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FAIRCHILD SEMICONDUCTOR®

GF1A - GF1M

Features

- Low forward voltage drop.
- High current capability.
- Easy pick and place.
- High surge current capability.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE

General Purpose Rectifiers (Glass Passivated)

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		1A	1B	1D	1G	1J	1K	1M	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ T_L = 125°C	1.0							A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	30							A
T_{stg}	Storage Temperature Range	-65 to +175							°C
T_J	Operating Junction Temperature	-65 to +175							°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	1.8	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient*	80	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead*	26	°C/W

*Device mounted on PCB with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter		Device							Units
			1A	1B	1D	1G	1J	1K	1M	
V_F	Forward Voltage @ 1.0 A		1.0					1.2		V
t_{rr}	Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A		2.0							µs
I_R	Reverse Current @ rated V_R	T_A = 25°C	5.0							µA
		T_A = 125°C	50							µA
C_T	Total Capacitance V_R = 4.0 V, f = 1.0 MHz		15							pF

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Typical Characteristics

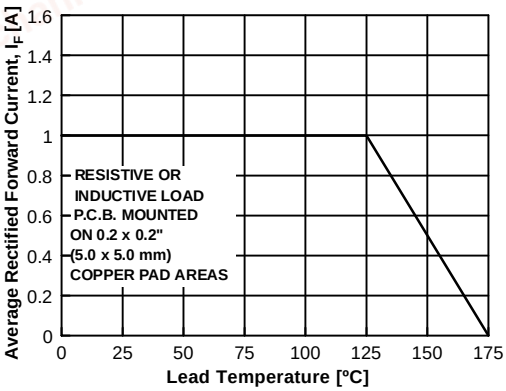


Figure 1. Forward Current Derating Curve

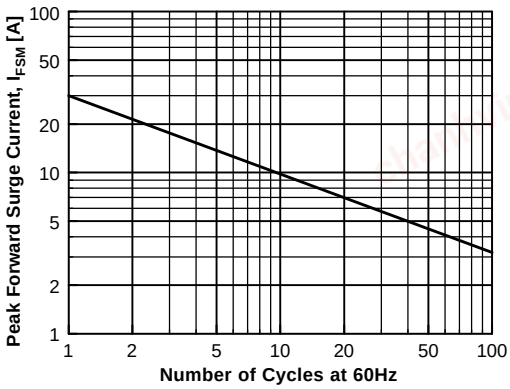


Figure 2. Non-Repetitive Surge Current

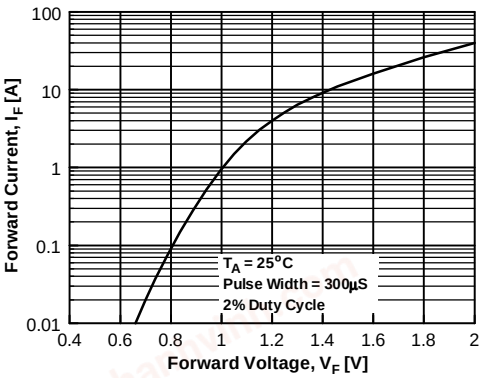


Figure 3. Forward Voltage Characteristics

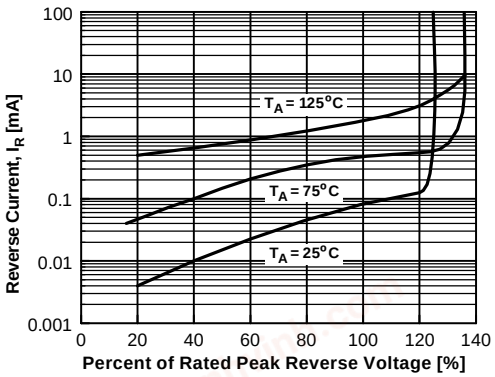


Figure 4. Reverse Current vs Reverse Voltage

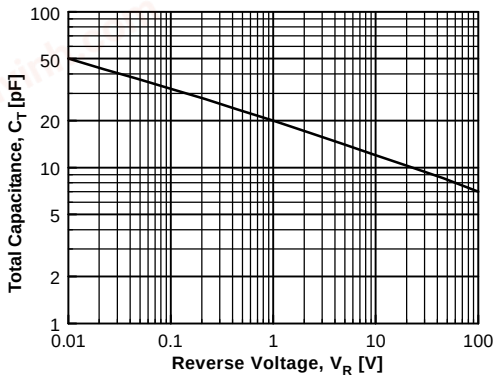


Figure 5. Total Capacitance

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