

# SS20L THRU SS100L

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 100 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 dice
- \* Anti-ESD

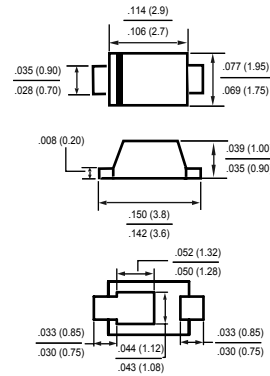
### MECHANICAL DATA

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

### 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	SS20L	SS30L	SS40L	SS50L	SS60L	SS80L	SS100L	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	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 Current Square Time	I <sup>2</sup> T	1.6							A <sup>2</sup> S
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

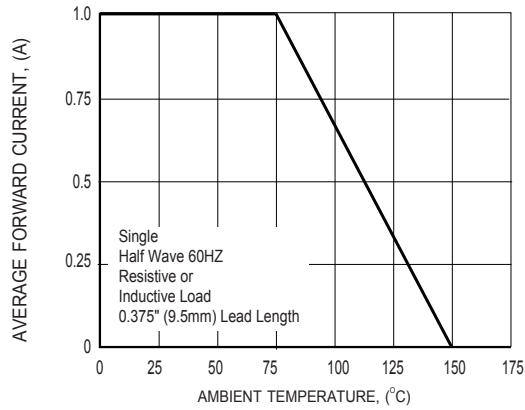
### ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SS20L	SS30L	SS40L	SS50L	SS60L	SS80L	SS100L	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	0.55			0.70		0.85		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

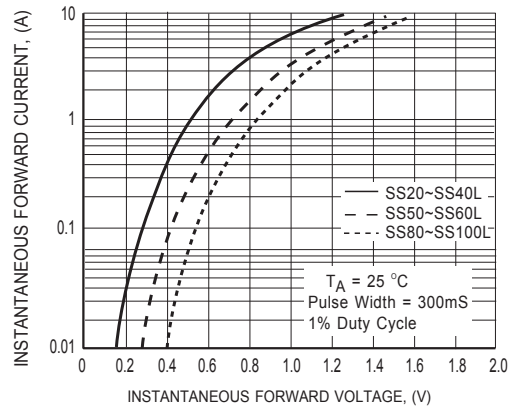
- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4 Volts.  
2. "Fully ROHS compliant", "100% Sn plating (Pb-free)".  
3. Thermal Resistance: Mounted on PCB.

2010-03  
REV: 0

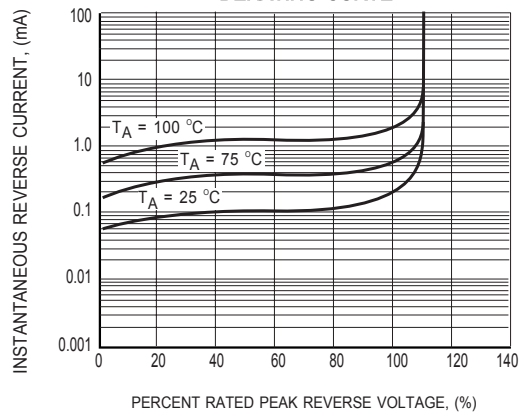
# RATING AND CHARACTERISTICS CURVES ( SS20L THRU SS100L )



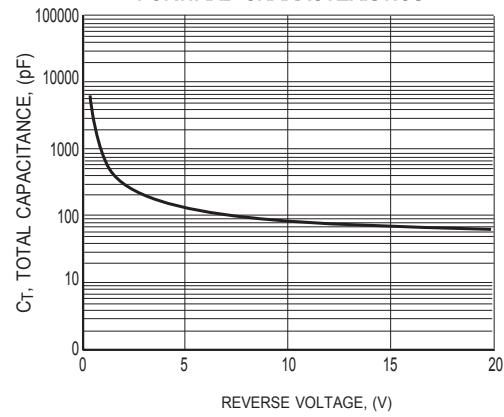
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



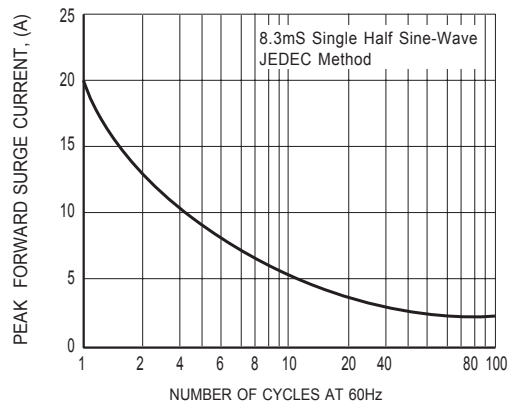
**FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 TYPICAL REVERSE CHARACTERISTICS**

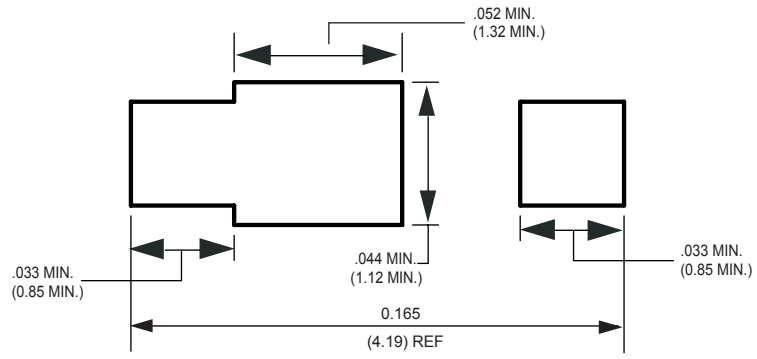


**FIG.4 TYPICAL TOTAL CAPACITANCE**



**FIG.5 TYPICAL REVERSE CHARACTERISTICS**

## Mounting Pad Layout



Dimensions in inches and (millimeters)