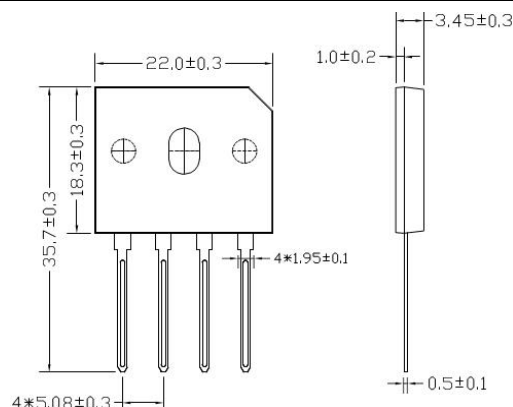


**Kingtronics**®**GBU6005 THRU  
GBU610****SINGLE PHASE GLASS PASSIVATED BRIDGE RECTIFIERS**  
**REVERSE VOLTAGE 50 to 1000 Volts    FORWARD CURRENT 6.0 Ampere****FEATURES**

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)	$I^2t$	64.85							A <sup>2</sup> sec
Maximum instantaneous forward voltage dropper leg at 3A	VF	1.0							V
Maximum DC reverse current at rated DC blocking voltage per leg	$T_j=25^\circ\text{C}$	5.0							uA
	$T_j=125^\circ\text{C}$	500							

**THERMAL CHARACTERISTICS**

Typical thermal resistance per leg (Note 1)	$R_{\theta JA(2)}$	20	°C/W
	$R_{\theta JL(1)(3)}$	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

**Kingtronics**® International Company

# Kingtronics®

# GBU6005 THRU GBU610

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

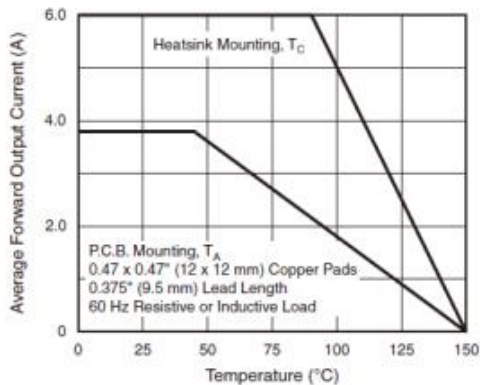


Figure 1. Derating Curve Output Rectified Current

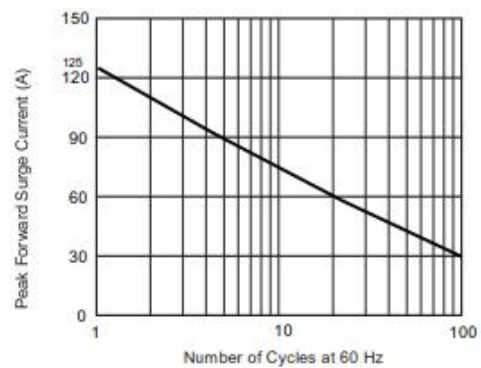


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

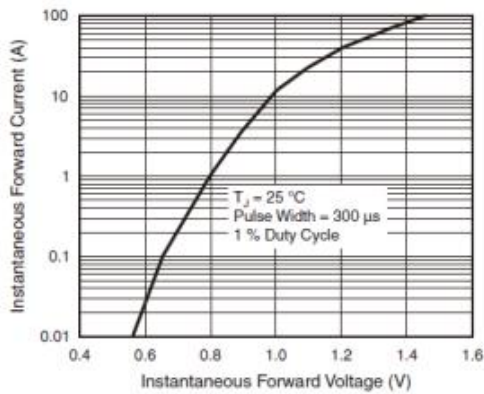


Figure 3. Typical Forward Characteristics Per Diode

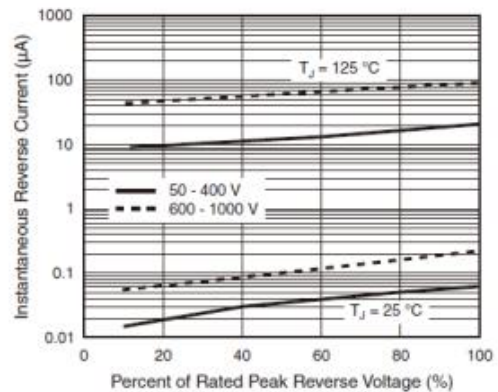


Figure 4. Typical Reverse Leakage Characteristics Per Diode

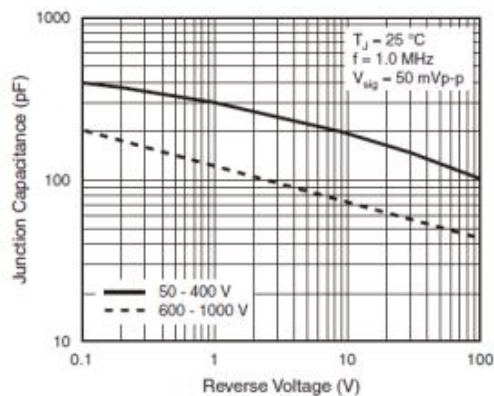


Figure 5. Typical Junction Capacitance Per Diode

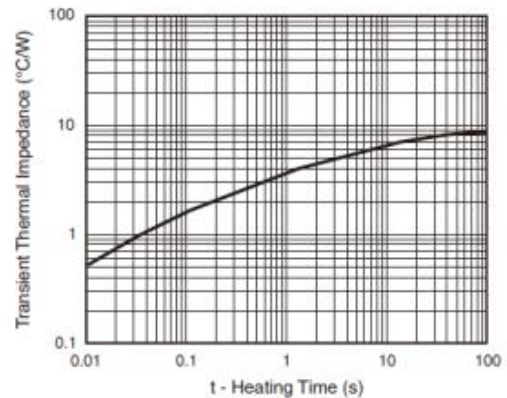


Figure 6. Typical Transient Thermal Impedance

Note: Specifications are subject to change without notice.

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