



# RS1A THRU RS1M

## SURFACE MOUNT FAST RECOVERY RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

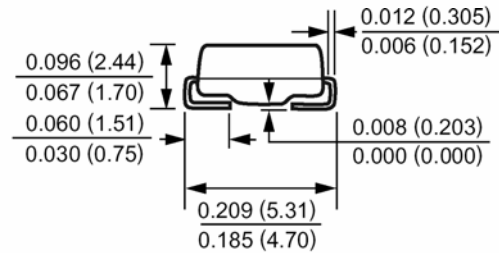
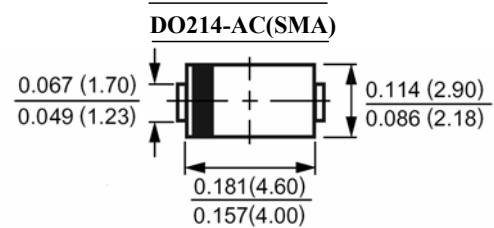
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass Passivated Die Construction
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Fast Recovery times for high efficiency
- Suffix " H " indicated Halogen-free part, 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	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	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	$I_{(AV)}$	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 $T_J=25^\circ\text{C}$	$I_R$	5.0							uAmp	
at Rated DC Blocking Voltage $T_J=100^\circ\text{C}$		50								
Typical Junction Capacitance (Note 1)	$C_J$	15							pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	75							°C/W	
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	150				250		500		nS
Operating Junction Temperature Range	$T_J$	-65 to +150							°C	
Storage Temperature Range	$T_{stg}$	-65 to +175							°C	

#### NOTES:

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

2- Thermal Resistance junction to ambient.

3- Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{RR}=0.25A$ .



# RS1A THRU RS1M

## SURFACE MOUNT FAST RECOVERY RECTIFIER

### RATINGS AND CHARACTERISTIC CURVES

FIG.1 - FORWARD CURRENT DERATING CURVE

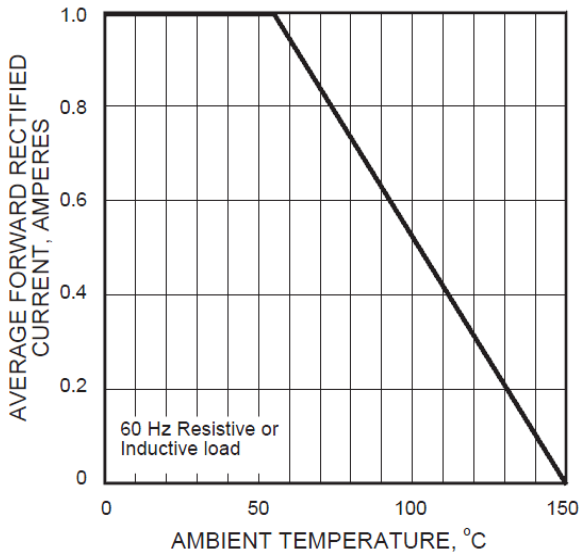


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

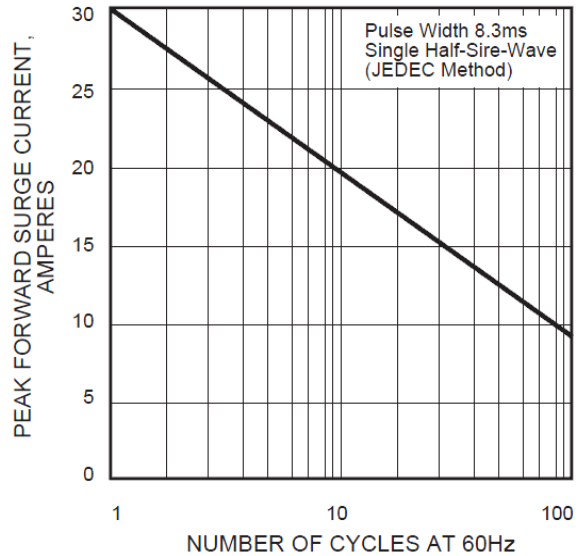


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

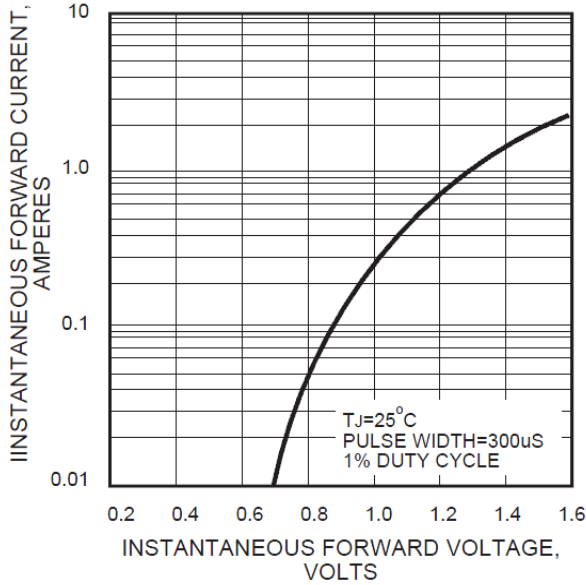


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

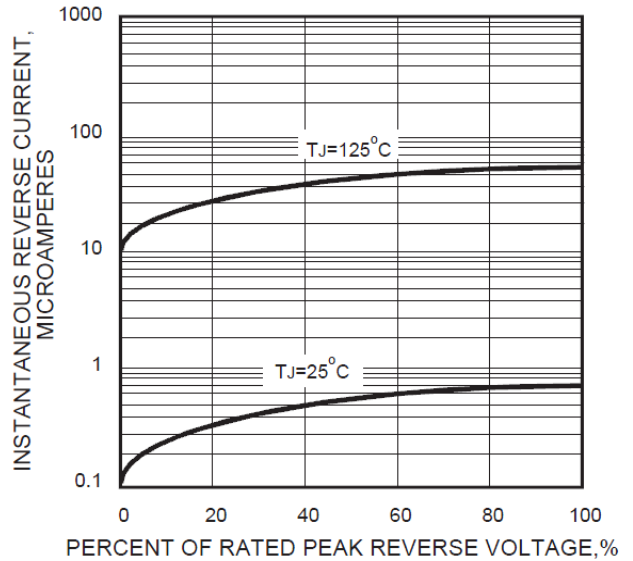


FIG.5 - TYPICAL JUNCTION CAPACITANCE

