

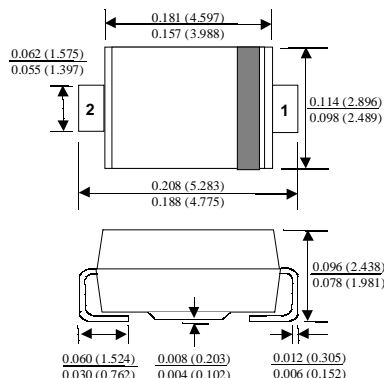
RS1A - RS1M

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°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_{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.

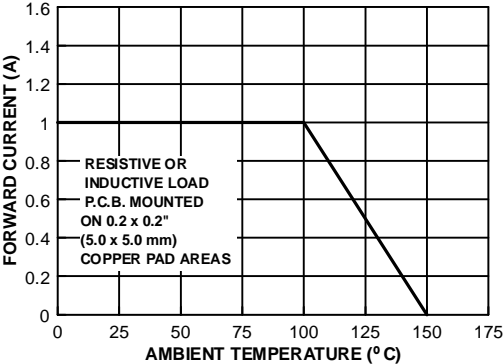
Electrical Characteristics

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

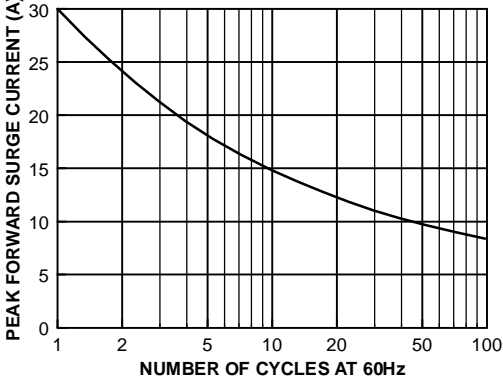
Parameter	Device							Units	
	1A	1B	1D	1G	1J	1K	1M		
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V	
Maximum Reverse Current @ rated V_R								5.0	μA
								$T_A = 125^\circ\text{C}$	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				250	500		nS	
Typical Junction Capacitance $V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$	10							pF	

Typical Characteristics

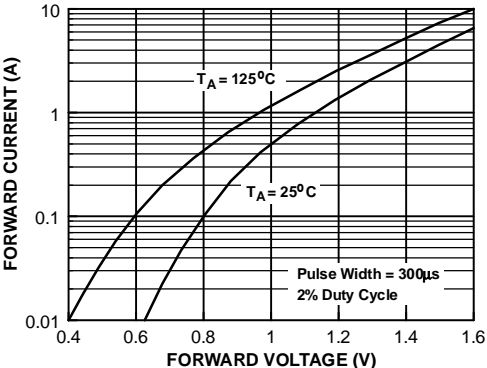
Forward Current Derating Curve



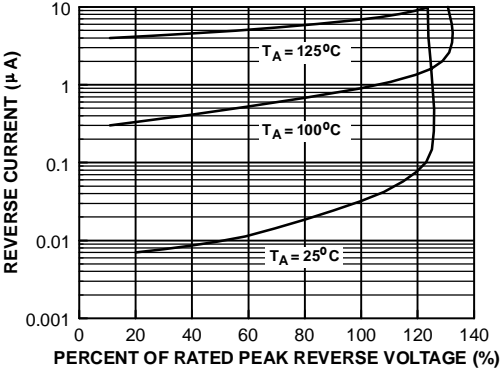
Non-Repetitive Surge Current



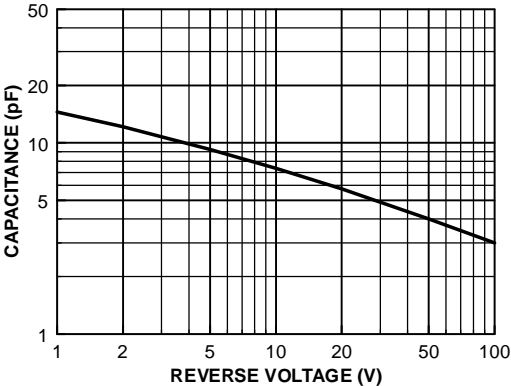
Forward Characteristics



Reverse Characteristics



Junction Capacitance



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