

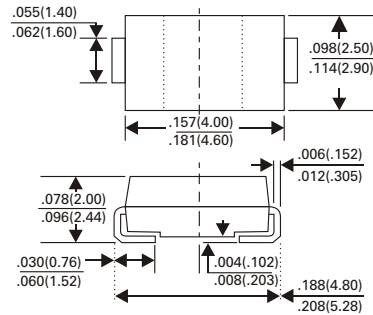
# RS1A thru RS1M

## SURFACE MOUNT FAST RECOVERY RECTIFIER

VOLTAGE - 50 TO 1000 VOLTS CURRENT - 1.0 AMPERES



SMA/DO-214AC



Dimensions in inches and (millimeters)

### FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed

### MECHANICAL DATA

Case : JEDEC DO-214AC molded plastic  
 Epoxy : UL 94V-0 rate flame retardant  
 Metallurgically bonded construction  
 Polarity : Color band denotes cathode end  
 Mounting position : Any  
 Weight : 0.063 grams

### 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%

	SYMBOL	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	UNITS
Maximum Repetitive 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 .0375" (9.5mm) Lead Length at $T_A = 50^\circ C$	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	30							Amps
Maximum Instantaneous at 1.0A DC	$V_F$	1.3							Volts
Maximum DC Reverse Current @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 100^\circ C$	$I_R$	5.0 100							$\mu A$
Maximum Reverse Recovery Time (NOTE 1)	$T_{RR}$	150			250		500		nS
Typical Junction Capacitance (NOTE 2)	$C_J$	15							pF
Operating Temperature Range	$T_J$	+175							$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +175							$^\circ C$

NOTES :

1. Reverse Recovery Time Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$
2. Measured at 1 MHz and applied reverse voltage of 4.0VDC

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### RATING AND CHARACTERISTICS CURVES RS1A THRU RS1M

Fig. 1 - FORWARD CURRENT DERATING CURVE

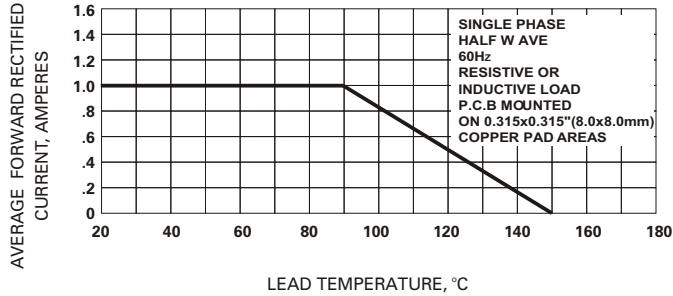


Fig. 2 - TYPICAL JUNCTION CHARACTERISTICS

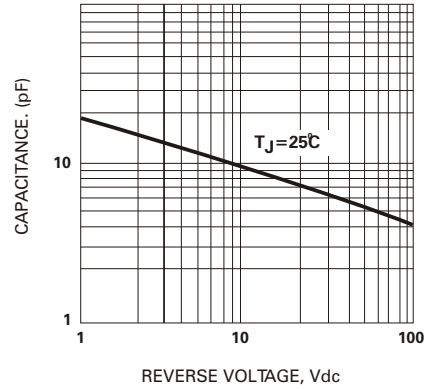


Fig. 3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

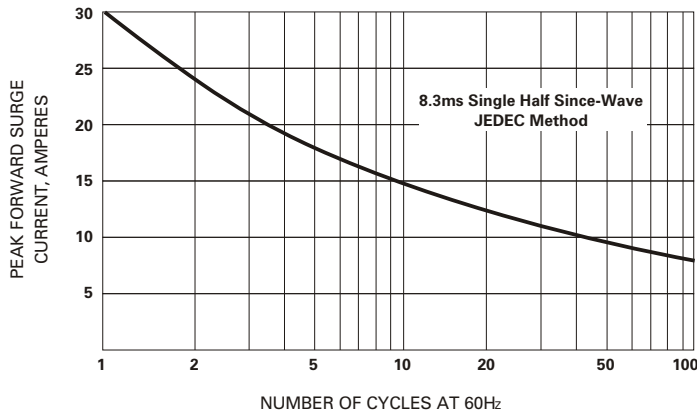


Fig. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

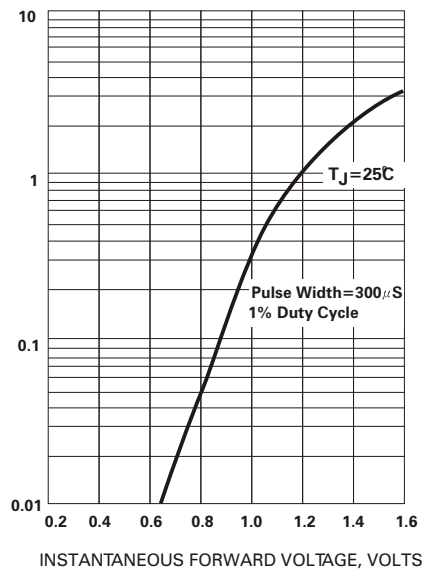


Fig. 5 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

