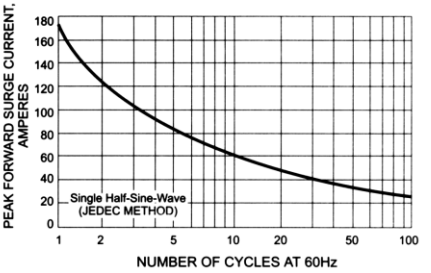


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

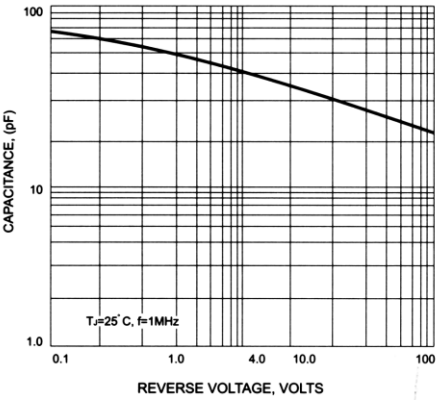
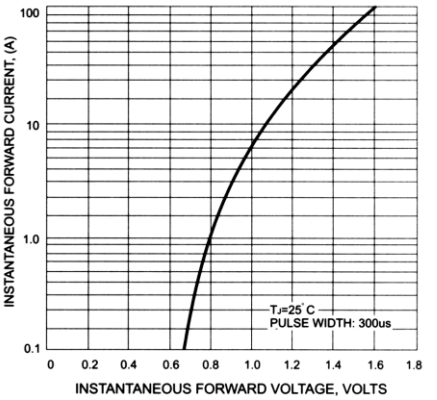


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS



FIG, 5 - TYPICAL REVERSE CHARACTERISTICS