

**SE1L
THRU
SE6L**

SURFACE MOUNT SUPER FAST RECTIFIER
VOLTAGE RANGE 50 to 400 Volts CURRENT 1.0 Ampere

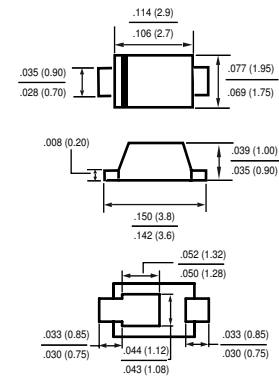
FEATURES

- * High reliability
- * Low leakage
- * Low forward voltage
- * High current capability
- * Super fast switching speed
- * High surge capability
- * Good for switching mode circuit

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.016 gram

SOD-123FL



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	SE1L	SE2L	SE3L	SE4L	SE5L	SE6L	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	Volts
Maximum Average Forward Rectified Current at $T_A = 55^\circ\text{C}$	I_O	1.0						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	15						Amps
Current Squared Time	I^2t	0.9						A^2/Sec
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	130						$^\circ\text{C}/\text{W}$
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	30						$^\circ\text{C}/\text{W}$
Typical Junction Capacitance (Note 2)	C_J	15				10		pF
Operating Temperature Range	T_J	150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150						$^\circ\text{C}$

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

CHARACTERISTICS	SYMBOL	SE1L	SE2L	SE3L	SE4L	SE5L	SE6L	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F	0.95				1.25		Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ\text{C}$	5						μA
	@ $T_A = 100^\circ\text{C}$	350						μA
Maximum Reverse Recovery Time (Note 4)	t_{rr}	35						nSec

- NOTES :
1. Thermal Resistance :Mounted on PCB.
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
 3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".
 4. Test Conditions: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$.
 5. Available in Halogen-free epoxy by adding suffix -HF after the part nbr.

2010-05
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RATING AND CHARACTERISTICS CURVES (SE1L THRU SE6L)

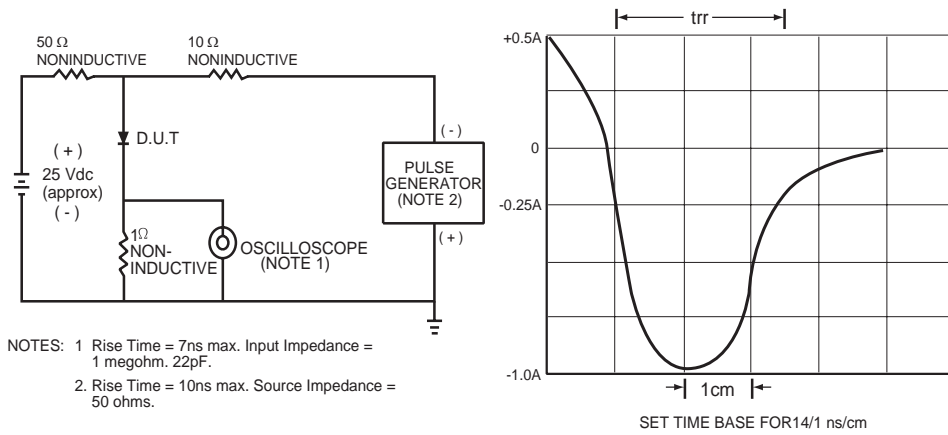


FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

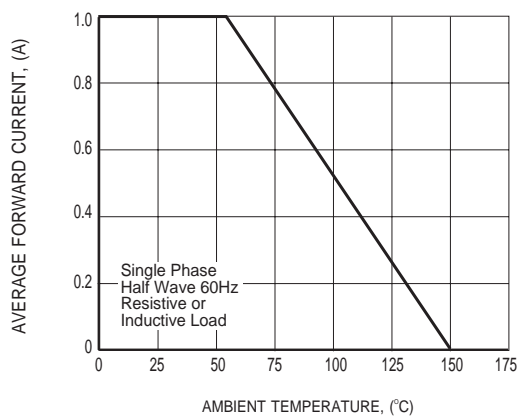


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

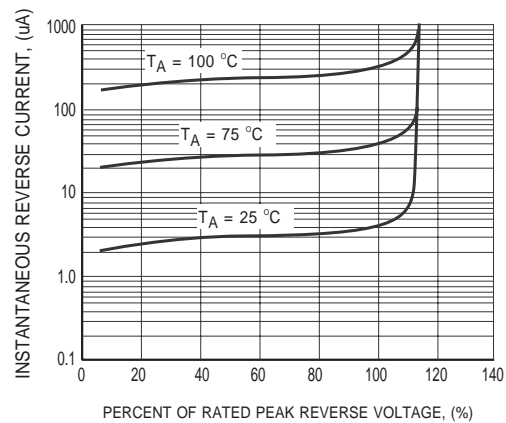


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (SE1L THRU SE6L)

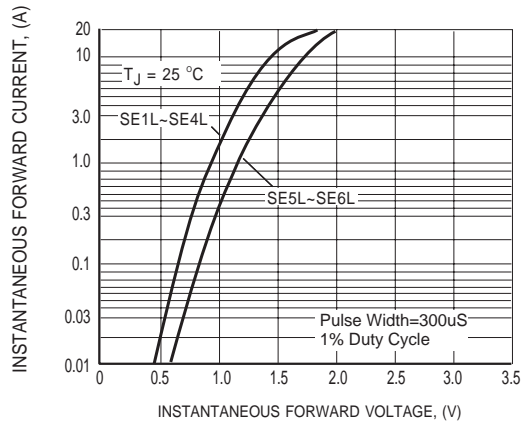


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

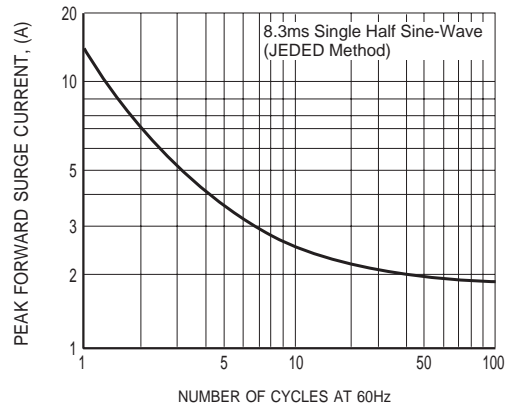


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

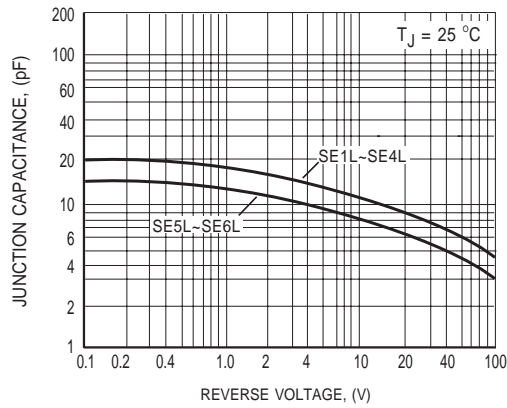
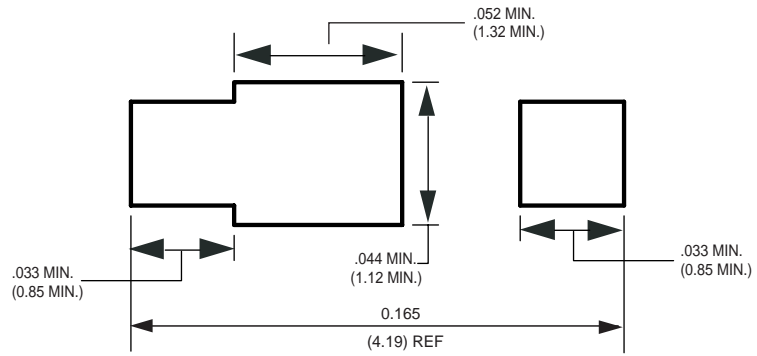


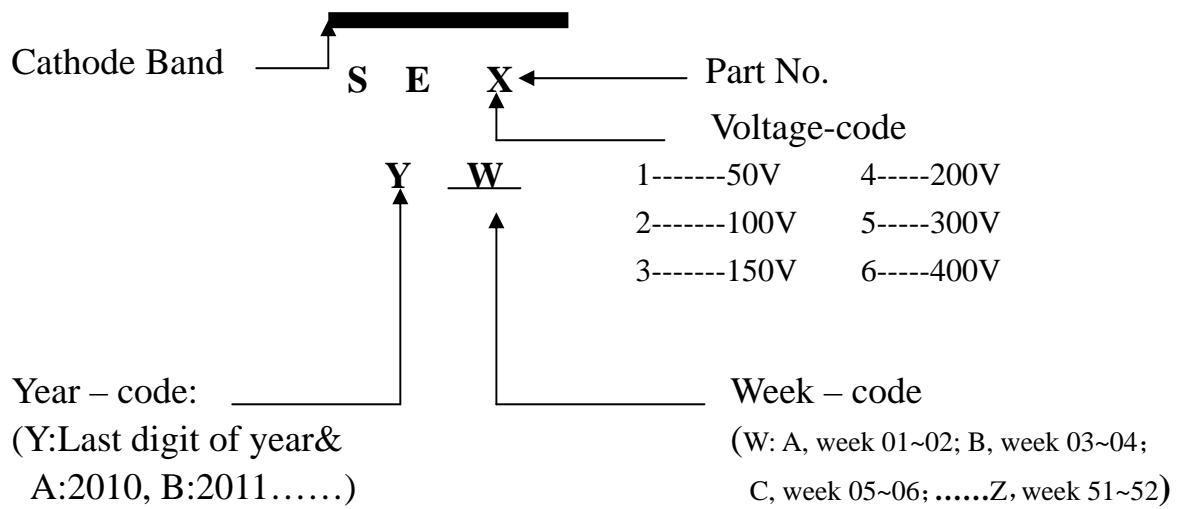
FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

Marking Description



PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

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

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