GBU6A - GBU6M

Bridge Rectifiers

Features

- Glass−Passivated Junction
- Surge Overload Rating: 175 A Peak
- Reliable Low−Cost Construction Utilizing Molded Plastic Technique
- Ideal for Printed Circuit Board
- UL Certified: UL #E258596

PACKAGE MARKING AND ORDERING INFORMATION

Part Number	Marking	Package	Packing Method
GBU6A	GBU6A	GBU 4L	Rail
GBU6B	GBU6B		
GBU6D	GBU6D		
GBU6G	GBU6G		
GBU6J	GBU6J		
GBU6K	GBU6K		
GBU6M	GBU6M		

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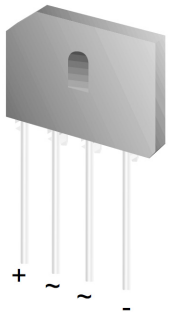

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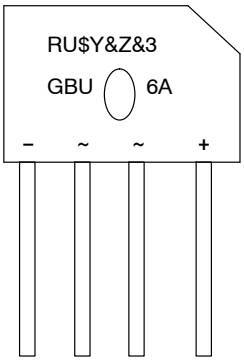
MARKING DIAGRAM



RU	= UL Marking
$Y	= ON Semiconductor Logo
&Z	= Assembly Plant Code
&3	= Numeric Date Code
GBU6A	= Specific Device Code

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ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise noted) (Note 1)

Symbol	Parameter		Value							Units
			6A	6B	6D	6G	6J	6K	6M	
V_{RRM}	Maximum Repetitive Reverse Voltage		50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage		35	70	140	280	420	560	700	V
V_R	DC Reverse Voltage (Rated V_R)		50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current	T_A = 100°C	6.0							A
I_{FSM}	Non−Repetitive Peak Forward Surge Current 8.3 ms Single Half−Sine−Wave		175							A
T_{STG}	Storage Temperature Range		−55 to +150							°C
T_J	Operating Junction Temperature		−55 to +150							°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

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

THERMAL CHARECTERISTICS (T_A = 25°C unless otherwise noted)

Symbol	Parameter	Value	Units
P_D	Power Dissipation	12	W
$R_{\theta JA}$	Thermal Resistance per Leg, Junction to Ambient (Note 2)	18.6	°C/W
$R_{\theta JL}$	Thermal Resistance per Leg, Junction to Lead (Note 3)	3.1	°C/W

2. Device mounted on PCB with 0.5 × 0.5 inch (12 × 12 mm)
3. Device mounted on Al plate with 2.6 × 1.4 × 0.06 inch (6.5 × 3.5 × 0.15 cm)

ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise noted)

Symbol	Parameter		Value	Units
V_F	Forward Voltage, per Element	6.0 A	1.0	V
I_R	Reverse Current, per Element at Rated V_R	T_A = 25°C	5.0	μA
		T_A = 125°C	500	μA
I^2t	I^2t Rating for Fusing	t < 8.35 ms	127	A^2s

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

TYPICAL PERFORMANCE CHARACTERISTICS

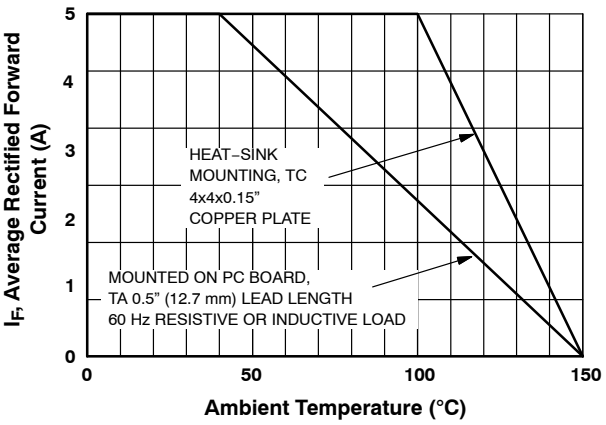

Figure 1. Forward Current Derating Curve

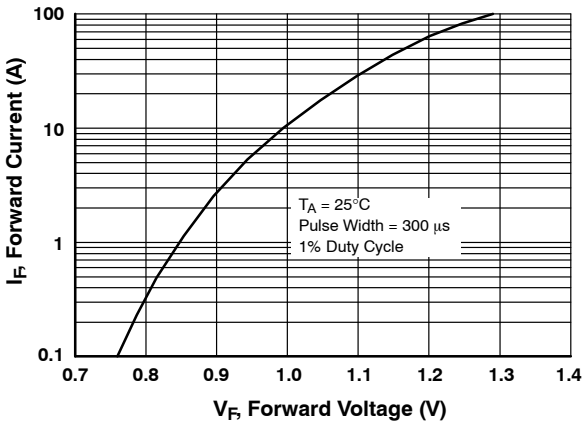

Figure 2. Forward Voltage Characteristics

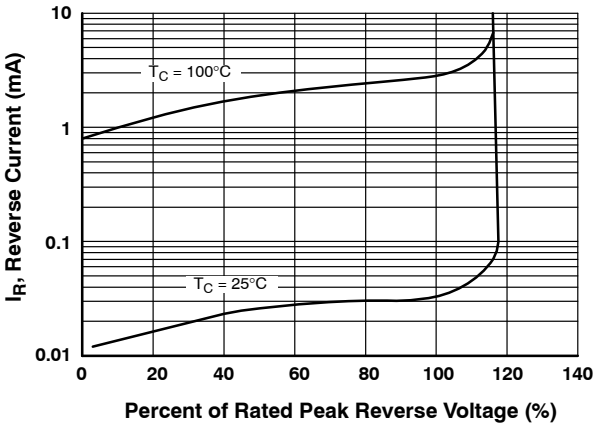

Figure 3. Reverse Current vs. Reverse Voltage

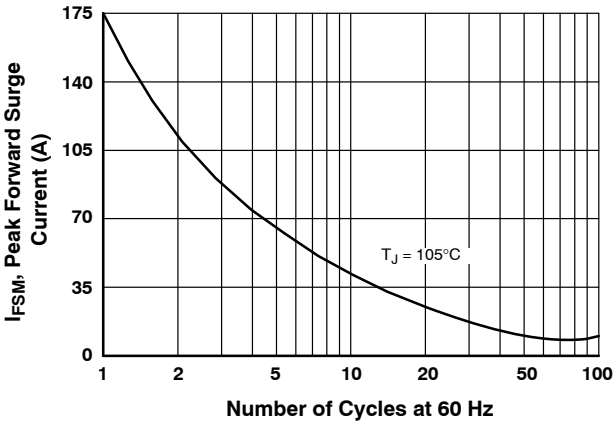

Figure 4. Non−Repetitive Surge Current

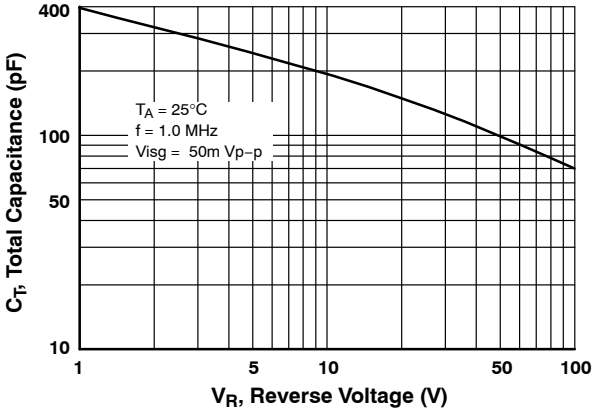

Figure 5. Total Capacitance

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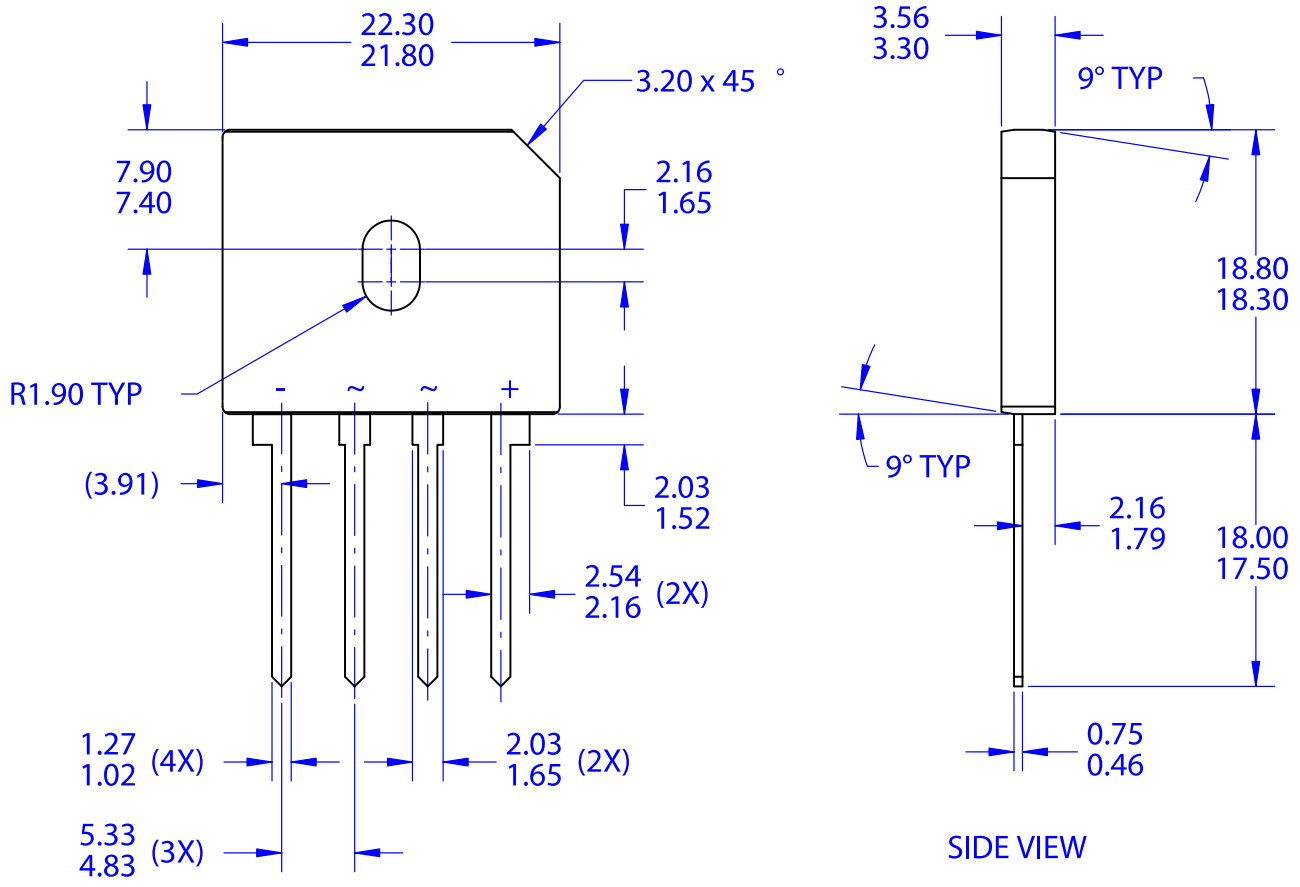

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