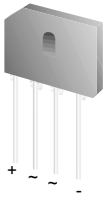
FAIRCHILD SEMICONDUCTOR®

February 2012

GBU8A - GBU8M
Bridge Rectifiers

Features

- Glass passivated junction
- Surge overload rating: 200 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
		8A	8B	8D	8G	8J	8K	8M	
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_c = 100°C** @ T_a = 45°C*	8.0 6.0							A A
I_{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	200							A
T_{STG}	Storage Temperature Range	-55 to +150							°C
T_J	Operating Junction Temperature	-55 to +150							°C

* Device mounted on PCB with 0.5 × 0.5” (12 × 12mm).
** Heat-sink mounting, 4"x4"x0.15" Copper plate

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	16	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient, * per leg	18	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction to Case, ** per leg	3	°C/W

* Device mounted on PCB with 0.5 × 0.5” (12 × 12mm).
** Heat-sink mounting, 4"x4"x0.15" Copper plate

Electrical Characteristics T_a = 25℃ unless otherwise noted

Symbol	Parameter	Value	Units
V_F	Forward Voltage, per element @ 8.0A	1.0	V
I_R	Reverse Current, per element @ Rated V_R T_a = 25°C T_a = 100°C	 5.0 500	 μA μA
	I^2t Rating for Fusing t < 8.35ms	166	A^2s

Typical Performance Characteristics

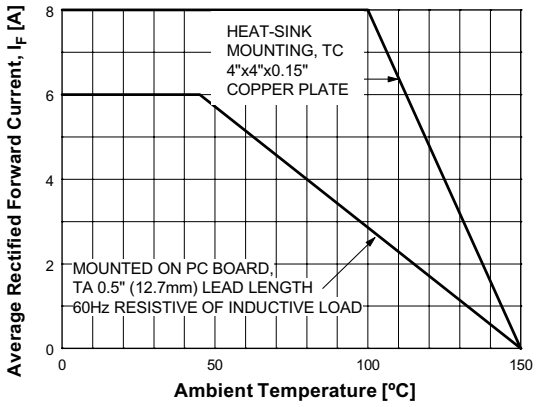


Figure 1. Forward Current Derating Curve

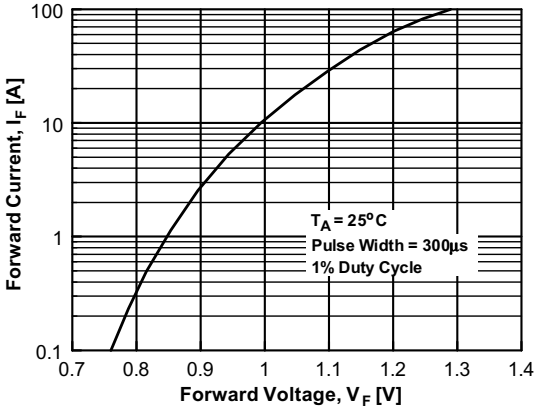


Figure 2. Forward Voltage Characteristics

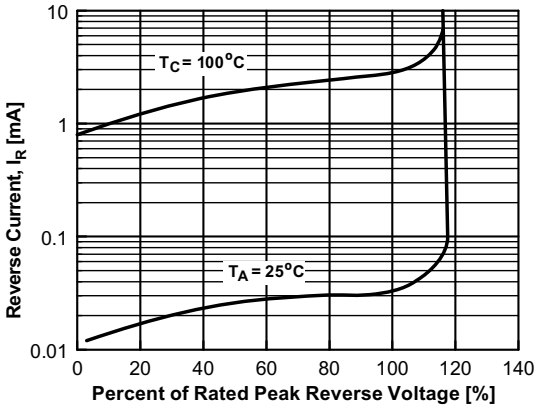


Figure 3. Reverse Current vs Reverse Voltage

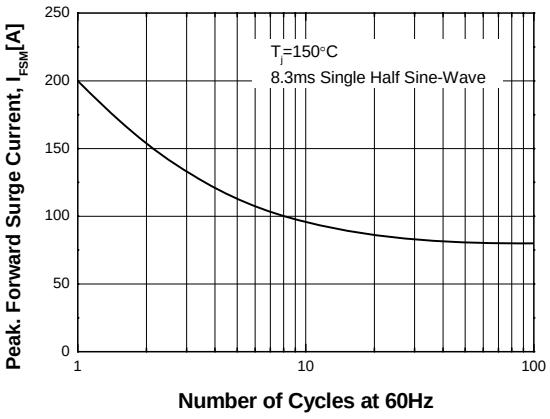


Figure 4. Non-Repetitive Surge Current

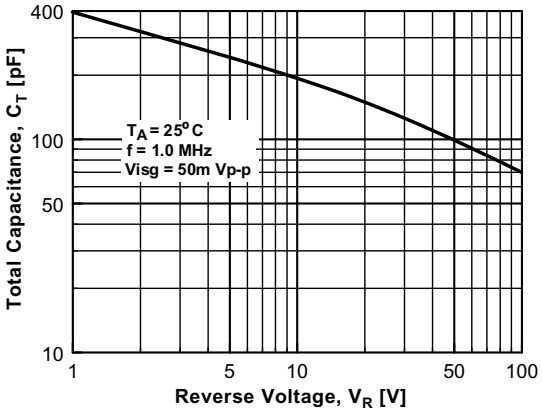


Figure 5. Total Capacitance

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