

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

FEATURES

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

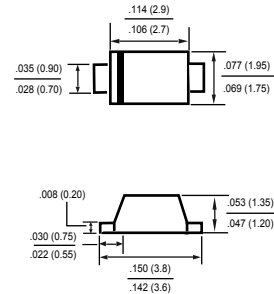
MECHANICAL DATA

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

NEW RELEASE



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 I _{FSM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	25							Amps
Typical Thermal Resistance (Note 3)	R _{θJA}	85							°C/W
	R _{θJL}	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	I _R	@T _A = 25°C							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. Thermal Resistance: Mounted on PCB.

RATING AND CHARACTERISTICS CURVES (SA1 THRU SA7)

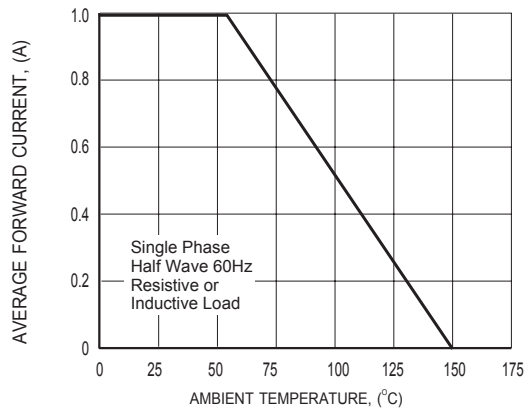


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

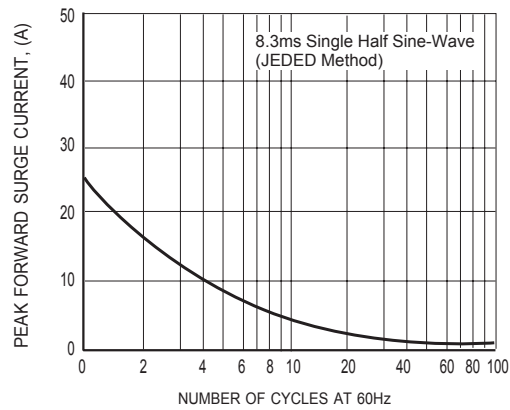


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

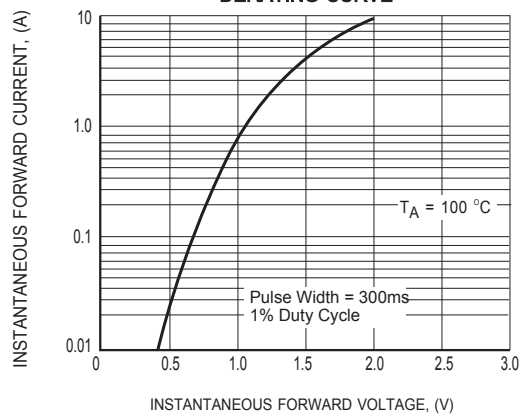


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

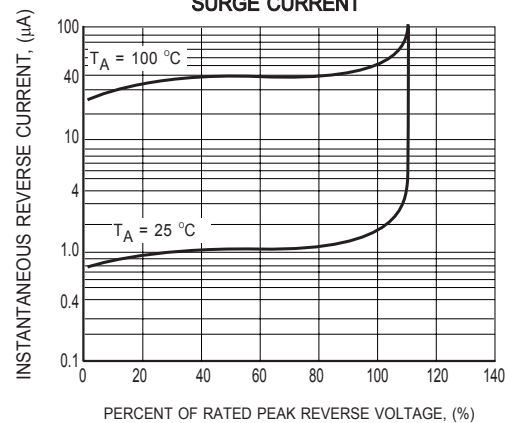


FIG.4 TYPICAL REVERSE CHARACTERISTICS

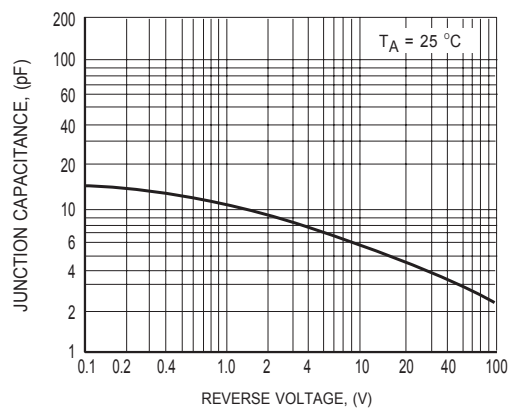
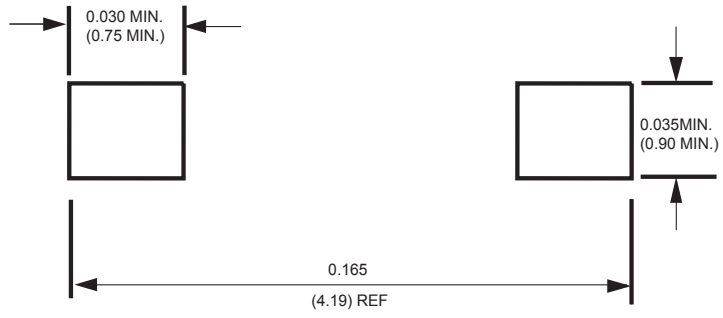


FIG.5 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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