

**SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 60 Volts CURRENT 2.0 Amperes**

**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

**MECHANICAL DATA**

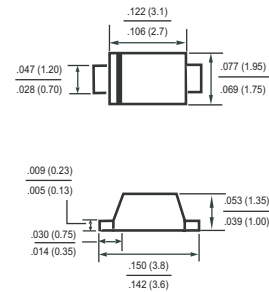
- \* Epoxy: Device has UL flammability classification 94V-O
- \* Mounting position: Any
- \* Weight: 0.018 gram (Approx.)
- \* Flat lead frame
- \* Anti-ESD

**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%.



**SOD-123F**



Dimensions in inches and (millimeters)

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

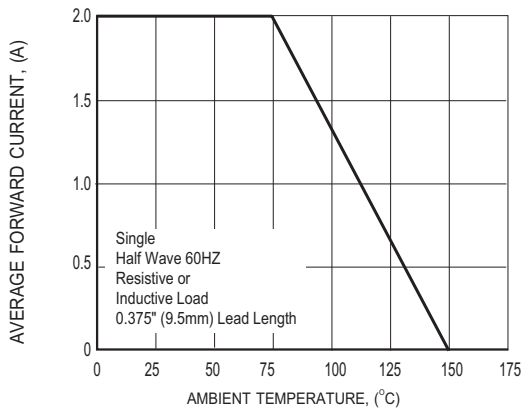
RATINGS	SYMBOL	2SS20	2SS30	2SS40	2SS50	2SS60	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	Volts
Maximum Average Forward Rectified Current @ TA=75 °C	I <sub>O</sub>	2.0					Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	60					Amps
Typical Current Squared Time	i <sup>2</sup> T	14.49					A <sup>2</sup> S
Typical Thermal Resistance (Note 3)	R <sub>θJA</sub>	110					°C/W
	R <sub>θJL</sub>	3					
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)**

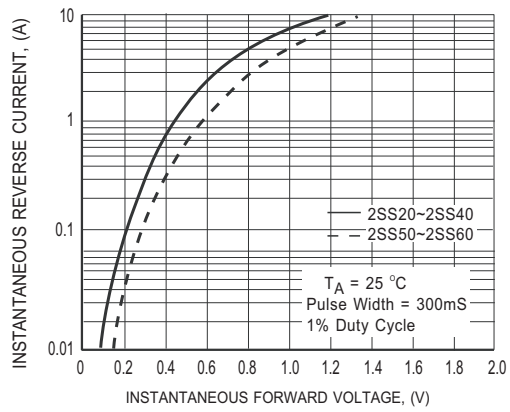
CHARACTERISTICS	SYMBOL	2SS20	2SS30	2SS40	2SS50	2SS60	UNITS
Maximum Instantaneous Forward Voltage at 2.0A DC	V <sub>F</sub>	0.55			0.70		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	0.2					mAmps
	@ TA = 150°C	5					mAmps

- NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4 Volts.  
 2. "ROHS compliant"  
 3. Thermal Resistance: Mounted on PCB.

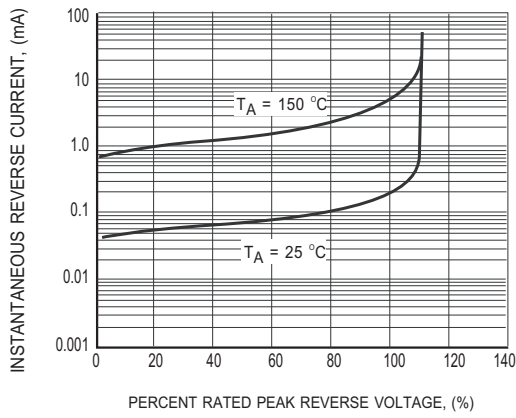
# RATING AND CHARACTERISTICS CURVES ( 2SS20 THRU 2SS60 )



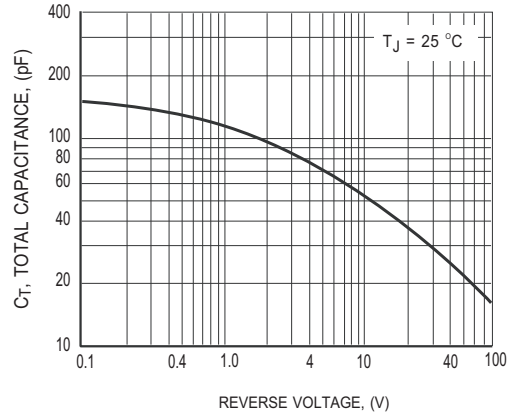
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



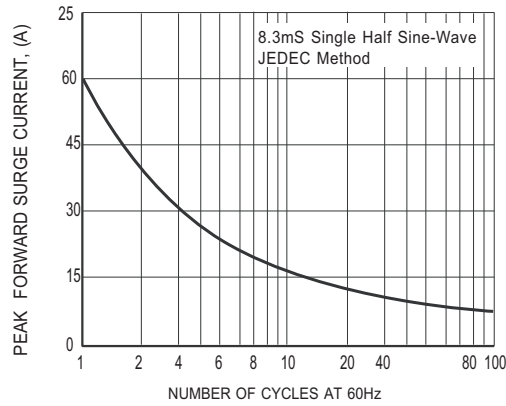
**FIG.2 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.3 MAXIMUM REVERSE CHARACTERISTICS**

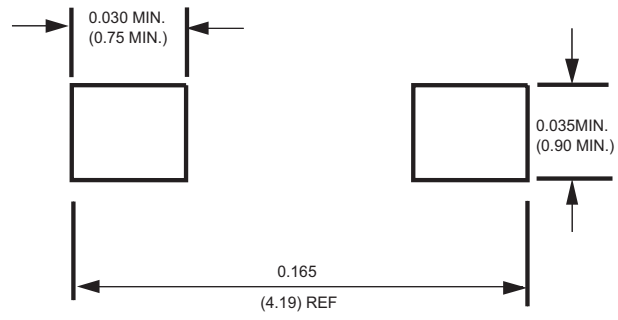


**FIG.4 TYPICAL JUNCTION CAPACITANCE**



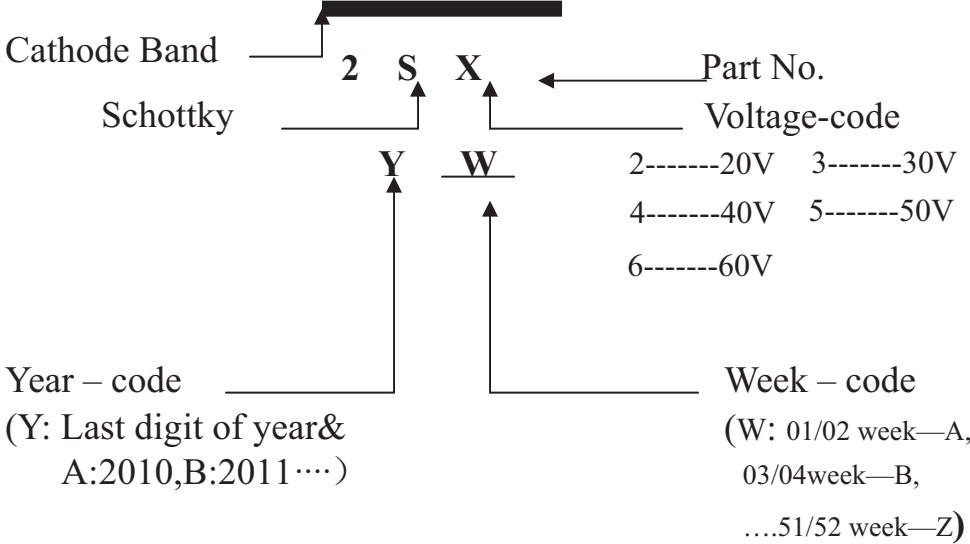
**FIG.5 TYPICAL REVERSE CHARACTERISTICS**

## 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*310	120,000	6.964