MASTER INSTRUMENT CORPORATION

SURFACE MOUNT RECTIFIER
RS1A THRU RS1M

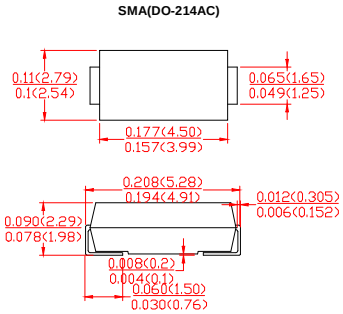
VOLTAGE RANGE **50 to 1000 Volts**
Forward Current **1.0 Amperes**

FEATURES

- For surface mounted applications in order optimize board space
- Low profile package
- Built –in strain relief, ideal for automated placement
- Plastic package has underwrites laboratory flammability classification 94v-0
- Low forward voltage drop.
- Glass passivated chip junction
- High temperature soldering guaranteed: 250 °C/10 seconds at terminals

MECHANICAL DATA

- Case: JEDED SMA(DO-214AC) molded plastic body
- Terminals: Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denoles cathode end .
- Mounting Position: Any.
- Weight: 0.002 ounce, 0.064 gram



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%.

	SYMBOLS	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, at T_A=50 °C	$I_{(AV)}$	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.30							Volts
Maximum DC Reverse Current at rated DC blocking voltage at T_A=25 °C	I_R	5.0							µA
T_A=125 °C		100							
Maximum Reverse Recovery Time (Note 1)	T_{RR}	150				250	500		nS
Typical junction capacitance (Note 2)	C_J	10					7.0		
Maximum Thermal Resistance (Note 3)	R_{QJA}	32.0							°C/W
	R_{QJL}	105.0							
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							°C

NOTES:
1.Test conditions :I_F=0.5A I_R=1.0A Irr=0.25A
2.Measured at 1MHZ and applied reverse voltage of 4.0 Vplts.
3.Thermal resistance from junction to ambient and from junction to lead mounted on 0.2 3 0.2"(5.0 3 5.0mm) copper pad areas.

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Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 — Forward Current Derating Curve

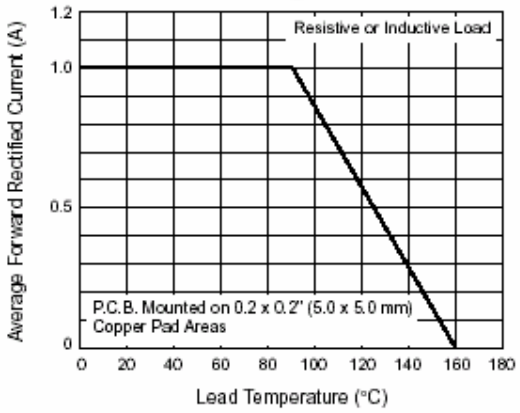

Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

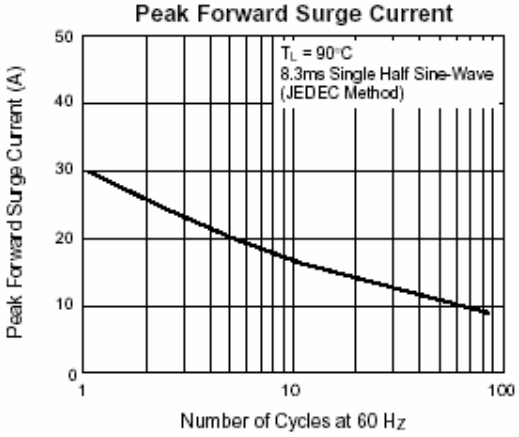

Fig. 3 — Typical Instantaneous Forward Characteristics

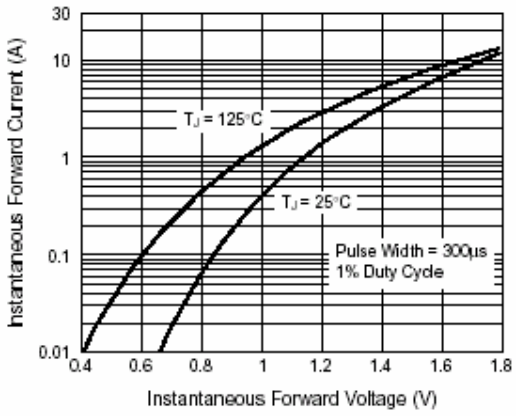

Fig. 4 — Typical Reverse Characteristics

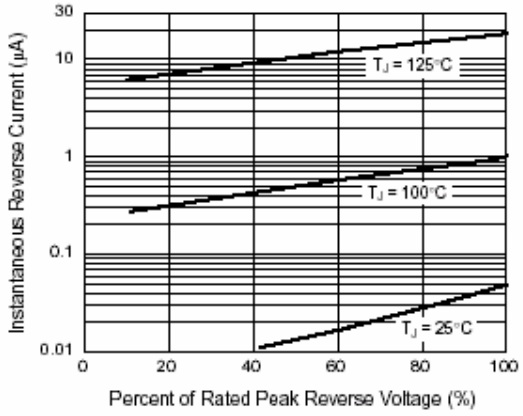

Fig. 5 — Typical Junction Capacitance

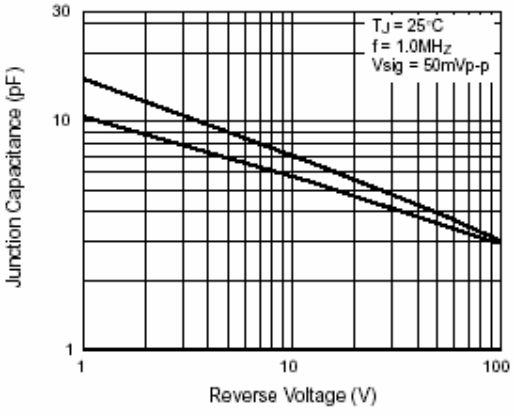

Fig. 6 — Typical Transient Thermal Impedance