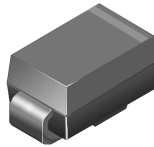
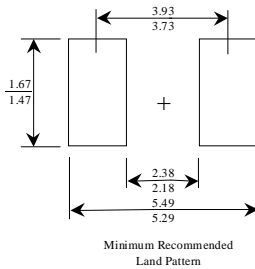


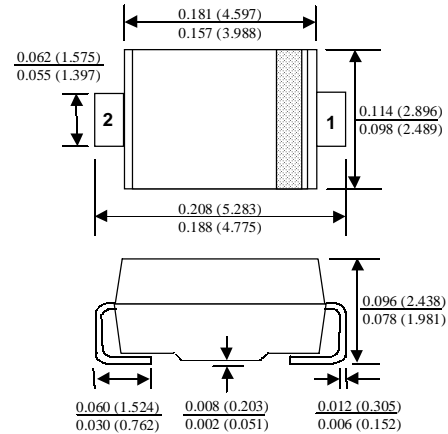
# EGF1A - EGF1D

## Features

- Low forward voltage drop.
- Low profile package.
- Fast switching for high efficiency.



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



## 1.0 Ampere High Efficiency Glass Passivated Rectifier

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current @ $T_L = 100^\circ\text{C}$	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 **	85	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	30	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	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 FR-4 PCB 0.013 mm.

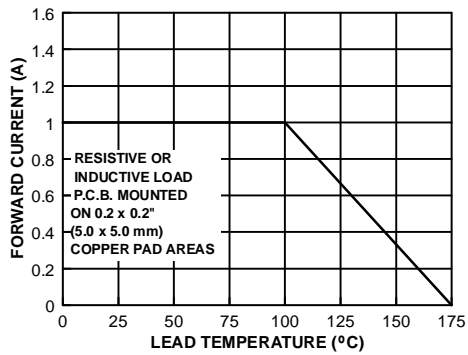
### Electrical Characteristics

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

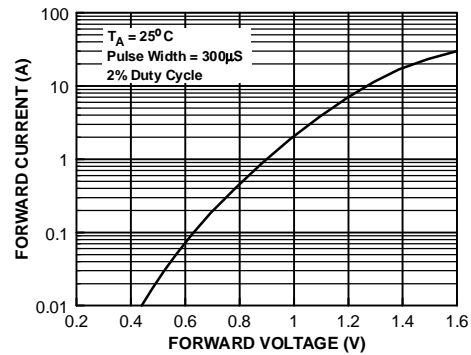
Parameter	Device				Units
	1A	1B	1C	1D	
Peak Repetitive Reverse Voltage	50	100	150	200	V
Maximum RMS Voltage	35	70	105	140	V
DC Reverse Voltage (Rated $V_R$ )	50	100	150	200	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 125^\circ\text{C}$	10 100				$\mu\text{A}$ $\mu\text{A}$
Maximum Forward Voltage @ 1.0 A	1.0				V
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{RR} = 0.25 \text{ A}$	50				ns
Typical Junction Capacitance $V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$	15				pF

## Typical Characteristics

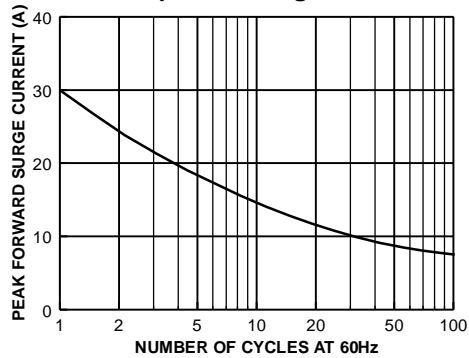
### Forward Current Derating Curve



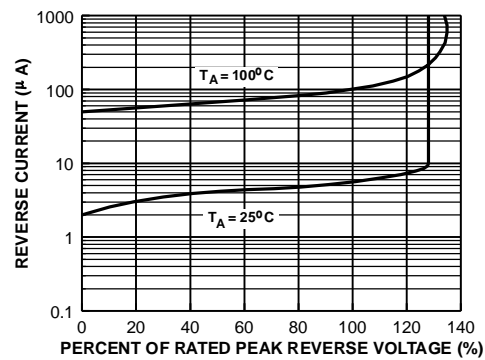
### Forward Characteristics



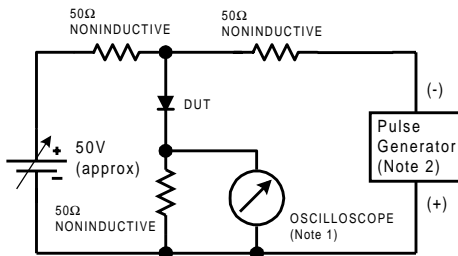
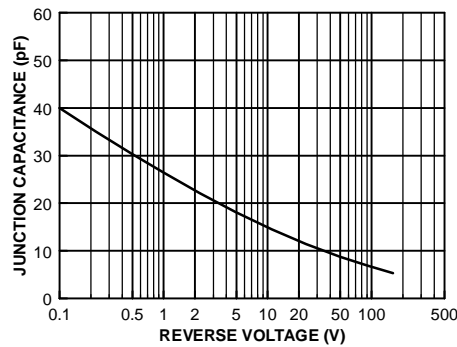
### Non-Repetitive Surge Current



### Reverse Characteristics

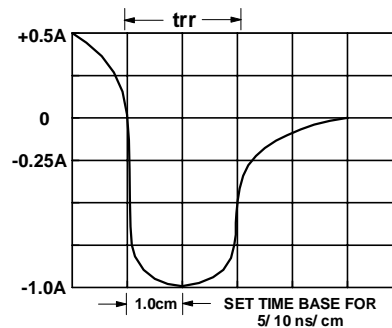


### Typical Junction Capacitance



#### NOTES:

1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
2. Rise time = 10 ns max; Source impedance = 50 ohms.

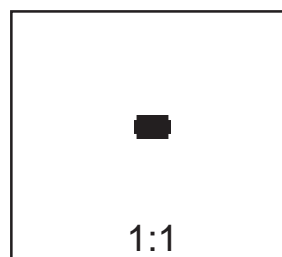
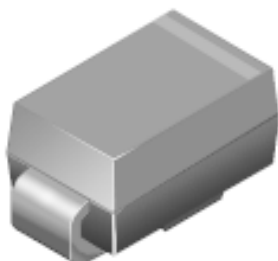


### Reverse Recovery Time Characteristic and Test Circuit Diagram

## SMA/DO-214AC Package Dimensions



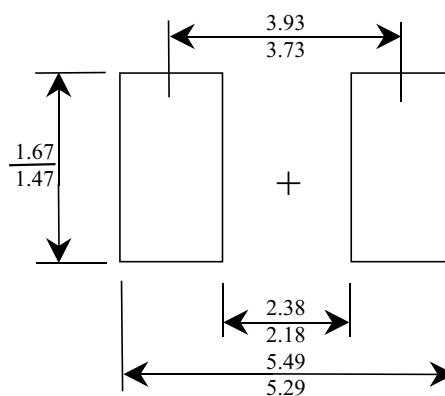
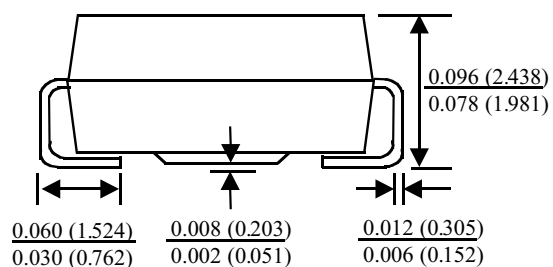
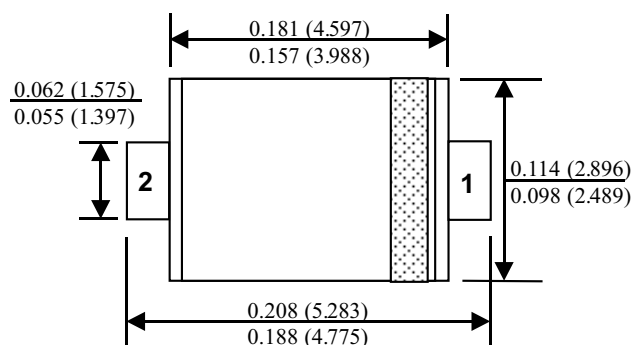
### SMA/DO-214AC (FS PKG Code P5)



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.
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