

SURFACE MOUNT SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 0.5 Ampere

FEATURES

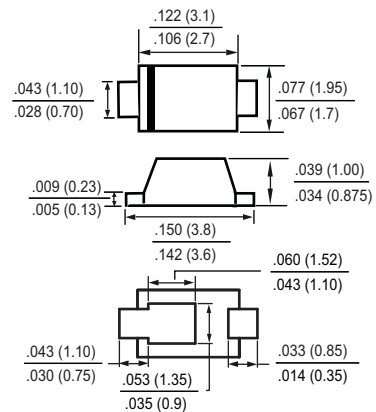
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.015 gram

MECHANICAL DATA

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



SOD-123FL



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	05A1L	05A2L	05A3L	05A4L	05A5L	05A6L	05A7L	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	0.5							Amps
Peak Forward Surge Current IFM(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	15							Amps
Current Squarad Time	I ² T	0.9							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	05A1L	05A2L	05A3L	05A4L	05A5L	05A6L	05A7L	UNITS
Maximum Forward Voltage at 0.5A DC	V _F	1.0							Volts
Maximum Full Load Reverse Current, Full cycle Average at TA=55°C	I _R	30							μAmps
Maximum DC Average Reverse Current at @TA = 25°C		1.0							μAmps
Rated DC Blocking Voltage @TA = 150°C		5.0							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 "CHF after the part nbr.

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RATING AND CHARACTERISTICS CURVES (05A1L THRU 05A7L)

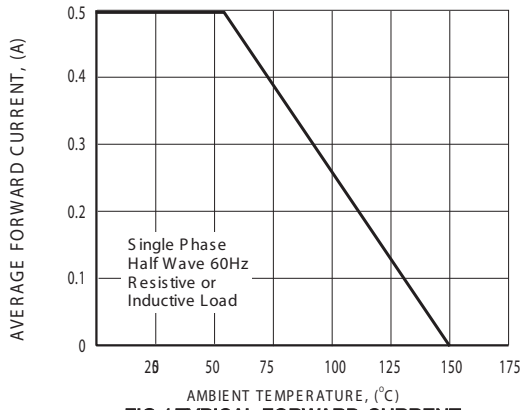


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

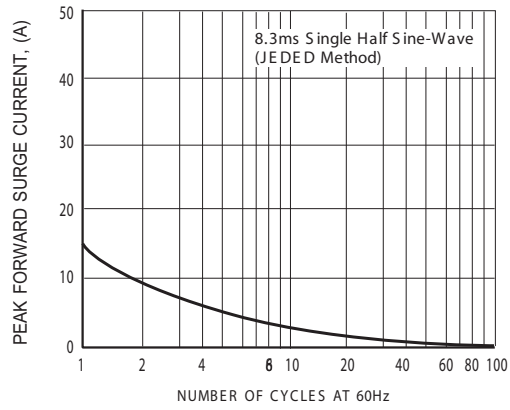


FIG.2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

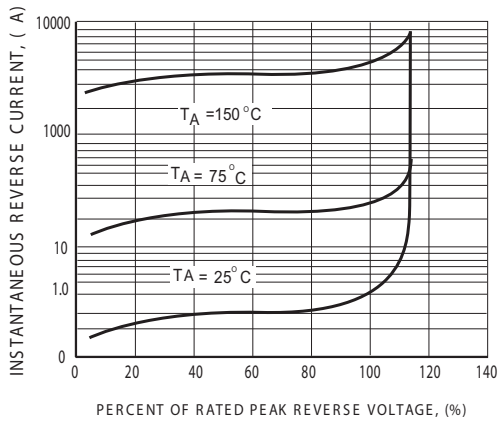


FIG.3 TYPICAL REVERSE CHARACTERISTICS

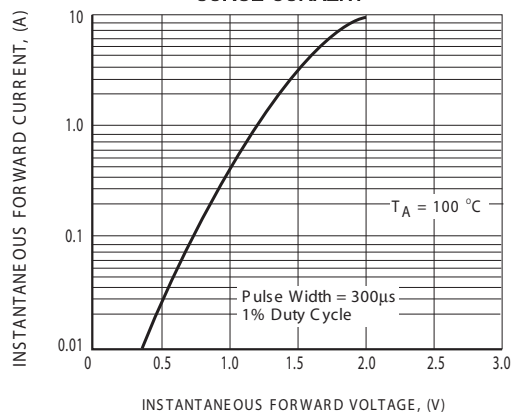


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

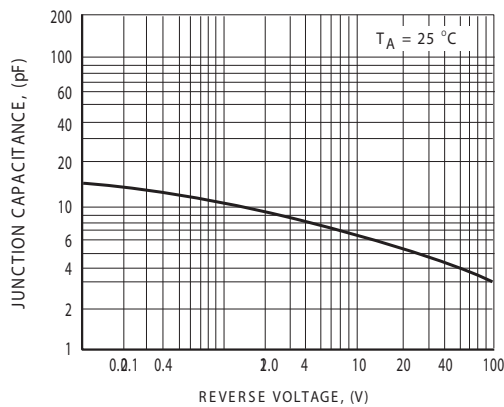
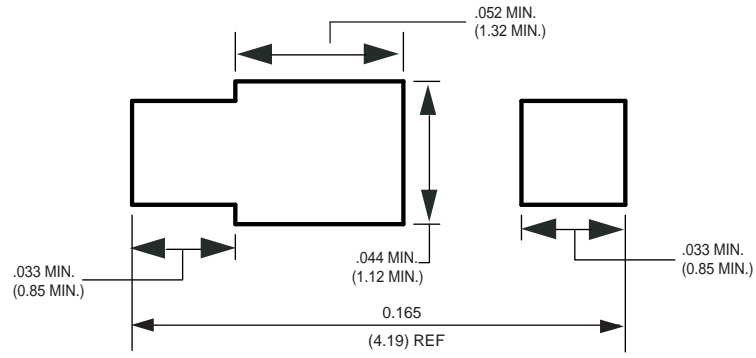


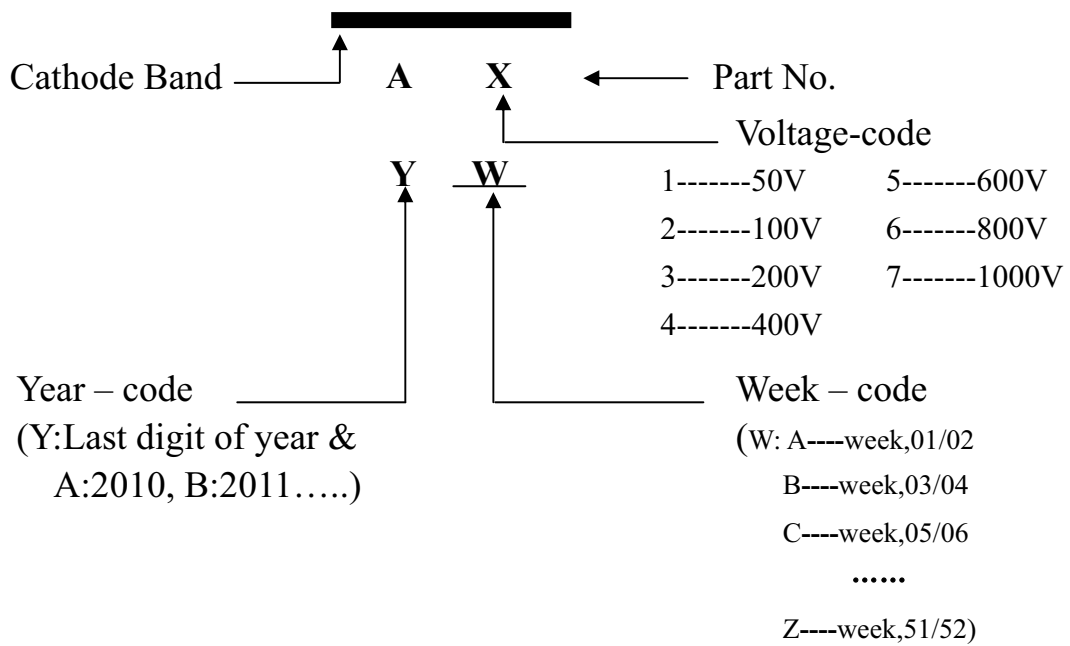
FIG.5 TYPICAL JUNCTION CAPACITANCE

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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