



**DC COMPONENTS CO., LTD.**

**RECTIFIER SPECIALISTS**

**RS1A  
THRU  
RS1M**

**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**

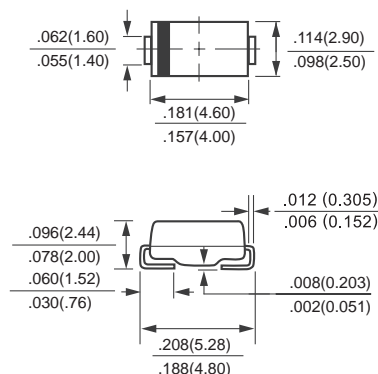
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated, solderable per  
MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.064 gram

**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	RS1A	RS1B	RS1D	RS1G	RS1J	RS1K	RS1M	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		Io	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	30							Amps
Maximum Forward Voltage at 1.0A DC		VF	1.3							Volts
Maximum DC Reverse Current at	@ TA = 25°C	IR	5.0							uAmps
Rated DC Blocking Voltage	@ TA = 125°C		150							
Maximum Reverse Recovery Time (Note 3)		trr	150				250	500		nSec
Maximum Thermal Resistance (Note 2)		RθJL	30							°C/W
Typical Junction Capacitance (Note 1)		Cj	15							pF
Operating and Storage Temperature Range		TJ, TSTG	-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 ( RS1A THRU RS1M )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

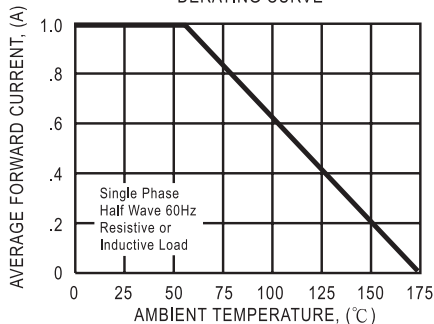


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

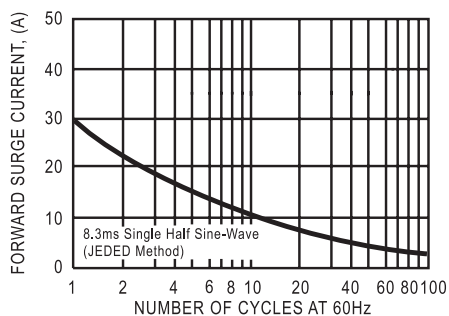


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

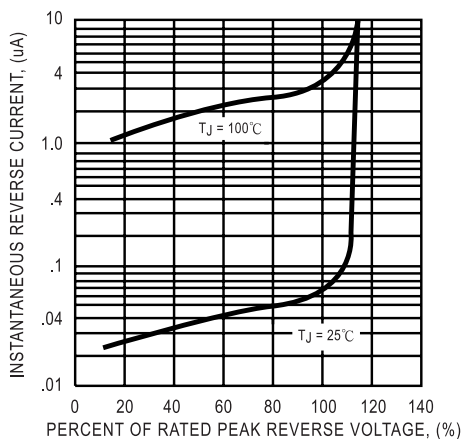


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

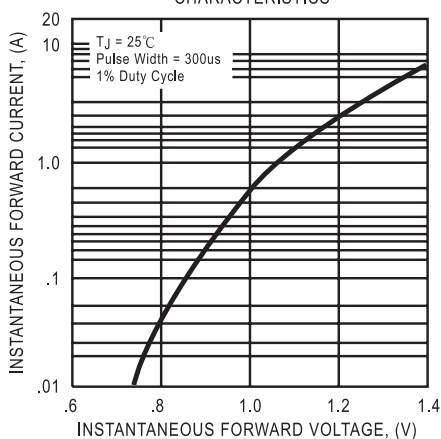


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

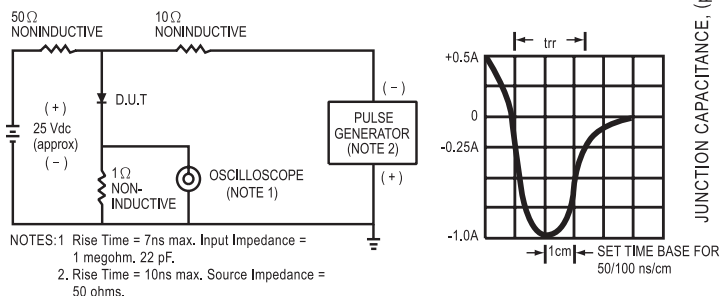
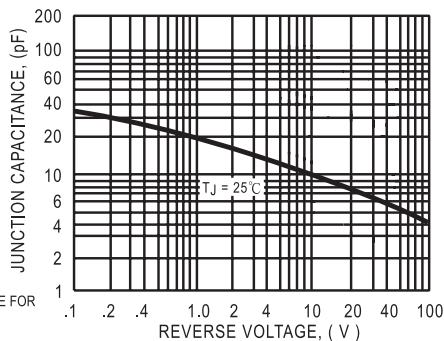


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



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