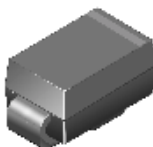
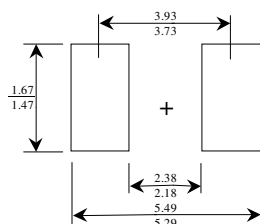


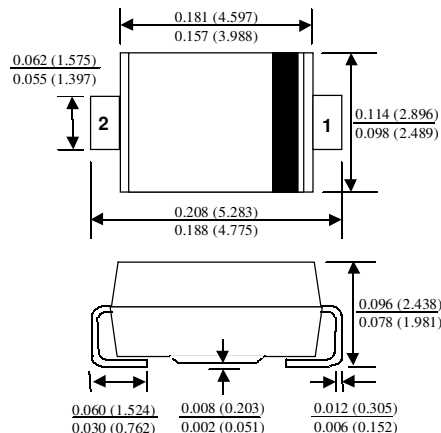
# GF1A - GF1M

## Features

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



**SMA/DO-214AC**  
COLOR BAND DENOTES CATHODE



## 1.0 Ampere Glass Passivated Rectifier

### Absolute Maximum Ratings\*

$T_A = 25^\circ\text{C}$  unless otherwise noted

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current @ $T_L = 125^\circ\text{C}$	1.0	A
$I_{F(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	2.0 13	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	80	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	26	$^\circ\text{C}/\text{W}$
$T_{stg}$	Storage Temperature Range	-65 to +175	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-65 to +175	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

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

### Electrical Characteristics

$T_A = 25^\circ\text{C}$  unless otherwise noted

Parameter	Device							Units
	1A	1B	1D	1G	1J	1K	1M	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	800	V
DC Reverse Voltage (Rated V <sub>R</sub> )	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V <sub>R</sub> T <sub>A</sub> = 25°C T <sub>A</sub> = 125°C	5.0 50							μA μA
Maximum Forward Voltage @ 1.0 A	1.0					1.2		V
Maximum Reverse Recovery Time I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A	2.0							μS
Typical Junction Capacitance V <sub>R</sub> = 4.0 V, f = 1.0 MHz	15							pF

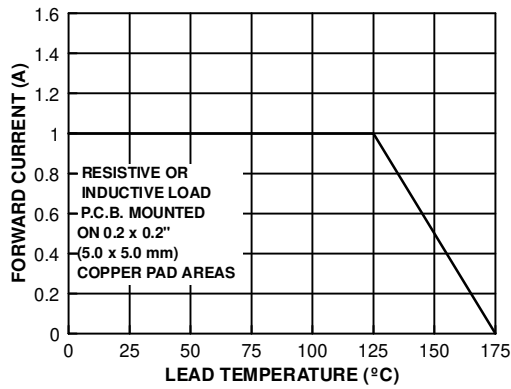
# Surface Mount Glass Passivated Rectifier

(continued)

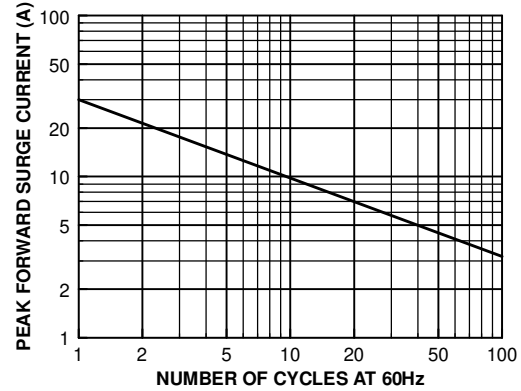
GF1A-GF1M

## Typical Characteristics

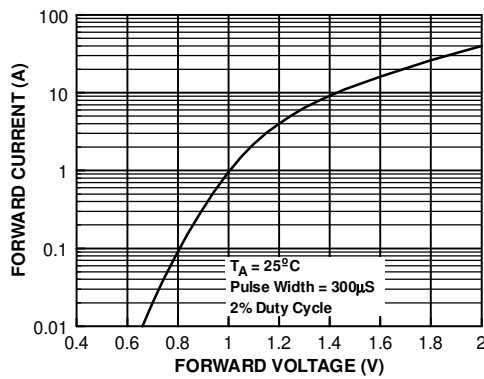
Forward Current Derating Curve



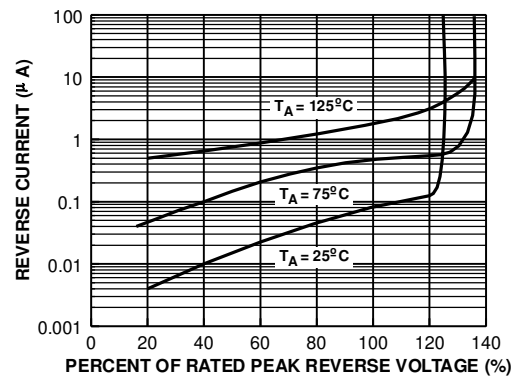
Non-Repetitive Surge Current



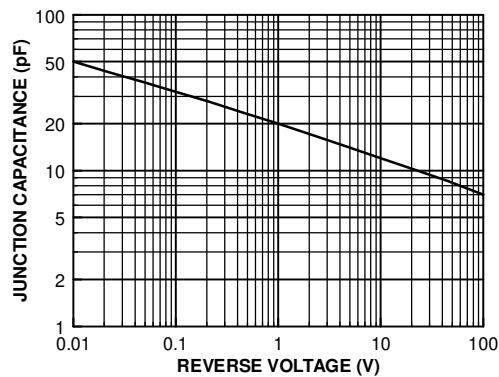
Forward Characteristics



Reverse Characteristics



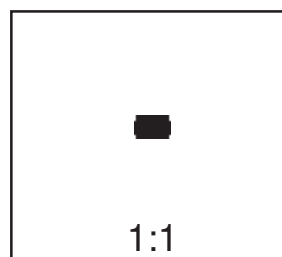
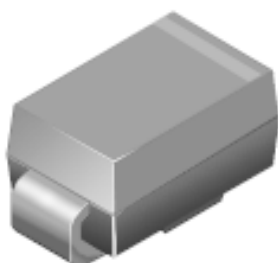
Typical Junction Capacitance



## SMA/DO-214AC Package Dimensions



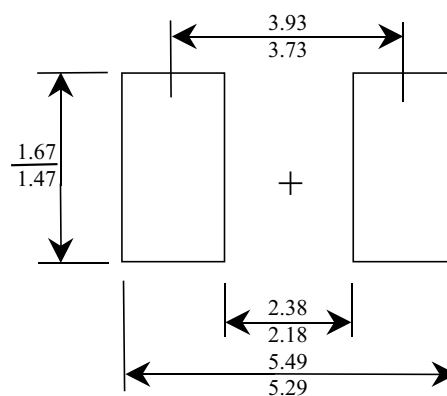
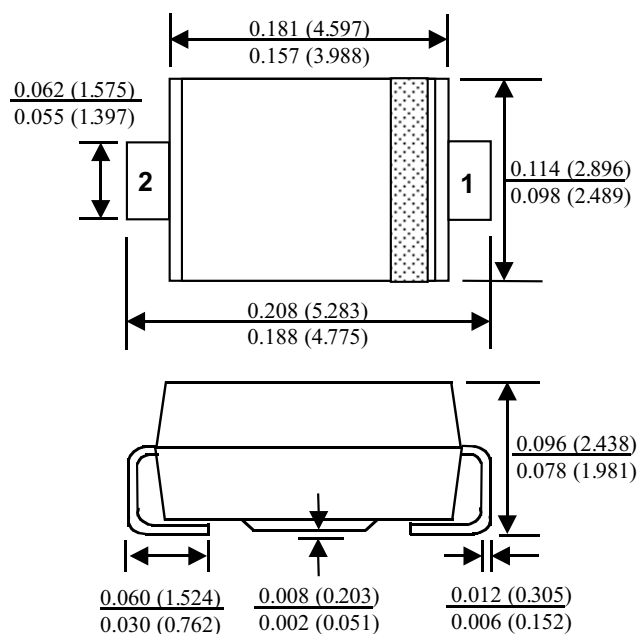
### SMA/DO-214AC (FS PKG Code P5)



Scale 1:1 on letter size paper

Dimensions shown below are in:  
inches [millimeters]

Part Weight per unit (gram): 0.064



Minimum Recommended  
Land Pattern

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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.
Obsolete	Not In Production	This datasheet contains specifications on a product that has been discontinued by Fairchild semiconductor. The datasheet is printed for reference information only.