

Kingtronics®

GBU6005 THRU GBU610

SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 6.0 Ampere

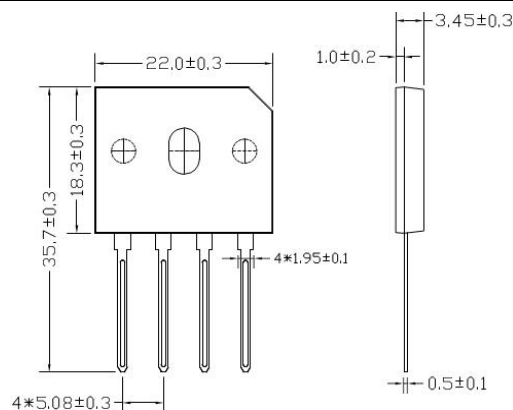
FEATURES

Plastic package has Underwriters Laboratory
Flammability Classification 94V-0
Ideal for printed circuit boards
Glass passivated chip junction
High forward surge capability

MECHANICAL DATA

Case: GBU Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750,
Method 2026
High temperature soldering guaranteed: 260°C/10 seconds
Mounting Position: Any

GBU



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at TA = 25°C unless otherwise specified

PARAMETER	SYMBOL	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 606	GBU 608	GBU 610	UNIT
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
Average forward rectified output Current TC = 90 °C (1) TA = 40 °C (2)	I _{F(AV)}	6.0 3.8							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125							A
Rating for fusig (t<8.3ms)	I ² t	64.85							A ² sec
Maximum instantaneous forward voltage dropper leg at 3A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg	T _j =25°C	5.0							uA
	T _j =125°C	500							

THERMAL CHARACTERISTICS

Typical thermal resistance per leg (Note 1)	R _{θJA(2)}	20	°C/W
	R _{θJL(1)(3)}	2.5	
Operating junction temperature range	T _J	-55 to +150	°C
Storage temperature range	T _{STG}	-55 to +150	°C

Note

Unit case mounted on aluminum plate heatsink

Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

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RATINGS AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$ unless otherwise noted)

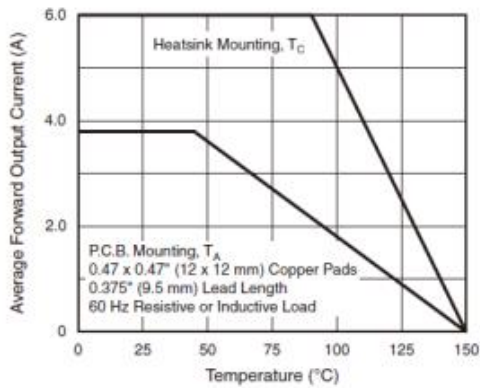


Figure 1. Derating Curve Output Rectified Current

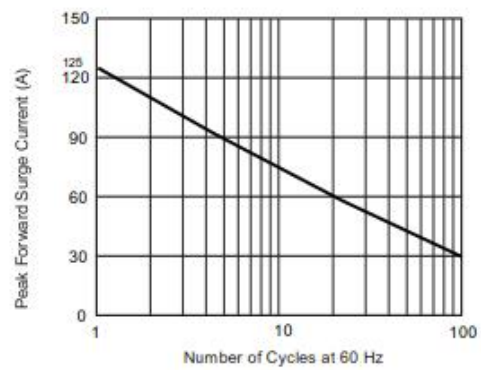


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

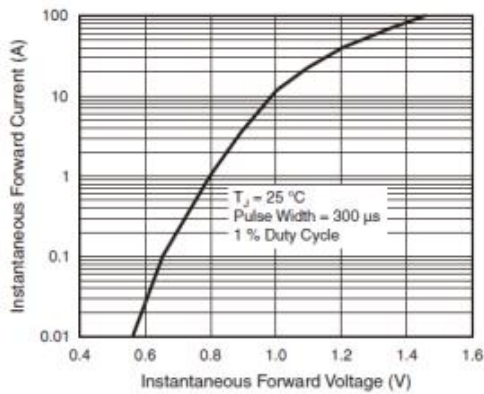


Figure 3. Typical Forward Characteristics Per Diode

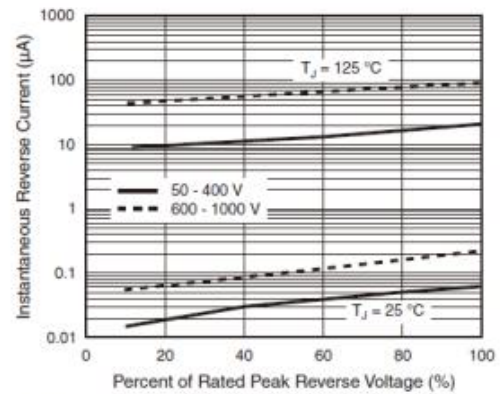


Figure 4. Typical Reverse Leakage Characteristics Per Diode

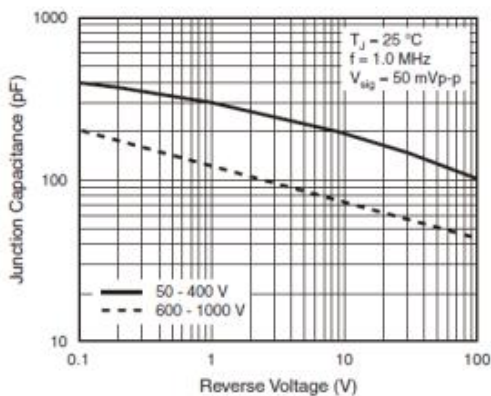


Figure 5. Typical Junction Capacitance Per Diode

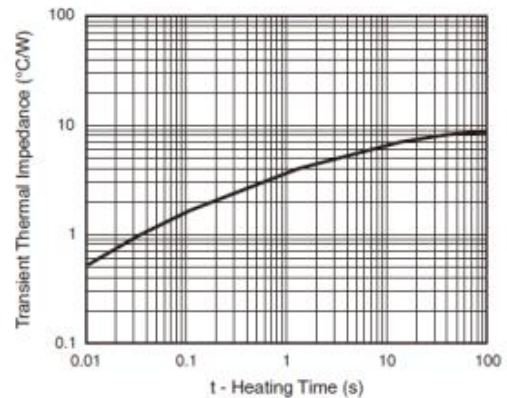


Figure 6. Typical Transient Thermal Impedance

Note: Specifications are subject to change without notice.