



# RS1AH THRU RS1MH

## SURFACE MOUNT FAST RECOVERY RECTIFIER

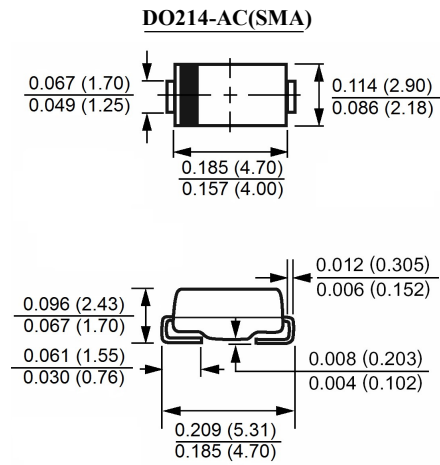
**REVERSE VOLTAGE:** 50 to 1000 VOLTS  
**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass Passivated Die Construction
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Fast Recovery times for high efficiency
- Suffix " H " indicated Halogen-free part, ex.RS1AH

### MECHANICAL DATA

Case : Molded plastic, DO-214AC(SMA)  
 Terminals : Solder plated, solderable per MIL-STD-750, method 2026 guaranteed  
 Polarity : Color band denotes cathode end



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Parameter	Symbols	RS1AH	RS1BH	RS1DH	RS1GH	RS1JH	RS1KH	RS1MH	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_L=75^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amp
Maximum Forward Voltage at 1.0A	$V_F$	1.3							Volts
Maximum Reverse Current at $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$	5 200							$\mu\text{Amp}$
Typical Junction Capacitance (Note 1)	$C_J$	15							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 3)	$t_{rr}$	150			250		500		ns
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to ambient mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

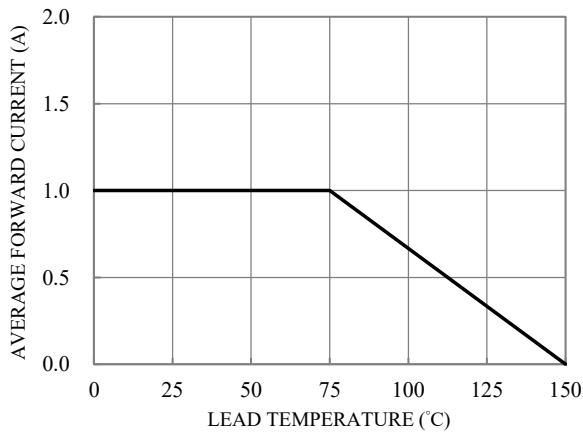
3- Reverse Recovery Test Conditions:  $I_F=5A$ ,  $I_R=1A$ ,  $I_{RR}=25A$ .



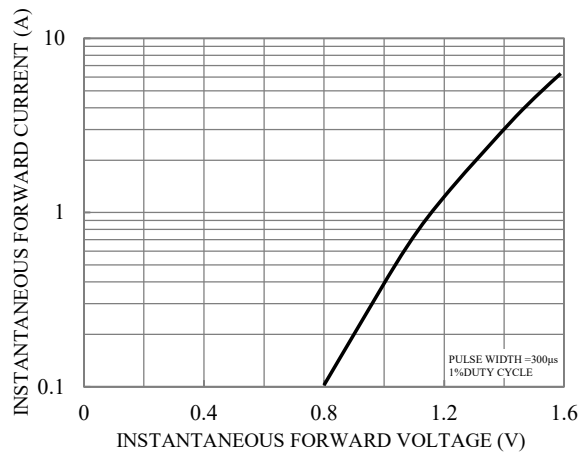
# RS1AH THRU RS1MH

## SURFACE MOUNT FAST RECOVERY RECTIFIER

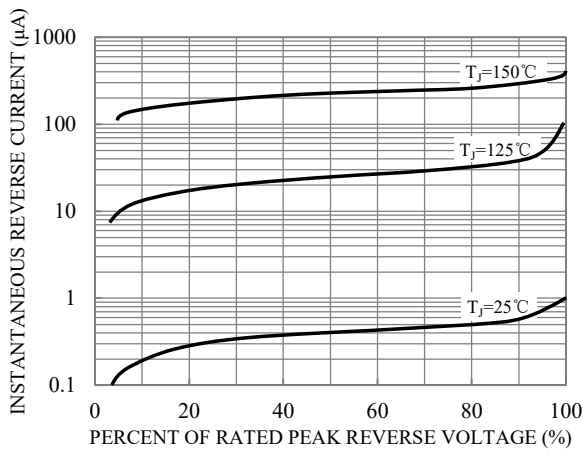
### RATINGS AND CHARACTERISTIC CURVES



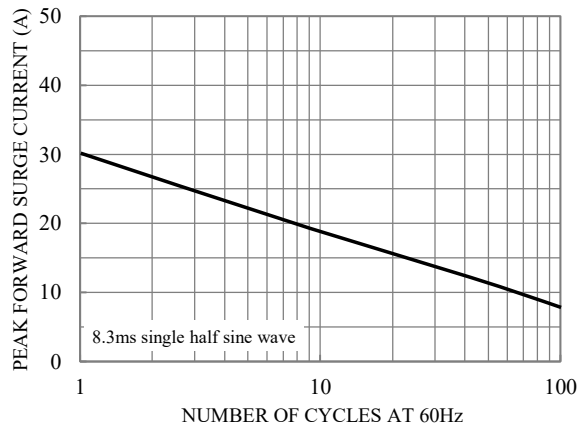
**Fig.1-FORWARD CURRENT DERATING CURVE**



**Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**Fig.3-TYPICAL REVERSE CHARACTERISTICS**



**Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT**