

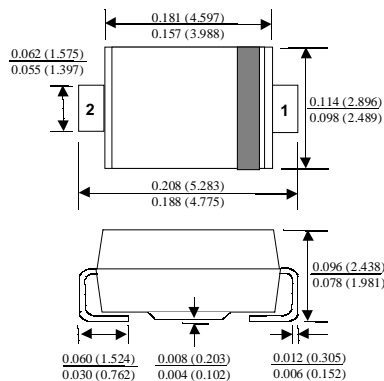
# RS1A - RS1M

## Features

- Glass passivated junction.
- For surface mounted applications.
- Built in strain relief, ideal for automated placement.



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



## 1.0 Ampere Fast Recovery Rectifiers

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value	Units
$I_o$	Average Rectified Current @ $T_A = 100^\circ\text{C}$	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	1.19	W
	Derate above $25^\circ\text{C}$	9.5	mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient **	105	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance, Junction to Case **	32	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

\*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.

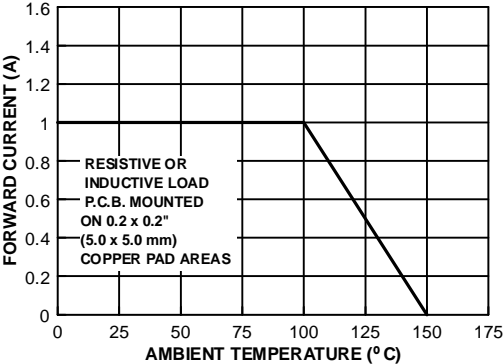
### Electrical Characteristics

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

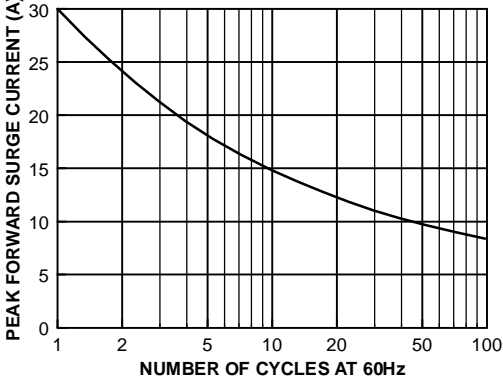
Parameter	Device							Units	
	1A	1B	1D	1G	1J	1K	1M		
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V	
Maximum Reverse Current @ rated $V_R$								5.0	$\mu\text{A}$
								$T_A = 125^\circ\text{C}$	50
Maximum Forward Voltage @ 1.0 A								1.3	V
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$ , $I_R = 1.0 \text{ A}$ , $I_{rr} = 0.25 \text{ A}$								150	nS
								250	
Typical Junction Capacitance $V_R = 4.0 \text{ V}$ , $f = 1.0 \text{ MHz}$								10	pF

Typical Characteristics

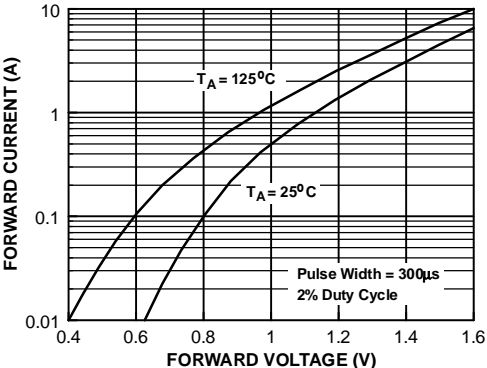
Forward Current Derating Curve



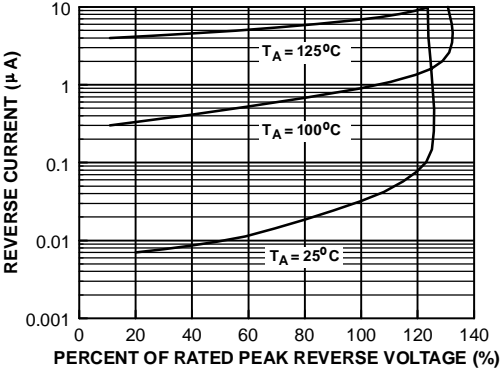
Non-Repetitive Surge Current



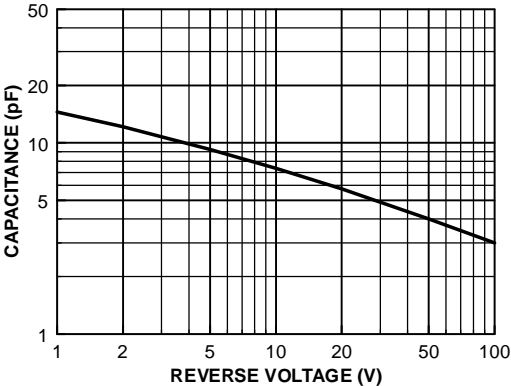
Forward Characteristics



Reverse Characteristics



Junction Capacitance



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