

# **GBU6A - GBU6M Bridge Rectifiers**

# Features

- Glass passivated junction
- Surge overload rating: 175 amperes peak
- Reliable low cost construction utilizing molded plastic technique.
- Ideal for printed circuit board.
- UL certified, UL # E326243.

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GBU	

September 2011

Symbol	Parameter	Value						Units	
		6A	6B	6D	6G	6J	6K	6M	Units
V <sub>RRM</sub>	Maximum Repetitive Reverse Voltage	50 100 200 400 600 800 1000		1000	V				
V <sub>RMS</sub>	Maximum RMS Bridge Input Voltage		70	140	280	420	560	700	V
V <sub>R</sub>	DC Reverse Voltage (Rated V <sub>R</sub> )		100	200	400	600	800	1000	V
I <sub>F(AV)</sub>	Average Recitified Forward Current, @ $T_A = 100^{\circ}C$	6.0			•	А			
I <sub>FSM</sub>	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	175			А				
T <sub>STG</sub>	Storage Temperature Range	-55 to +150			°C				
Τ <sub>J</sub>	Operating Junction Temperature -5		-55 to +150			°C			

# Absolute Maximum Ratings \* $T_A = 25^{\circ}C$ unless otherwise noted

\* These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

# **Thermal Characteristics**

Symbol	Parameter	Value	Units		
PD	Power Dissipation	12	W		
$R_{ ext{ heta}JA}$	Thermal Resistance, Junction to Ambient,* per leg	18.6	°C/W		
$R_{ extsf{ heta}JL}$	Thermal Resistance, Junction to Lead,** per leg	3.1	°C/W		

\* Device mounted on PCB with 0.5 x 0.5" (12 x 12 mm).

\*\*Device mounted on AI plate with 2.6 x 1.4" x 0.06" (6,5 x 3.5 x 0.15 cm).

## **Electrical Characteristics** $T_A = 25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units		
V <sub>F</sub>	Forward Voltage, per element @ 6.0A	1.0	V		
۱ <sub>R</sub>	Reverse Current, per element @ Rated $V_R$ $T_A = 25^{\circ}C$	5.0	μA		
	$T_A = 125^{\circ}C$	500	μΑ		
	$1^{2}$ t Rating for Fusing t < 8.35ms	127	A <sup>2</sup> s		

# Typical Performance Characteristics

Figure 1. Forward Current Derating Curve

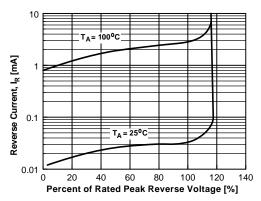


Figure 3. Reverse Current vs Reverse Voltage

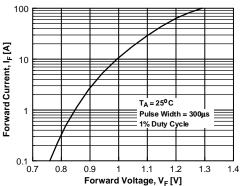


Figure 2. Forward Voltage Characteristics

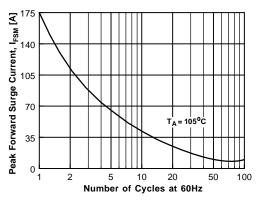
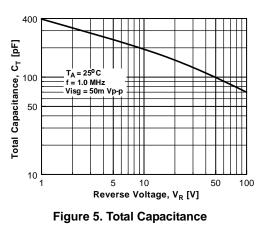


Figure 4. Non-Repetitive Surge Current



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