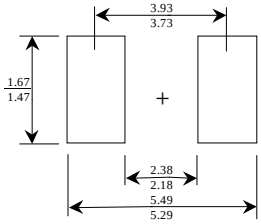
FAIRCHILD
SEMICONDUCTOR TM

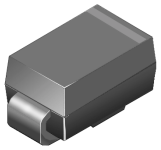
GF1A - GF1M

Features

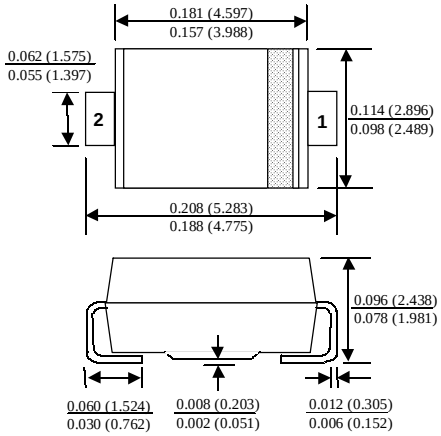
- Low forward voltage drop.
- High current capability.
- Easy pick and place.
- High surge current capability.



Minimum Recommended
Land Pattern



SMA/DO-214AC
COLOR BAND DENOTES CATHODE



1.0 Ampere Glass Passivated Rectifier

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
I_O	Average Rectified Current @ T_L = 125°C	1.0	A
$i_{f(surge)}$	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°C	2.0 13	W mW/°C
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	80	°C/W
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	26	°C/W
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.

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

Electrical Characteristics

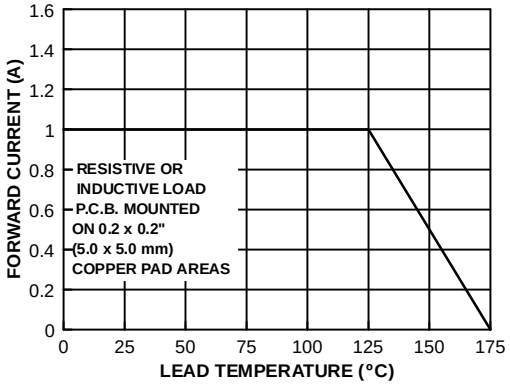
T_A = 25°C unless otherwise noted

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_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R T_A = 25°C T_A = 125°C	5.0 50							µA µA
Maximum Forward Voltage @ 1.0 A	1.0					1.2		V
Maximum Reverse Recovery Time I_F = 0.5 A, I_R = 1.0 A, I_{rr} = 0.25 A	2.0							µS
Typical Junction Capacitance V_R = 4.0 V, f = 1.0 MHz	15							pF

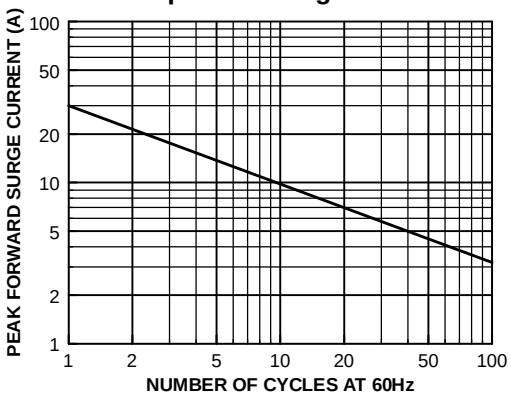
Surface Mount Glass Passivated Rectifier
(continued)

Typical Characteristics

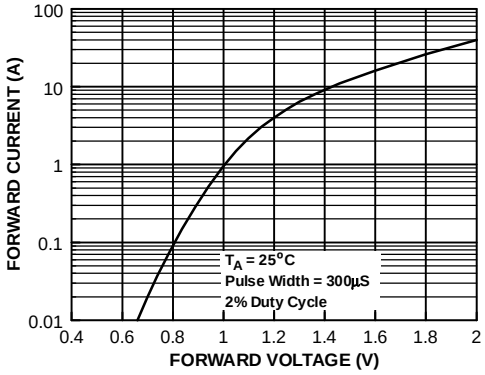
Forward Current Derating Curve



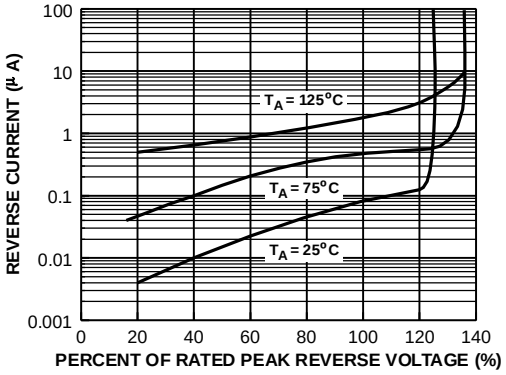
Non-Repetitive Surge Current



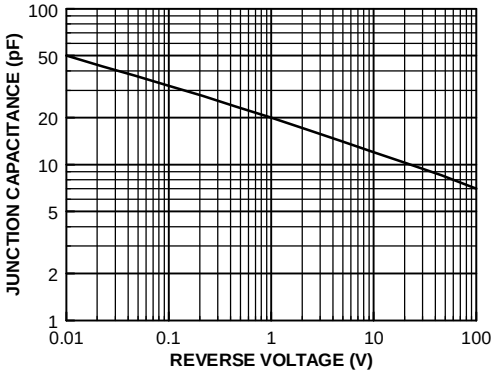
Forward Characteristics



Reverse Characteristics



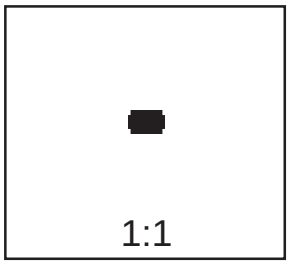
Typical Junction Capacitance



SMA/DO-214AC Package Dimensions

FAIRCHILD SEMICONDUCTOR™

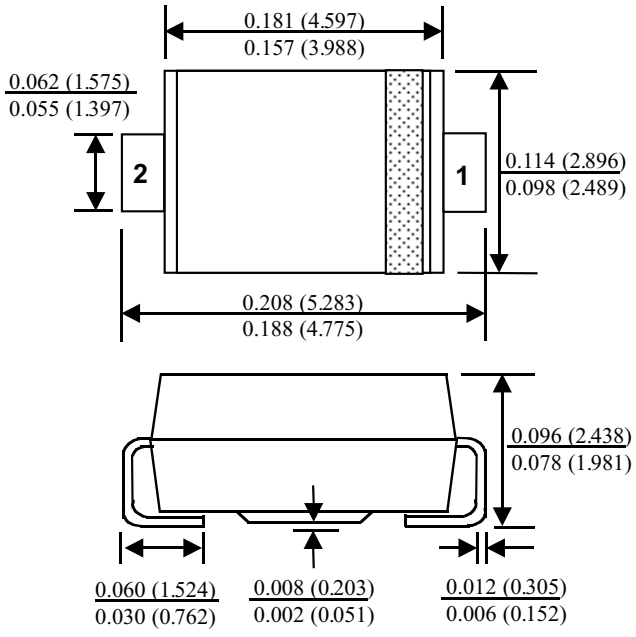
SMA/DO-214AC (FS PKG Code P5)

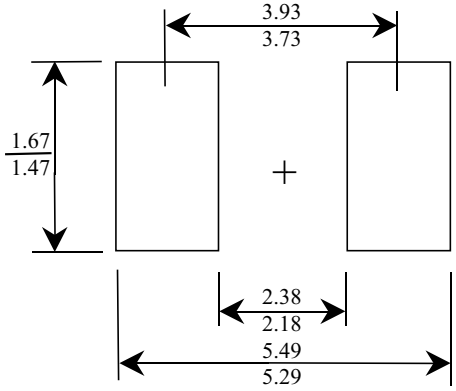


Scale 1:1 on letter size paper

Dimensions shown below are in:
inches [millimeters]

Part Weight per unit (gram): 0.064





Minimum Recommended
Land Pattern

August 1999, Rev. A

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PRODUCT STATUS DEFINITIONS

Definition of Terms

Datasheet Identification	Product Status	Definition
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