



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

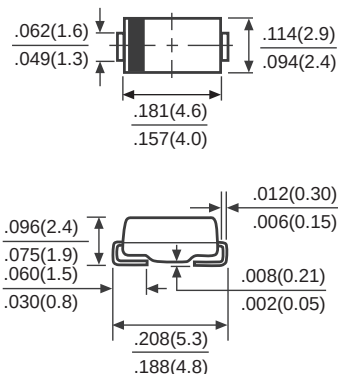
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rated flame retardant
- * Lead: Solder plated, solderable per MIL-STD-750, Method 2026
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 0.064 gram approx.

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 _{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}	500	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _A = 55°C		I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A DC		V _F	1.3							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T _A =25°C	I _R	5.0							μAmps
	@T _A =125°C		150							
Maximum Thermal Resistance (Note 2)		R _{θJL}	30							°C/W
Maximum Reverse Recovery Time (Note 3)		t _{rr}	150				250	500		nSec
Typical Junction Capacitance (Note 1)		C _J	15							pF
Operating and Storage Temperature Range		T _J , T _{STG}	-65 to +175							°C

NOTES : 1. Measured at 1.0 MHz and applied reverse voltage of 4.0VDC

2. Thermal Resistance (Junction to Ambient), .24in² (6.0mm²) copper pads to each terminal.

3. Test Conditions: IF = 0.5A, IR = 1.0A, IRR = 0.25A

RATING AND CHARACTERISTIC CURVES (RS1A THRU RS1M)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

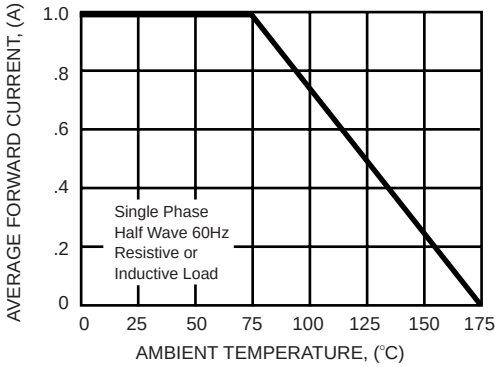


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

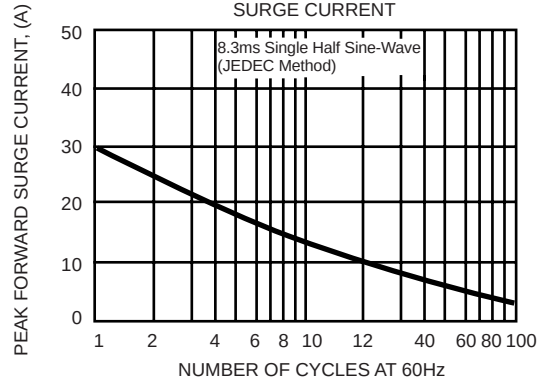


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

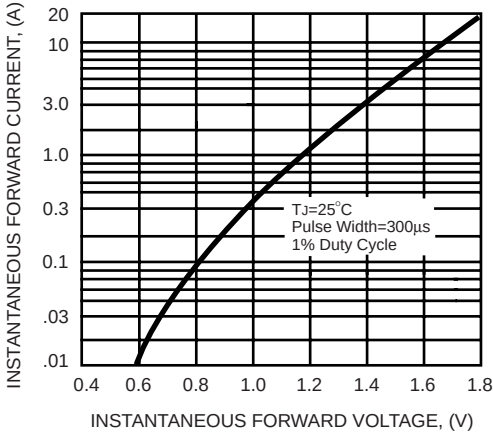


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

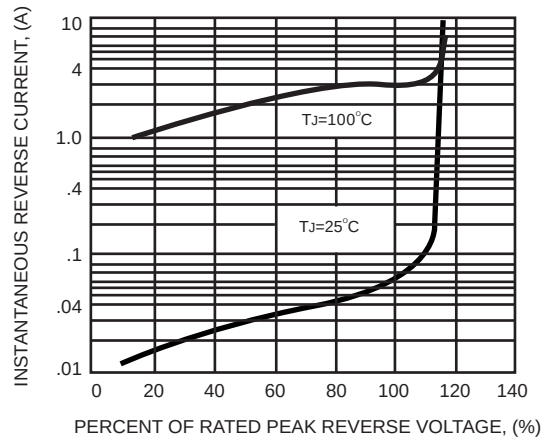


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

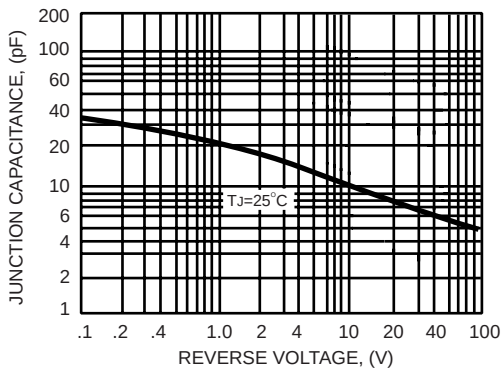
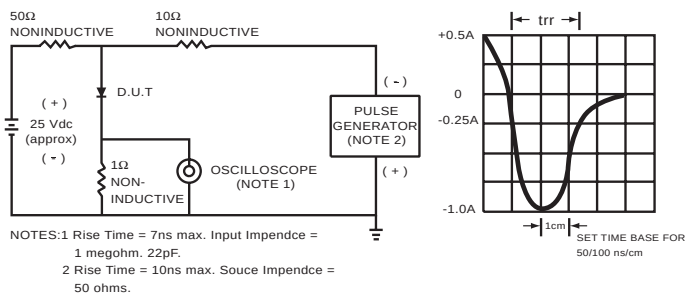


FIG. 6 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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