Technical Data *Green Products*
Data Sheet N0988, Rev. A

RS1A-RS1M SURFACE MOUNT SUPER FAST RECTIFIER

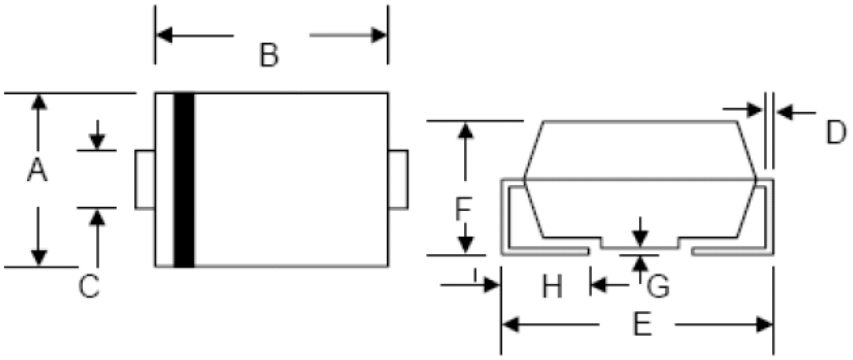
Features:

- **The plastic package carries Underwriters Laboratory Flammability Classification 94V-0**
- **For surface mounted applications**
- **Fast switching for high efficiency**
- **Low reverse leakage**
- **Built-in strain relief, ideal for automated placement**
- **High forward surge current capability**
- **High temperature soldering guaranteed: 250 C/10 seconds at terminals**
- **This is a Pb □ Free Device**
- **All SMC parts are traceable to the wafer lot**
- **Additional testing can be offered upon request**

Mechanical Data:

- **Case: JEDEC DO-214AC molded plastic body**
- **Terminals: Solder plated, solderable per MIL-STD-750, Method 2026**
- **Polarity: Color band denotes cathode end**
- **Mounting Position: Any**
- **Weight: 0.06 grams**

Mechanical Dimensions: In inches / mm



	SMA/DO-214AC			
Dim.	Min.	Max.	Min.	Max.
A	2.18	2.90	0.086	0.114
B	3.99	4.60	0.157	0.181
C	1.29	1.70	0.508	0.067
D	0.152	0.305	0.006	0.012
E	4.70	5.31	0.185	0.209
F	1.70	2.50	0.067	0.098
G	0.051	0.203	0.002	0.008
H	0.76	1.55	0.030	0.610
	In mm		In inch	

SMA

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current @T_L = 90°C	I_O	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @I_F = 1.0A	V_{FM}	1.30							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	5.0 50							μA
Reverse Recovery Time (Note 1)	t_{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C_j	15							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A,
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. Mounted on P.C. Board with 8.0mm^2 land area.

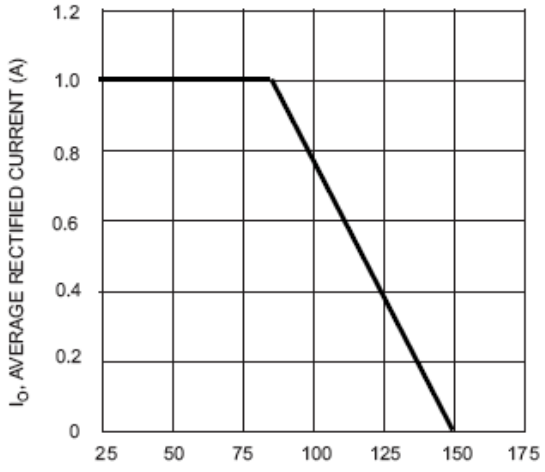


Fig. 1 Forward Current Derating Curve

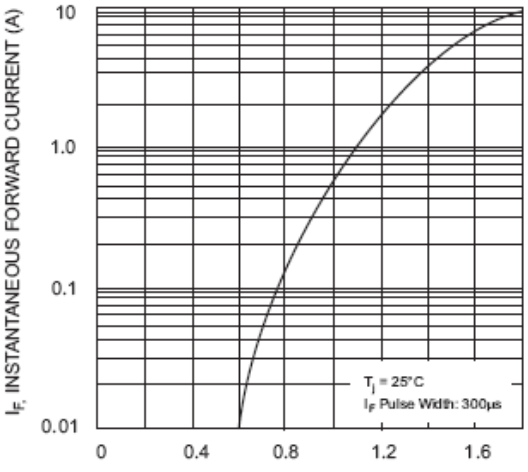


Fig. 2 Typical Forward Characteristics

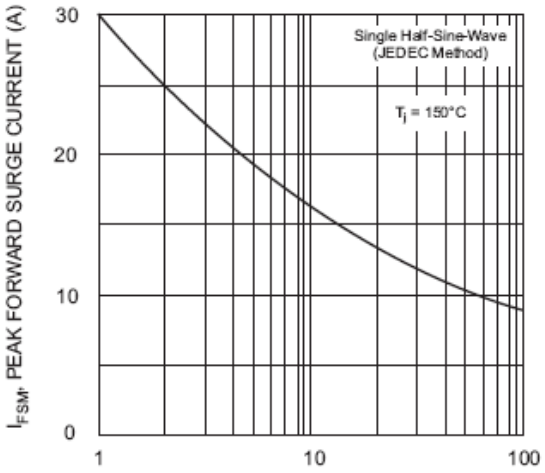


Fig. 3 Forward Surge Current Derating Curve

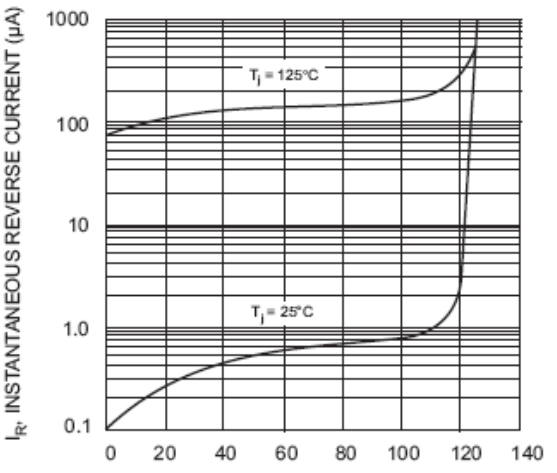
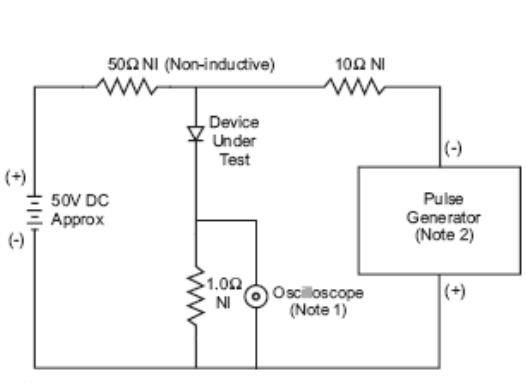


Fig. 4 Typical Reverse Characteristics



Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

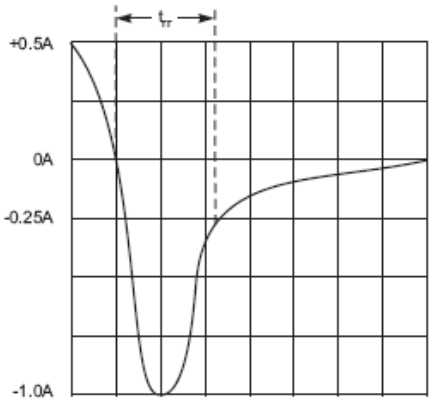


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

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