FAIRCHILD SEMICONDUCTOR®

September 2011

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.

GBU

Absolute Maximum Ratings * T_A = 25℃ unless otherwise noted

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 Recitified Forward Current, @ T_A = 100°C	6.0							A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	175							A
T_{STG}	Storage Temperature Range	-55 to +150							°C
T_J	Operating Junction Temperature	-55 to +150							°C

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

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	12	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient,* per leg	18.6	°C/W
$R_{\theta JL}$	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 Al plate with 2.6 x 1.4" x 0.06" (6,5 x 3.5 x 0.15 cm).

Electrical Characteristics T_A = 25℃ unless otherwise noted

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

Typical Performance Characteristics

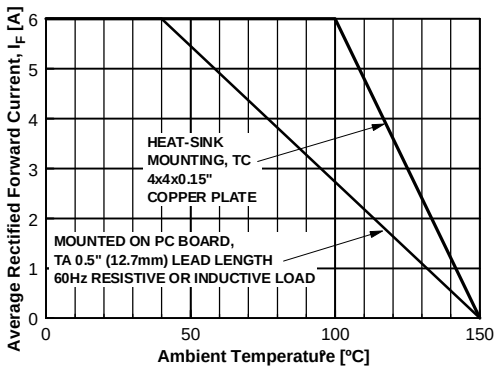

Figure 1. Forward Current Derating Curve

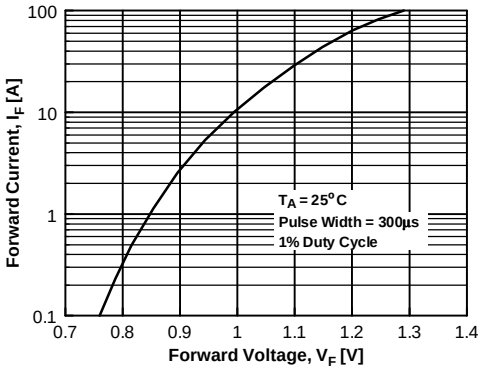

Figure 2. Forward Voltage Characteristics

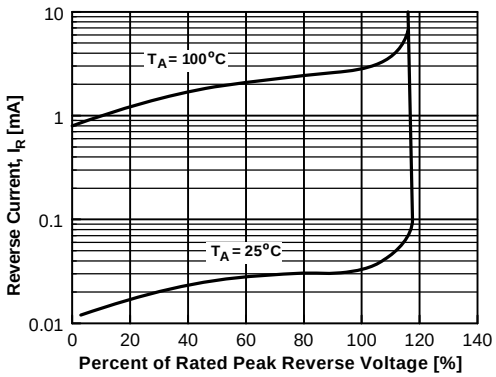

Figure 3. Reverse Current vs Reverse Voltage

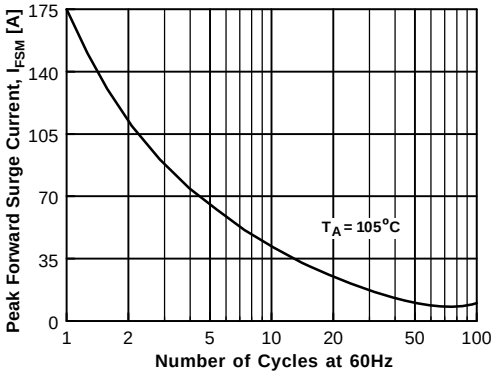

Figure 4. Non-Repetitive Surge Current

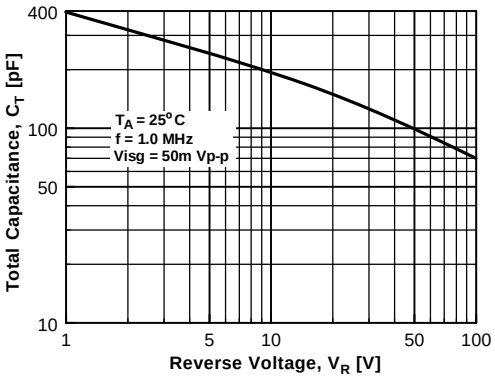

Figure 5. Total Capacitance

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No Identification Needed	Full Production	Datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice to improve the design.
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