

**SA1
THRU
SA7**

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

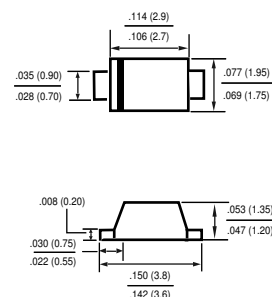
FEATURES

- * 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

SOD-123F



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.
resistive or inductive load.

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
Current Squarad Time	I^2t	2.5							A ² /Sec
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	I_R	@TA = 25°C							5.0	uAmps
		@TA = 100°C							50	uAmps

- 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.
 4. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2010-05
REV:B

RATING AND CHARACTERISTICS CURVES (SA1 THRU SA7)

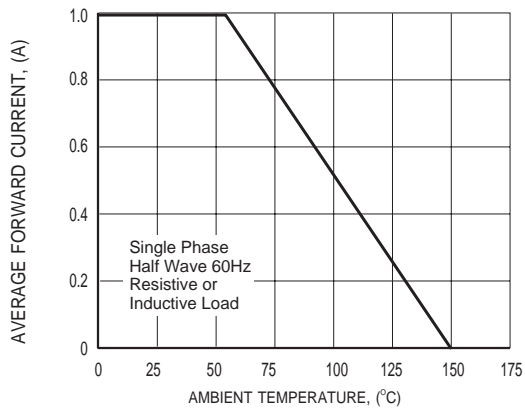


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

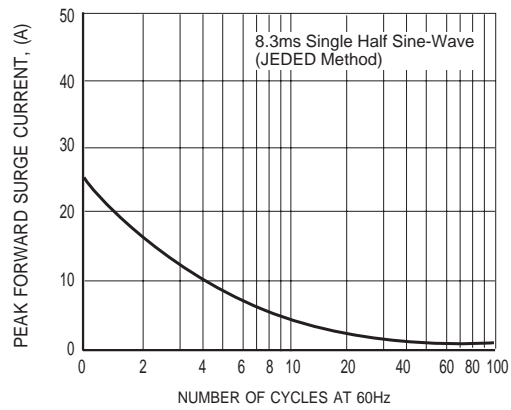


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

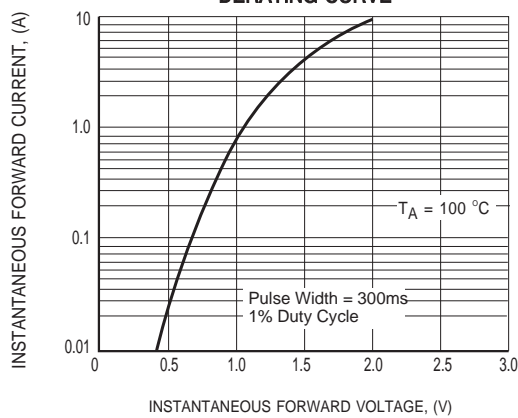


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

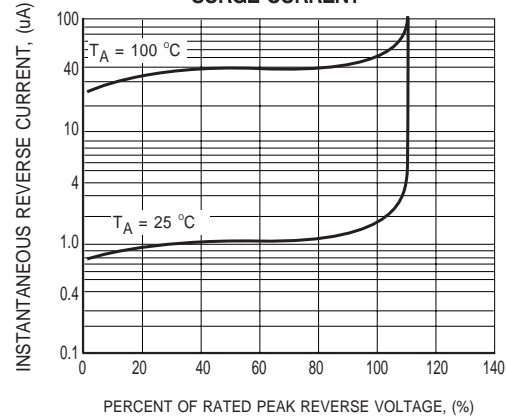


FIG.4 TYPICAL REVERSE CHARACTERISTICS

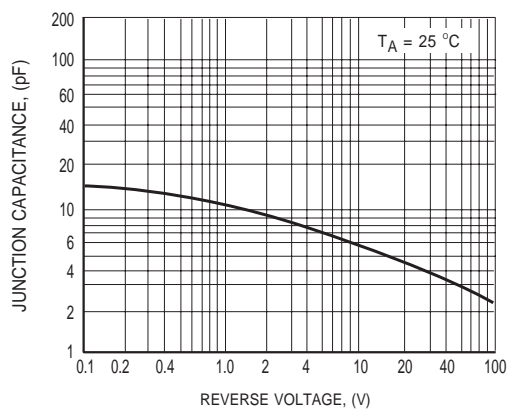
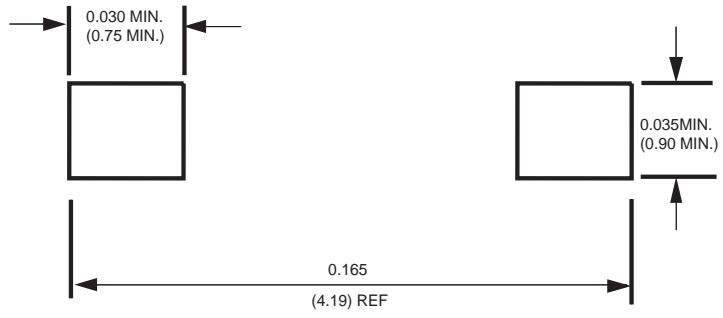


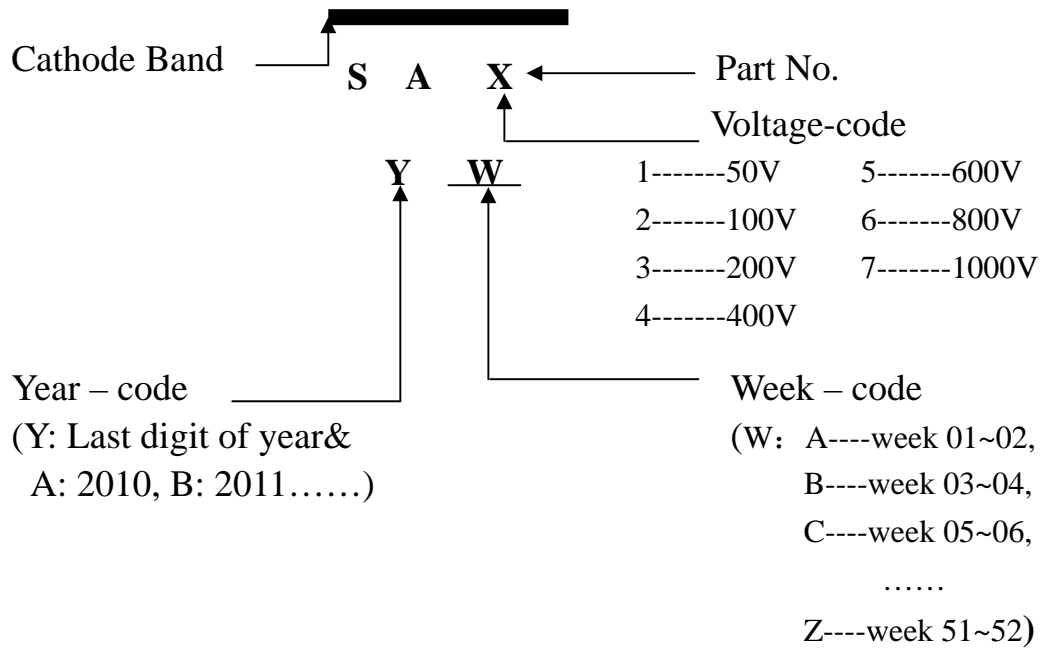
FIG.5 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F	-W	2,500	---	---	178	390*205*310	100,000	5.804



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