

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 60 Volts CURRENT 1.0 Ampere**

**FEATURES**

- \* Low power loss, high efficiency
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability
- \* High speed switching
- \* High surge capability
- \* High reliability
- \* Guard ring construction on dic
- \* Anti-ESD

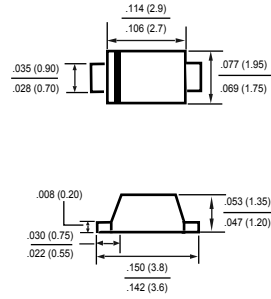
**MECHANICAL DATA**

- \* Epoxy: Device has UL flammability classification 94V-0
- \* Mounting position: Any
- \* Weight: 0.01 gram (Approx.)
- \* Flat lead frame

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	SS20	SS30	SS40	SS50	SS60	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current @ T <sub>A</sub> =75 °C	I <sub>O</sub>	1.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	20					Amps
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	110					°C/W
	R <sub>θJL</sub>	30					
Operating Temperature Range	T <sub>J</sub>	150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150					°C
Total Capacitance (Note 1)	C <sub>T</sub>	75					pF

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

CHARACTERISTICS	SYMBOL	SS20	SS30	SS40	SS50	SS60	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	0.55			0.70		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> = 25°C	0.2					mAmps
	@T <sub>A</sub> = 100°C	2					mAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4 Volts.  
 2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
 3. Mounted on PCB.

## RATING AND CHARACTERISTICS CURVES ( SS20 THRU SS60 )

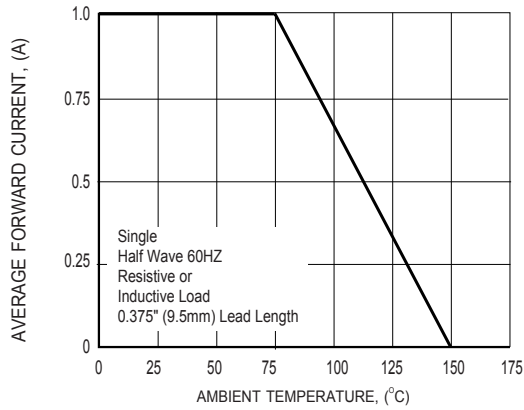


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

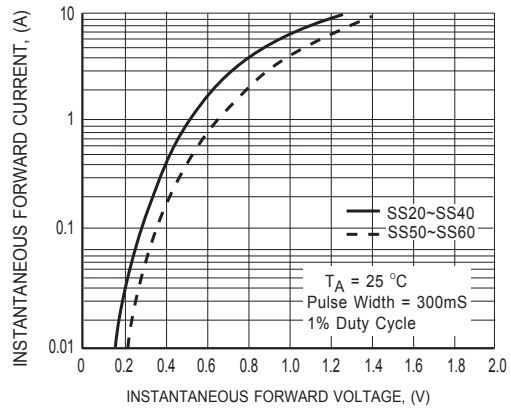


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

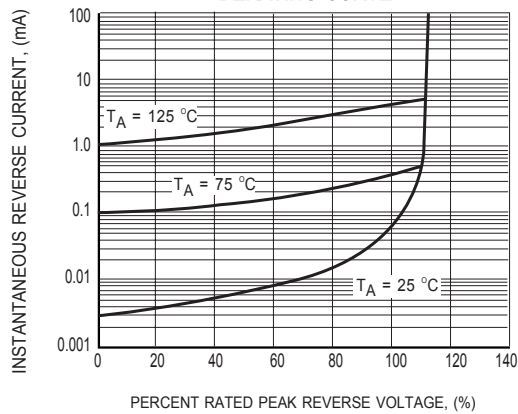


FIG.3 TYPICAL REVERSE CHARACTERISTICS

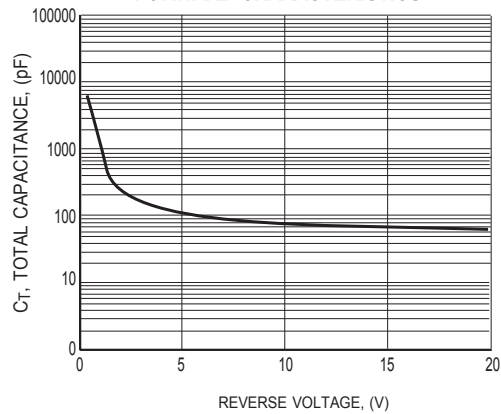


FIG.4 TYPICAL TOTAL CAPACITANCE

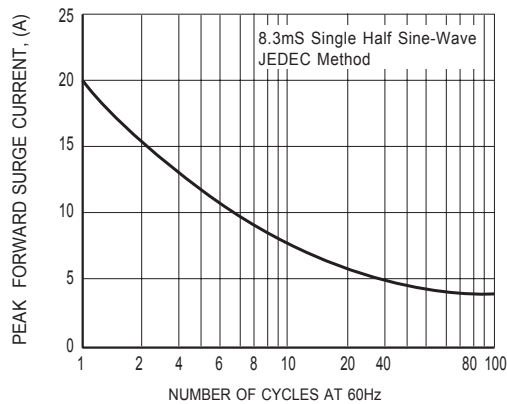
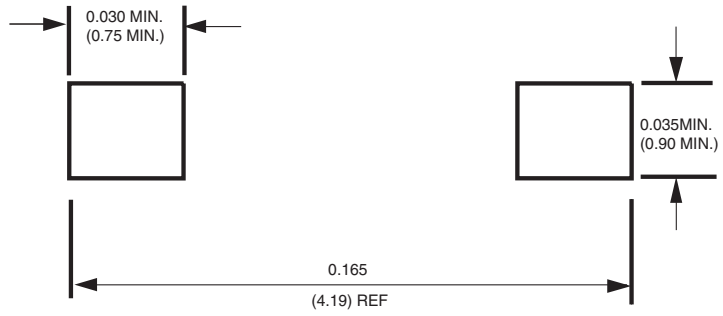


FIG.5 TYPICAL REVERSE CHARACTERISTICS

## Mounting Pad Layout



Dimensions in inches and (millimeters)

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