

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
- * P/N suffix V means AEC-Q101 qualified, e.g:SA1LV
- * P/N suffix V means Halogen-free

MECHANICAL DATA

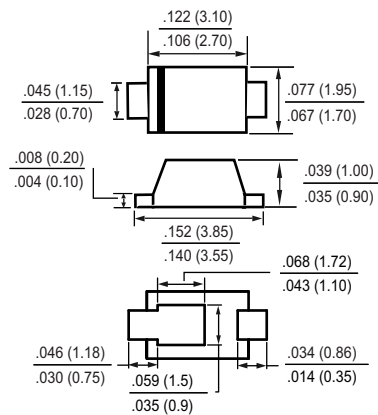
- * Epoxy : Device has UL flammability classification 94V-0
- * Weight: 0.016 gram
- * Mounting position: Any

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



SOD-123FL



Dimensions in inches and (millimeters)

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

RATINGS	SYMBOL	SA1L	SA2L	SA3L	SA4L	SA5L	SA6L	SA7L	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 _{FM} (surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30							Amps
Current Squared Time	I ² t	3.7							A ² /Sec
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	SA1L	SA2L	SA3L	SA4L	SA5L	SA6L	SA7L	UNITS
Maximum Forward Voltage at 1.0A DC	V _F	1.0							Volts
Maximum DC Average Reverse Current at Rated DC Blocking Voltage	I _R	1.0							uAmps
		5							mAmps

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

2. "ROHS compliant".

3. Thermal Resistance: Mounted on PCB.

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

2021-08
REV:D

RATING AND CHARACTERISTICS CURVES (SA1L THRU SA7L)

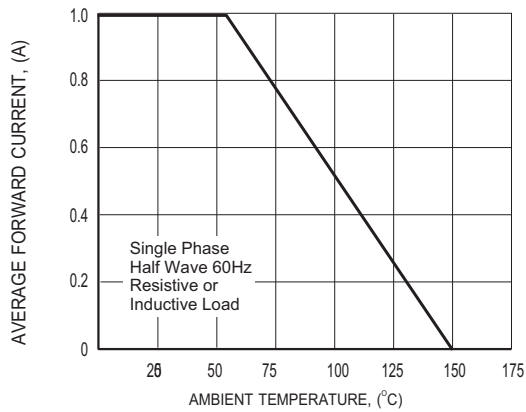


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

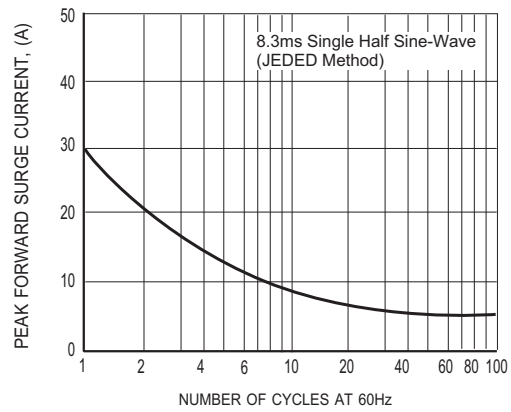


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

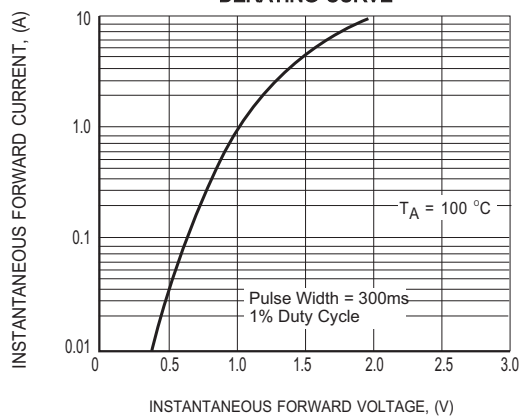


FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

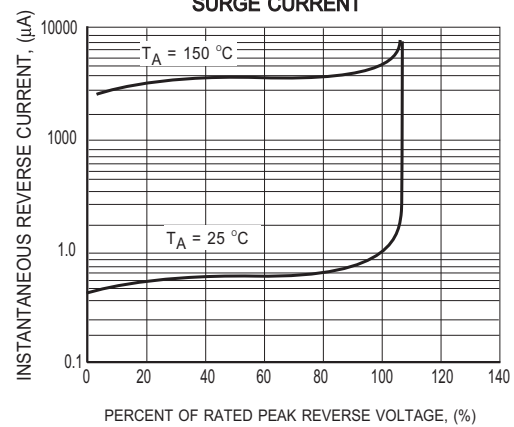


FIG.4 MAXIMUM REVERSE CHARACTERISTICS

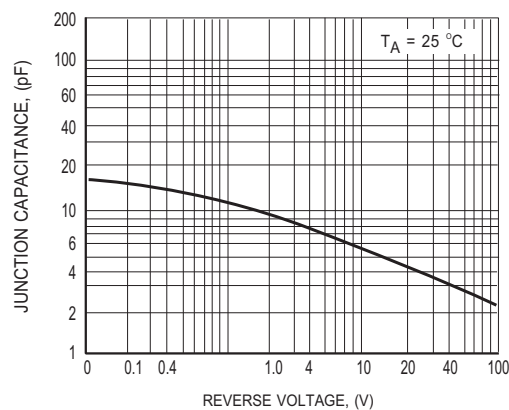
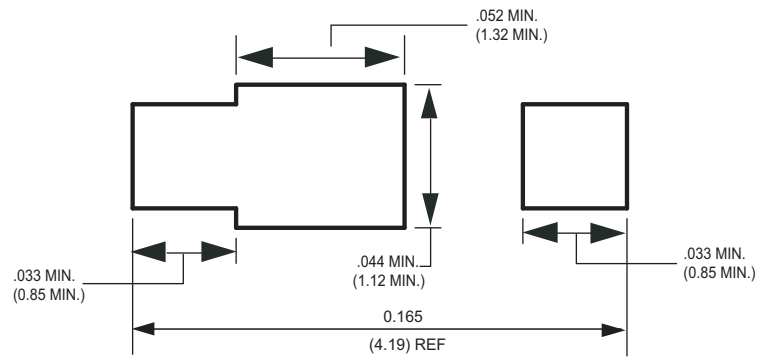


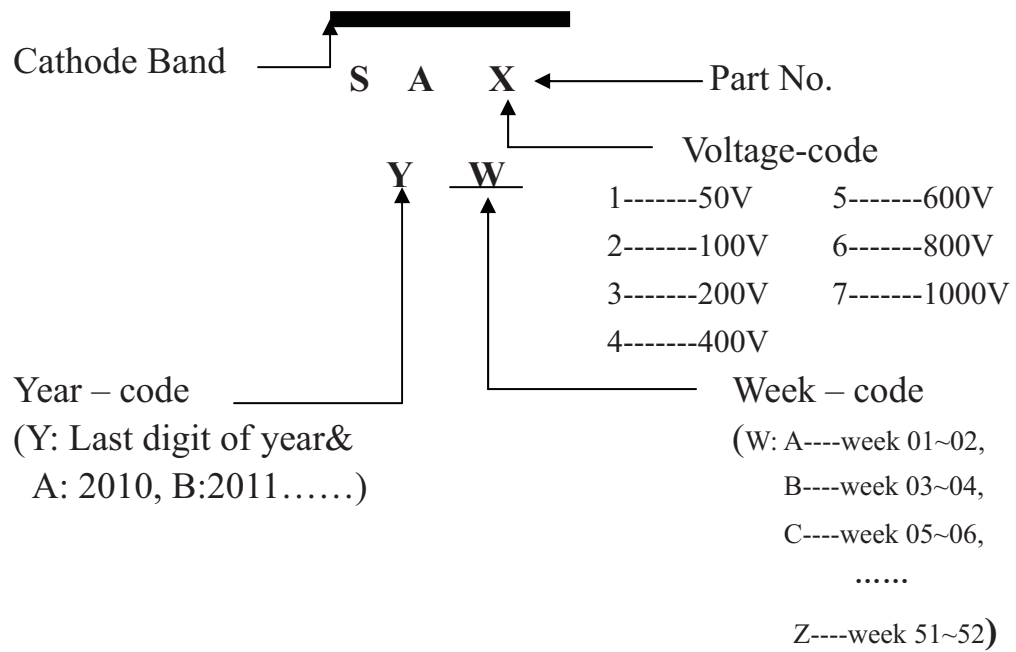
FIG.5 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F/ SOD-123FL	-W	3,000	15,000	---	---	178	390*205*31	120,000	6.964

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