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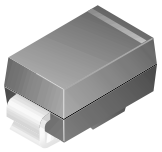
FAIRCHILD SEMICONDUCTOR®

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

General Purpose Rectifiers (Glass Passivated)
(continued)

Typical Characteristics

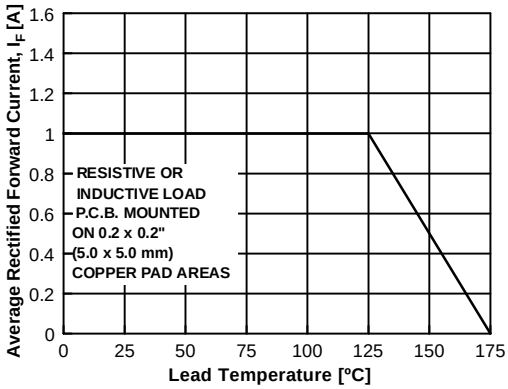


Figure 1. Forward Current Derating Curve

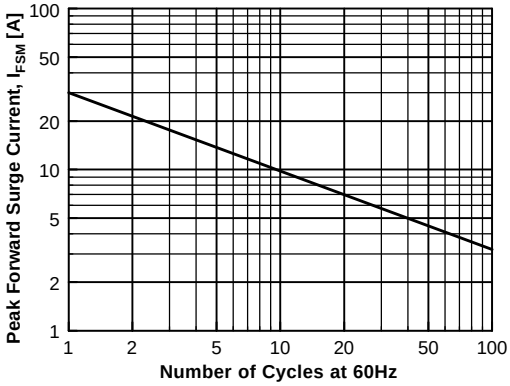


Figure 2. Non-Repetitive Surge Current

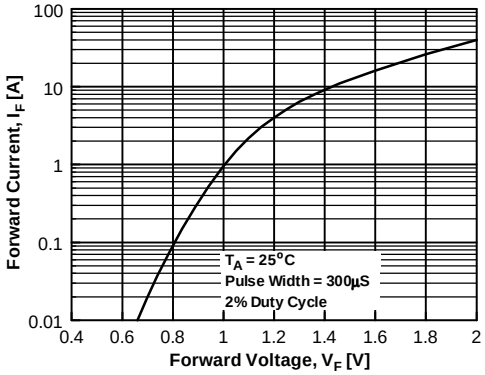


Figure 3. Forward Voltage Characteristics

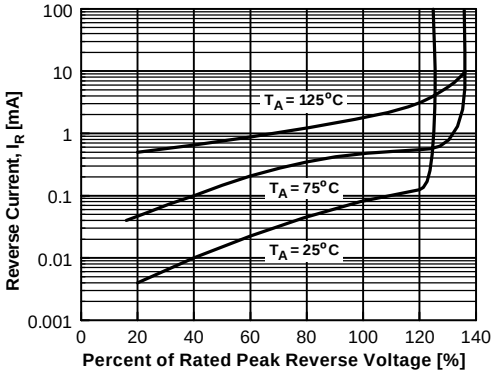


Figure 4. Reverse Current vs Reverse Voltage

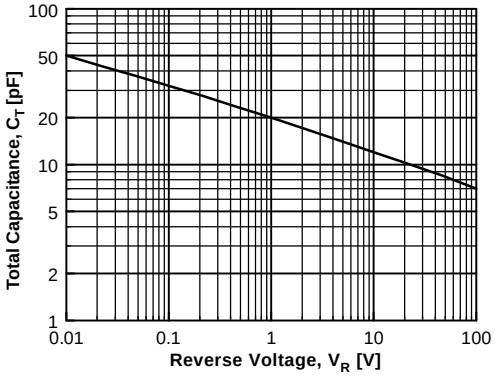


Figure 5. Total Capacitance

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Preliminary	First Production	This datasheet contains preliminary data, and supplementary data will be published at a later date. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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