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# ON Semiconductor®

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### 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<sub>A</sub> = 25°C unless otherwise noted

Symbol	Parameter Value				Units				
		1A	1B	1D	1G	1J	1K	1M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage		100	200	400	600	800	1000	V
I <sub>F(AV)</sub>	Average Rectified Forward Current, @ T <sub>L</sub> = 125°C				Α				
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave 30			Α					
T <sub>stg</sub>	Storage Temperature Range -65 to +175			°C					
T <sub>J</sub>	Operating Junction Temperature -65 to +175			°C					

<sup>\*</sup>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		

<sup>\*</sup>Device mounted on PCB with 0.2 x 0.2" (5.0 x 5.0 mm) copper pad areas.

### **Electrical Characteristics** T<sub>A</sub> = 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 <sub>rr</sub>	Reverse Recovery Time $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$ 2.0			μѕ						
I <sub>R</sub>	Reverse Current @ rated $V_R$ $T_A = 25^\circ$ $T_A = 125^\circ$					5.0 50				μA μA
Ст	Total Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$			pF						

### **General Purpose Rectifiers (Glass Passivated)**

(continued)

### **Typical Characteristics**

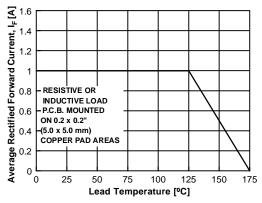


Figure 1. Forward Current Derating Curve

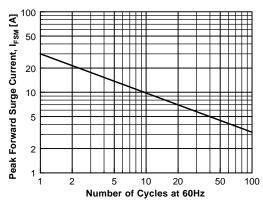


Figure 2. Non-Repetitive Surge Current

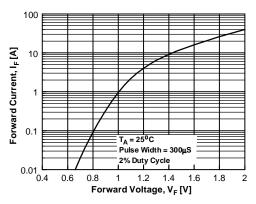


Figure 3. Forward Voltage Characteristics

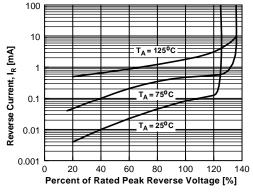


Figure 4. Reverse Current vs Reverse Voltage

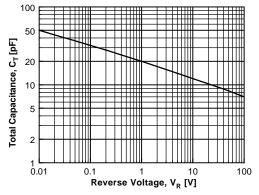


Figure 5. Total Capacitance

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Datasheet Identification	Product Status	Definition
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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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