

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

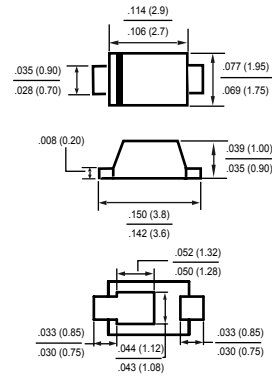
- * Epoxy: Device has UL flammability classification 94V-0
- * Mounting position: Any
- * Weight: 0.01 gram (Approx.)
- * Flat lead frame

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 _{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	Volts
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	Volts
Maximum Average Forward Rectified Current @ T _A =75 °C	I _O	1.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	20							Amps
Typical Current Square Time	I ² T	1.6							A ² S
Typical Thermal Resistance (Note 3)	R _{θJA}	110							°C/W
	R _{θJL}	30							
Operating Temperature Range	T _J	150							°C
Storage Temperature Range	T _{STG}	-55 to + 150							°C
Total Capacitance (Note 1)	C _T	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 _F	0.55			0.70		0.85		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T _A = 25°C	I _R	0.2							mAmps
	@T _A = 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: O

RATING AND CHARACTERISTICS CURVES (SS20L THRU SS100L)

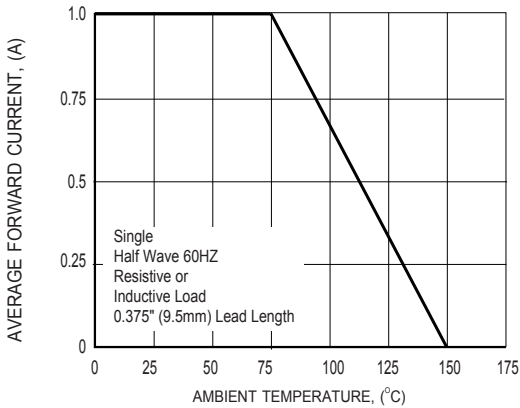


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

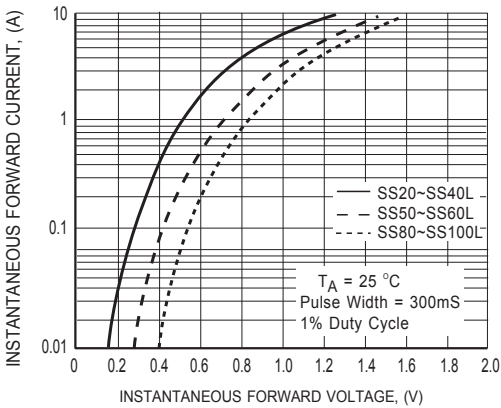


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

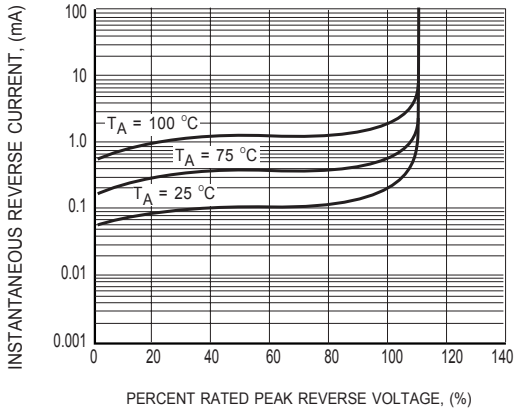


FIG.3 TYPICAL REVERSE CHARACTERISTICS

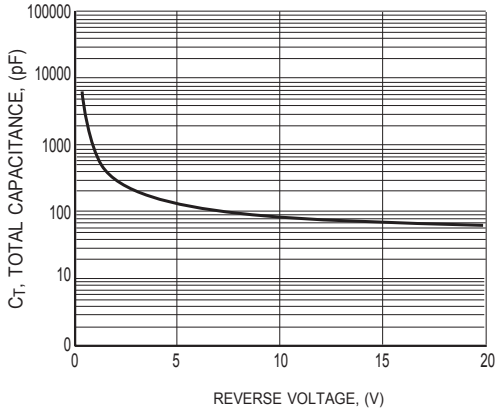


FIG.4 TYPICAL TOTAL CAPACITANCE

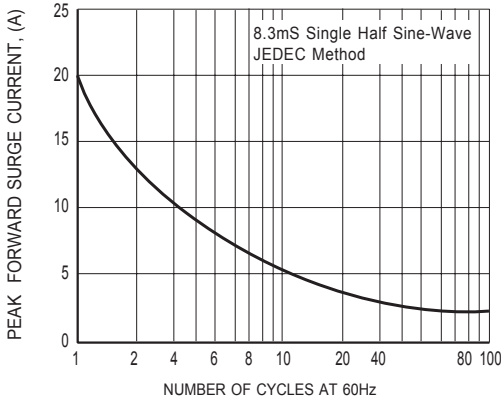
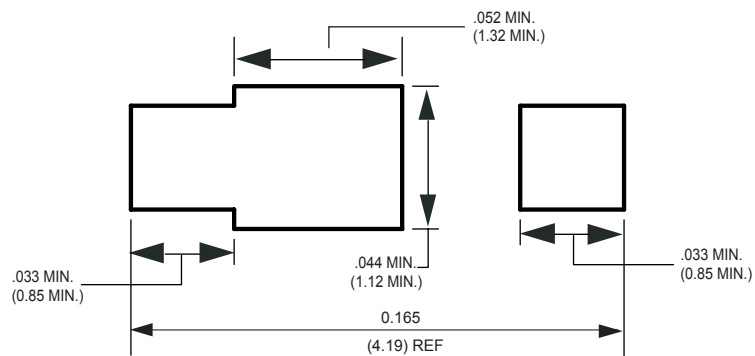


FIG.5 TYPICAL REVERSE CHARACTERISTICS

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description

Year- code: ← **S**
(Last digit of year &
A:2010,B:2011...)

Week code: ← **2**
A: week 01~02
B: week 03~04
C: week 05~06
.....
Z: week 51~52

Schottky

S

2

Cathode Band



Voltage code:
2-----20V
3-----30V
4-----40V
5-----50V
6-----60V
8-----80V
10-----100V

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	COMPONENT SPACE(mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
SOD-123F/ SOD-123FL	-W	2,500	---	---	178	390*205*310	100,000	5.804

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