RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SA1 THRU SA7

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

NEW RELEASE

FEATURES

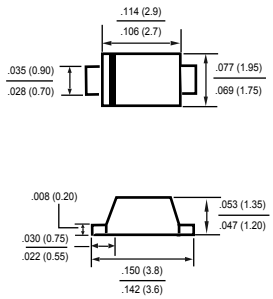
* Ideal for surface mounted applications
* Low leakage current
* Metallurgically bonded construction
* Mounting position: Any
* Weight: 0.016 gram

MECHANICAL DATA

* Epoxy : Device has UL flammability classification 94V-0



SOD-123F



Dimensions in inches and (millimeters)

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%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SA1	SA2	SA3	SA4	SA5	SA6	SA7	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}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at TA = 55°C	I_O	1.0							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	25							Amps
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	85							°C/W
	$R_{\theta JL}$	25					30		
Typical Junction Capacitance (Note 1)	C_J	8							pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							°C

ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SA1	SA2	SA3	SA4	SA5	SA6	SA7	UNITS
Maximum Forward Voltage at 1.0A DC		V_F	1.1							Volts
Maximum DC Average Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	2.0							µAmps
	@T_A = 100°C		50							µAmps

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

2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

3. Thernal Resistance: Mounted on PCB.

2006-12

RATING AND CHARACTERISTICS CURVES (SA1 THRU SA7)

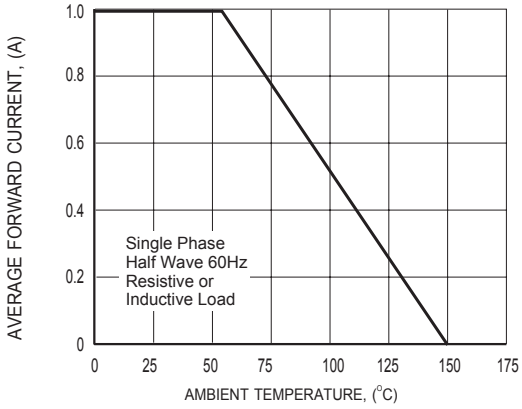


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

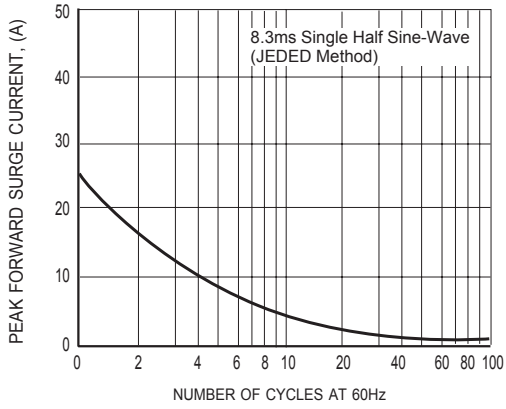


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

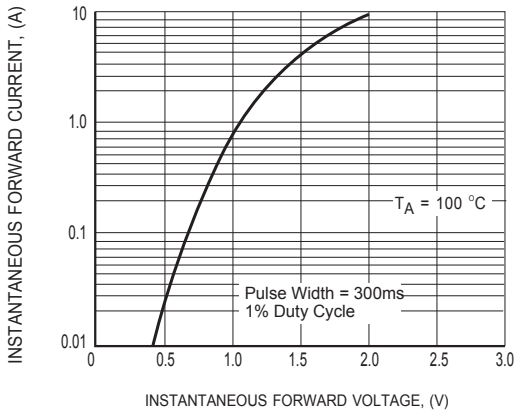


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

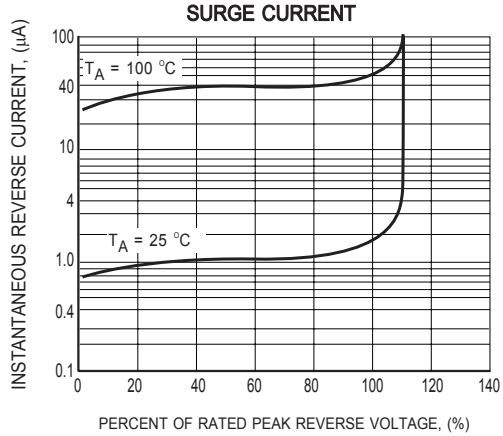


FIG.4 TYPICAL REVERSE CHARACTERISTICS

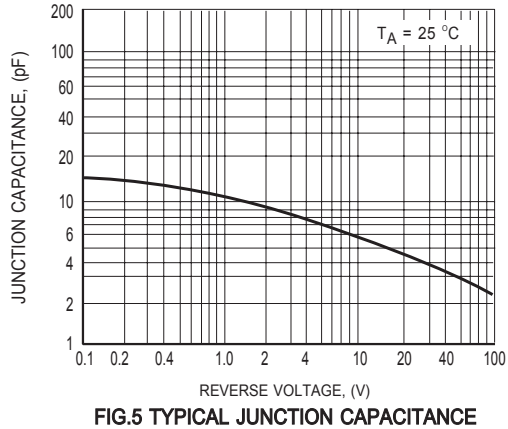
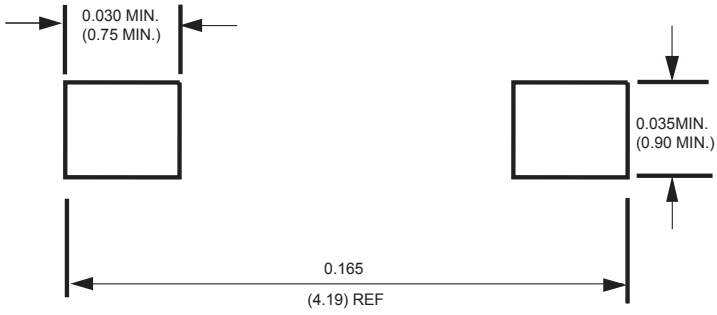


FIG.5 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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