



Features

- Average Forward Current: $I_{F(AV)}=1A$
- Polarity: Color band denotes cathode



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
ES1A-ES1J	SOD-123FL	E1x	3000

x: From A-J

SOD-123FL



Maximum Ratings (Ta=25°C unless otherwise noted)

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Type Number	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	Units
Maximum Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V
Maximum RMS Voltage	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at Ta=25°C	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage at 1.0A	0.95				1.25		1.7	V
Maximum DC Reverse Current Ta=25°C	5.0							μA
at Rated DC Blocking Voltage Ta=100°C	500							μA
Maximum Reverse Recovery Time (Note 1)	35							nS
Typical Junction Capacitance (Note 2)	15							pF
Typical Thermal Resistance R JA (Note 3)	80							°C/W
Operating and Storage Temperature Range Tj, Tstg	-65 — +150							°C

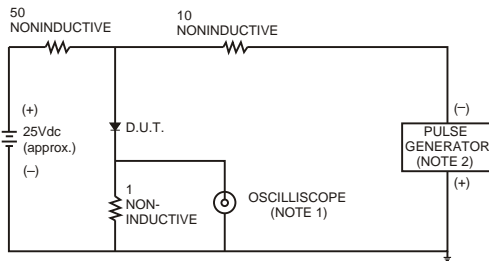
NOTES:

1. Reverse Recovery Time test condition: $I_F=0.5A$, $I_R=1.0A$, $IRR=0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Thermal Resistance from Junction to Ambient.



Typical Characteristics

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

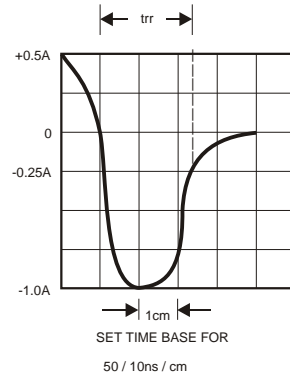


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

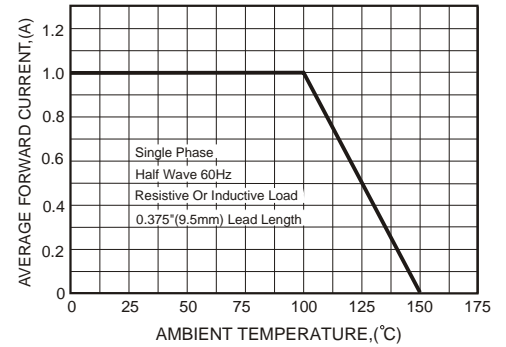


FIG.3-TYPICAL FORWARD CHARACTERISTICS

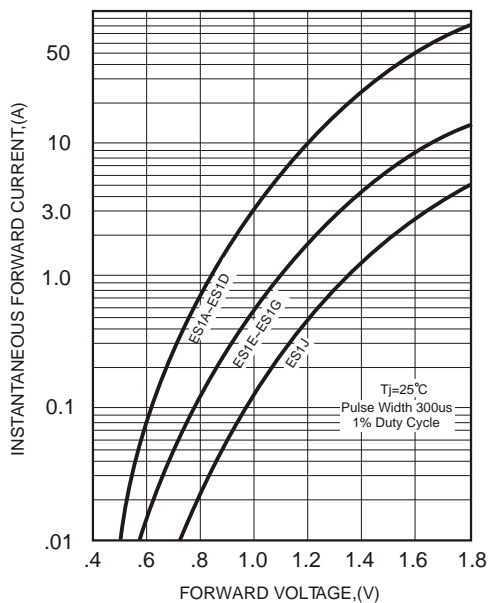


FIG.4-TYPICAL REVERSE CHARACTERISTICS

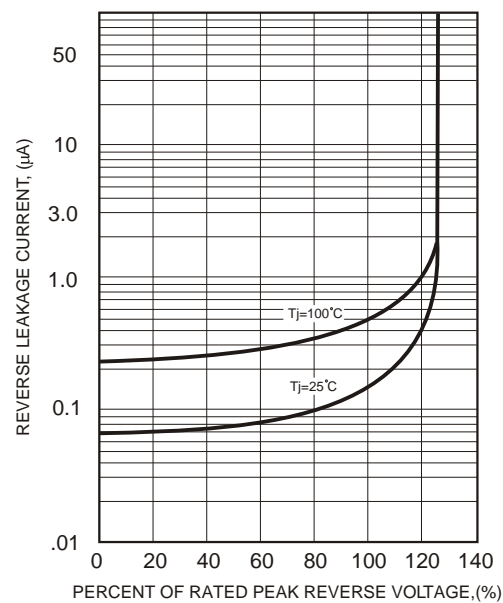


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

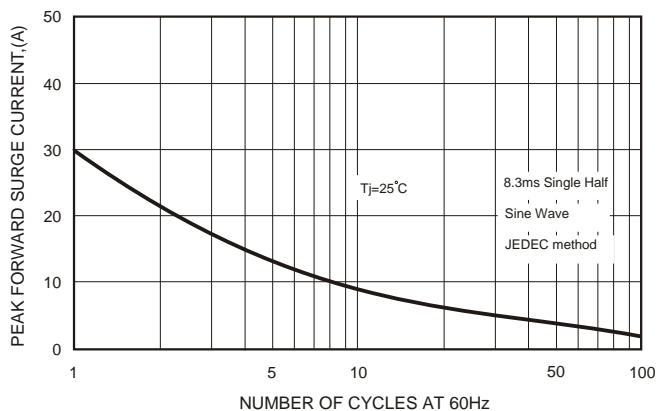
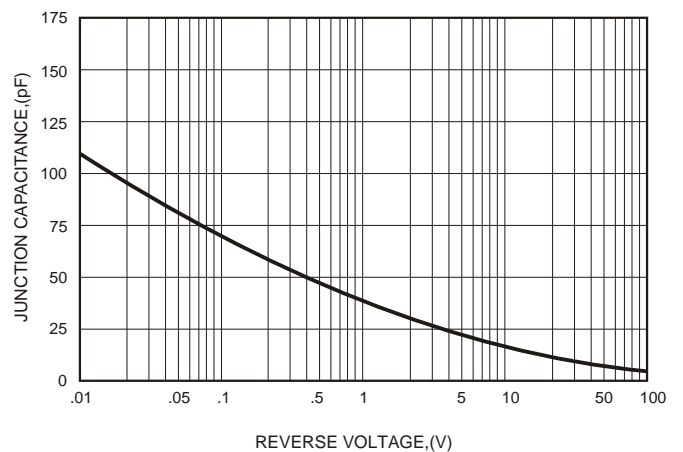
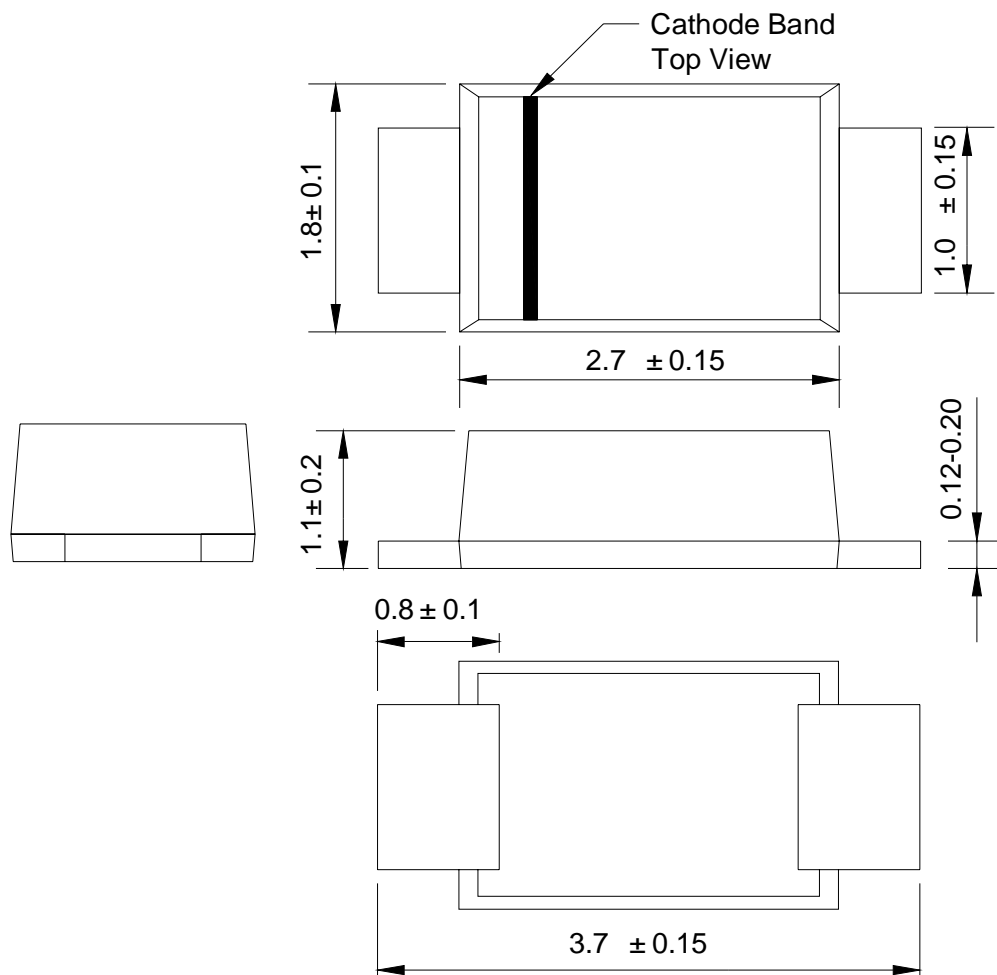


FIG.6-TYPICAL JUNCTION CAPACITANCE





Package Outline Dimensions
SOD-123FL





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