



**DC COMPONENTS CO., LTD.**  
RECTIFIER SPECIALISTS

**RS1AG  
THRU  
RS1MG**

**TECHNICAL SPECIFICATIONS OF SURFACE MOUNT FAST RECOVERY RECTIFIER**  
**VOLTAGE RANGE - 50 to 1000 Volts** **CURRENT - 1.0 Ampere**

### FEATURES

- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Glass passivated junction

### MECHANICAL DATA

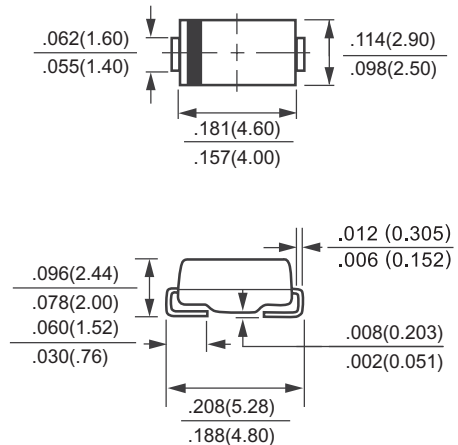
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



SMA (DO-214AC)



Dimensions in inches and (millimeters)

	SYMBOL	RS1AG	RS1BG	RS1DG	RS1GG	RS1JG	RS1KG	RS1MG	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 55°C	I <sub>O</sub>	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30							Amps
Maximum Forward Voltage at 1.0A DC	V <sub>F</sub>	1.3							Volts
Maximum DC Reverse Current at	I <sub>R</sub>	5.0							uAmps
Rated DC Blocking Voltage		150							
Maximum Reverse Recovery Time (Note 3)	t <sub>rr</sub>	150				250	500	nSec	
Maximum Thermal Resistance (Note 2)	R <sub>θJL</sub>	30							°C/W
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	15							pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to + 175							°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC  
 2. Thermal Resistance (Junction to Ambient), .24in<sup>2</sup> (6.0mm<sup>2</sup>) copper pads to each terminal.  
 3. Test Conditions: I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 0.25A

# RATING AND CHARACTERISTIC CURVES ( RS1AG THRU RS1MG )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

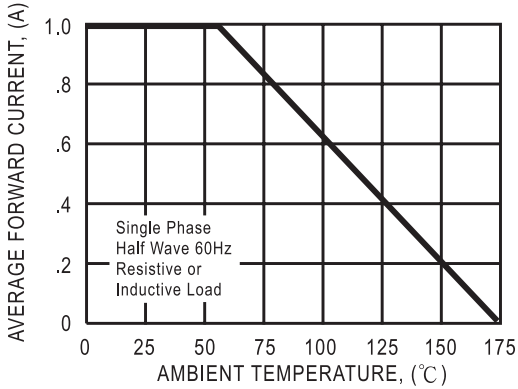


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

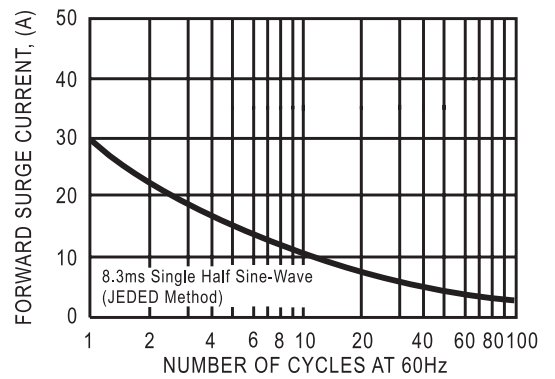


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

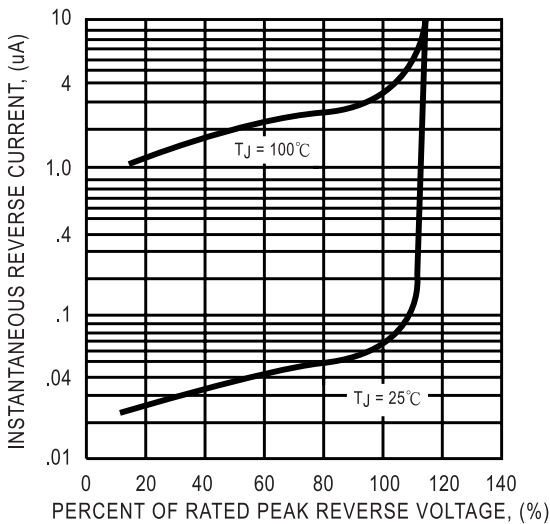


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

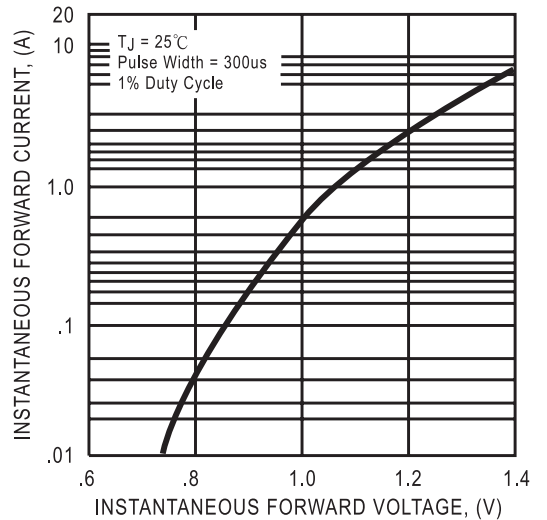
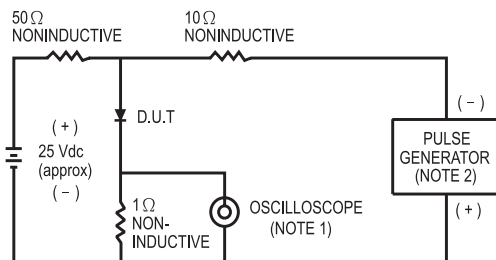


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm. 22 pF.  
 2. Rise Time = 10ns max. Source Impedance = 50 ohms.

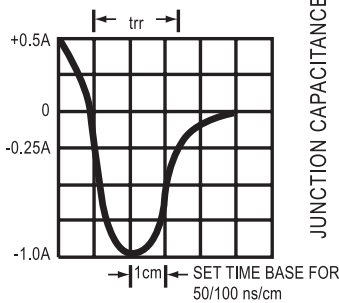


FIG. 6 - TYPICAL JUNCTION CAPACITANCE

