

ES1000FL – ES1006FL

SURFACE MOUNT ULTRAFAST EFFICIENT RECTIFIER

Features

- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-0
- Glass passivated chip junctions
- Ultrafast recovery times for high efficiency
- Low forward voltage, low power loss
- High temperature soldering guaranteed: 260°C/10

seconds on terminals

- RoHS Compliant Product

Mechanical Data

Case: SOD-123S molded plastic body

Terminals: Solder plated, solderable per

MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Weight: 0.017 gram

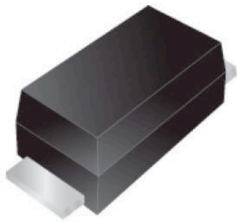
Packing & Order Information

3,000/Reel

SOD123S

Dimension	Millimeters		Inches	
	Min	Max	Min	Max
A	3.50	3.90	0.138	0.154
B	1.60	2.00	0.063	0.079
B1	0.80	1.00	0.031	0.039
C	1.00	1.40	0.039	0.055
D	0.12	0.20	0.005	0.008
E1	0.60	1.00	0.024	0.039
E2	0.60	1.00	0.024	0.039
F	0.20	0.60	0.008	0.024

Graphic symbol



RoHS
COMPLIANT

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

		ES 1000FL	ES 1001FL	ES 1002FL	ES 1004FL	ES 1006FL	Unit
V_{RRM}	Maximum repetitive peak reverse voltage	50	100	200	400	600	V
V_{RWS}	Maximum RMS voltage	35	70	140	280	420	V
V_{DC}	Maximum DC blocking voltage	50	100	200	400	600	V
$I_{F(AV)}$	Maximum average forward rectified current at $T_L=110^\circ\text{C}$	1					A
I_{FSM}	Peak forward surge current 8.3ms single half-sine-wave	30					A
V_F	Maximum instantaneous forward voltage at $I_{FM}=1.0\text{A}$	0.95		1.25		1.7	V
I_R	Maximum DC reverse current $T_J=25^\circ\text{C}$ At rated DC blocking voltage $T_A=100^\circ\text{C}$	5 200					μA

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Ratings at 25°C ambient temperature unless otherwise specified

		ES 1000FL	ES 1001FL	ES 1002FL	ES 1004FL	ES 1006FL	Unit
T _{rr}	Maximum reverse recovery time	35					nS
C _j	Typical junction capacitance	10					PF
R _{θJA}	Maximum thermal resistance	82					°C/W
R _{θJL}		27					°C/W
T _{STG}	Storage temperature range	-55 to +150					°C

NOTE:

1. Pluse test: Pulse width 300us, duty cycle 1%

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□ Ratings and Characteristic Curves

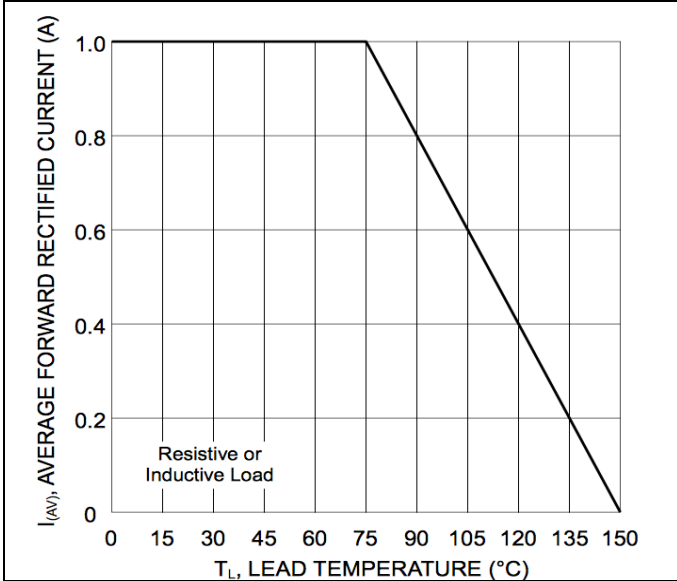


FIG.1-FORWARD DERATING CURVE

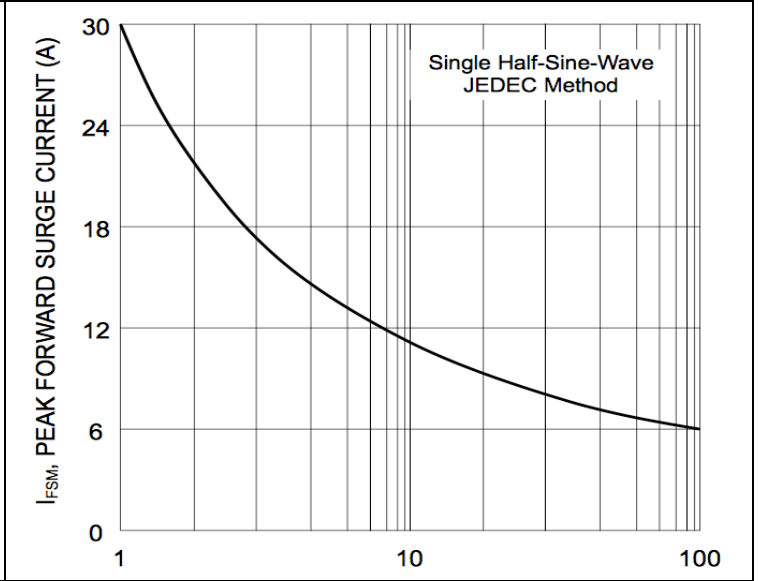


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

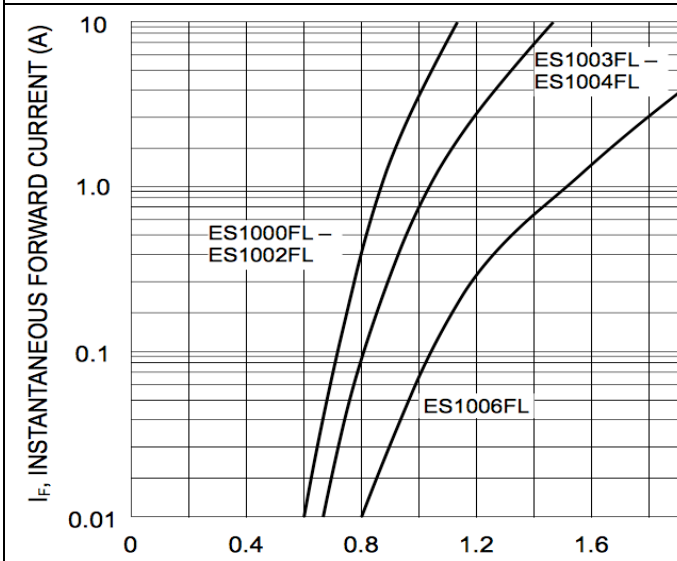


FIG.3-TYPICAL FORWARD CHARACTERISTICS

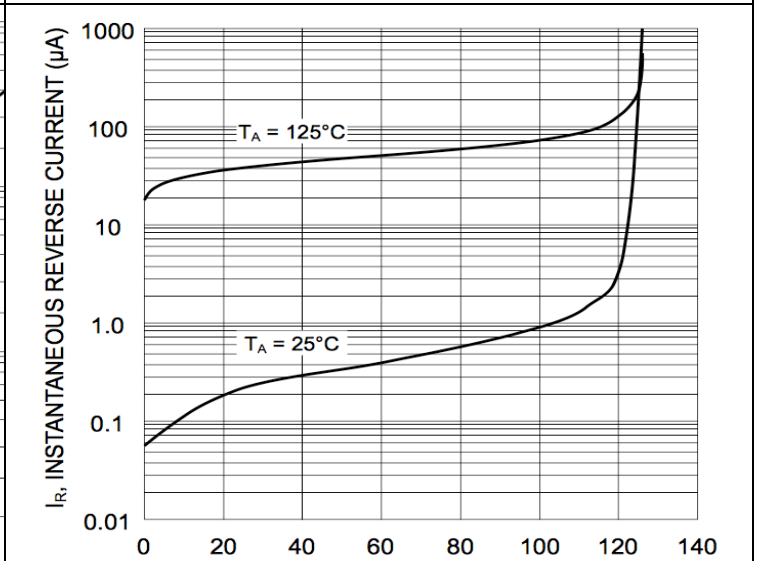


FIG.4-TYPICAL REVERSE CHARACTERISTICS

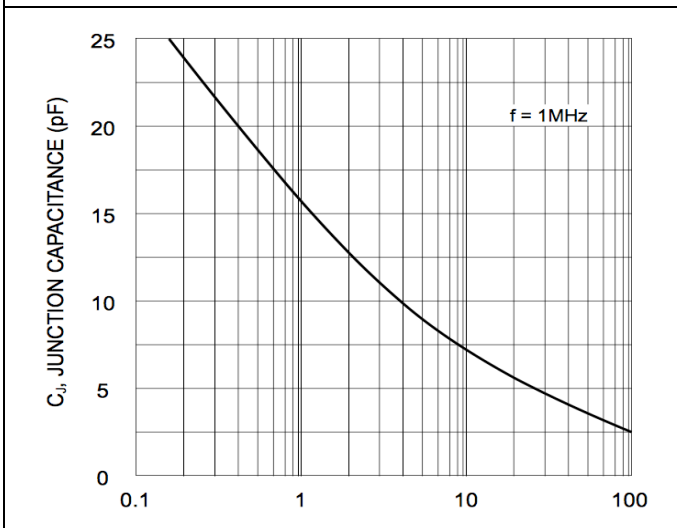


FIG.5-TYPICAL JUNCTION CAPACITANCE

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