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FAIRCHILD
 SEMICONDUCTOR®

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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.



Absolute Maximum Ratings $T_a = 25^\circ\text{C}$ 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 Rectified Forward Current, @ $T_c = 100^\circ\text{C}^{**}$ @ $T_a = 45^\circ\text{C}^*$	8.0							A
		6.0							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							$^\circ\text{C}$
T_J	Operating Junction Temperature	-55 to +150							$^\circ\text{C}$

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

** 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	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case, ** per leg	3	$^\circ\text{C}/\text{W}$

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

** Heat-sink mounting, 4"x4"x0.15" Copper plate

Electrical Characteristics $T_a = 25^\circ\text{C}$ 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 $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	5.0	μA
		500	μA
	I^2t Rating for Fusing $t < 8.35\text{ms}$	166	A^2s

Typical Performance Characteristics

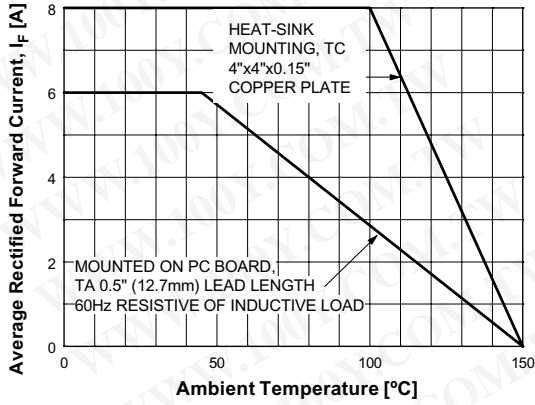


Figure 1. Forward Current Derating Curve

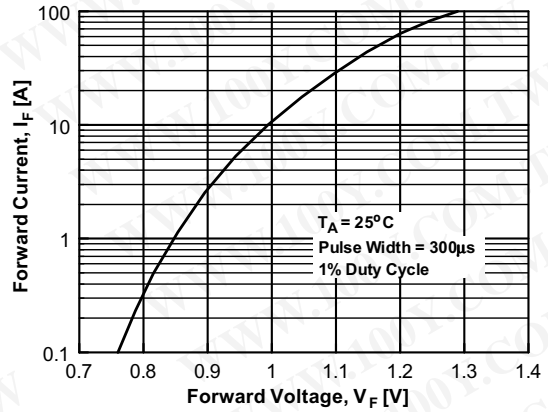


Figure 2. Forward Voltage Characteristics

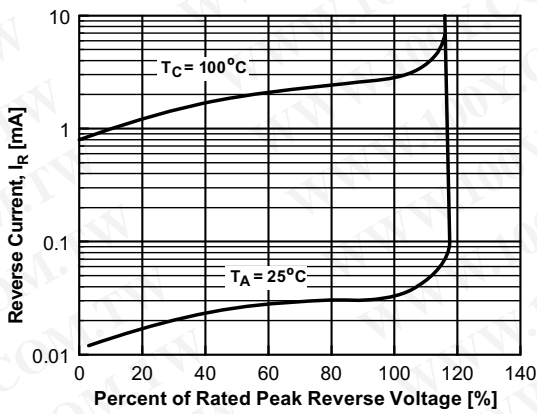


Figure 3. Reverse Current vs Reverse Voltage

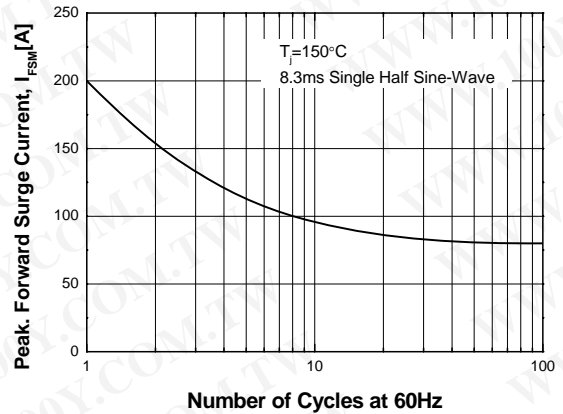


Figure 4. Non-Repetitive Surge Current

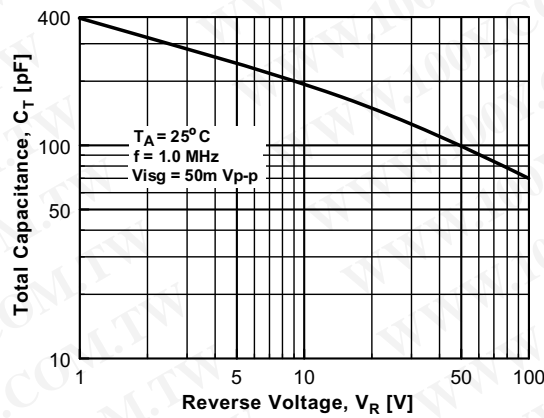


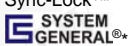


Figure 5. Total Capacitance



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