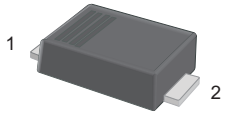
ES1AFL-ES1JFL

03-JUN-2018

Surface Mount Fast Recovery Rectifier

ES1AFL-ES1JFL

SOD-123FL



Cathode ⟵ **Anode**

Features

- Low forward voltage drop
- Low leakage
- High current capability
- Super fast switching speed
- High forward surge capability
- High reliability.

Mechanical Data

- Epoxy: UL 94V-O rate flame retardant
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end

■**Maximum Ratings** (T_a=25℃ Unless otherwise specified）

Parameter	Symbols	ES1AFL	ES1BFL	ES1DFL	ES1GFL	ES1JFL	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	V
Maximum Average Forward Rectified Current	$I_{(AV)}$	1.0					A
Reverse Recovery Time. IF=0.5A,IR=1A,IRR=0.25A	Trr	35					ns
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30					A
I^2t rating for fusing (1ms< t < 8.3ms)	I^2t	5.08					A^2S
Maximum Forward Voltage at 1.0A and 25℃	V_F	1.0			1.25	1.70	V
Maximum DC Reverse Current @TA=25 °C at Rated DC Blocking Voltage @TA=100 °C	I_R	5 100					μA
Typical Junction Capacitance（Note1）	C_j	15					pF
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150					°C
Typical thermal resistance (Note 2)	RθJ-A	85					°C/W

Note: 1. Measured at 1MHz and applied reverse voltage of 4 VDC.
2. Thermal resistance between junction and ambient and between junction and lead mounted on P.C.B with 3mm*3mm copper pad areas.

RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

Fig.1 Maximum Average Forward Current Rating

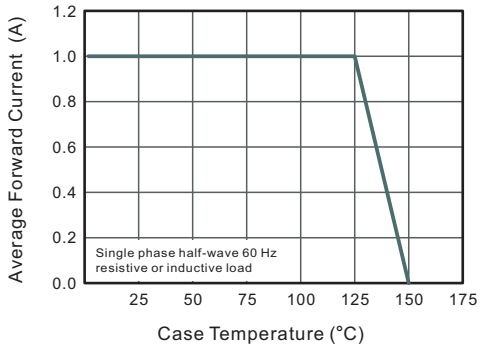


Fig.2 Typical Reverse Characteristics

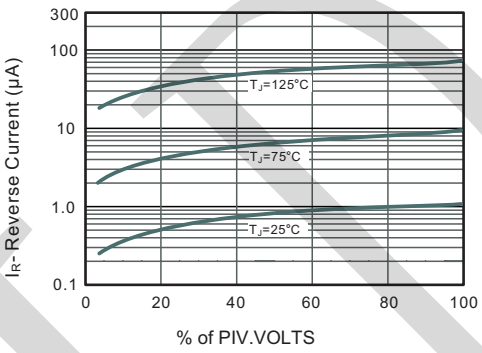


Fig.3 Typical Forward Characteristics

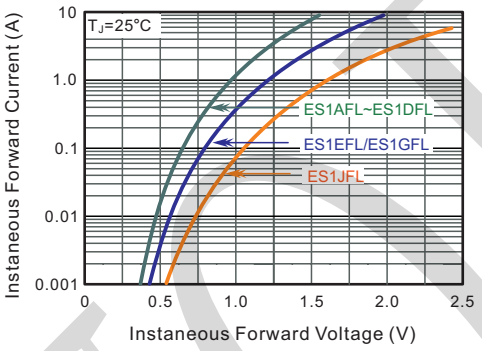


Fig.4 Typical Junction Capacitance

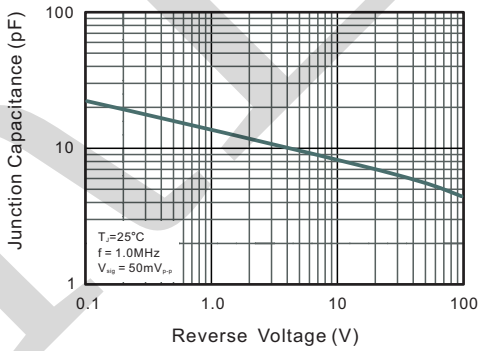
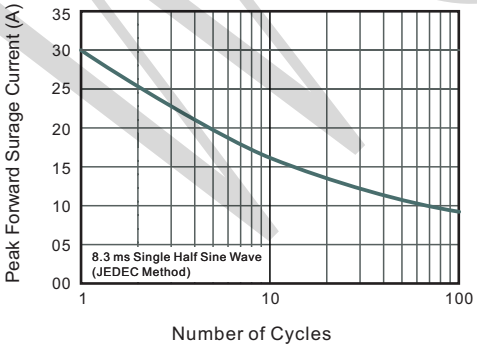
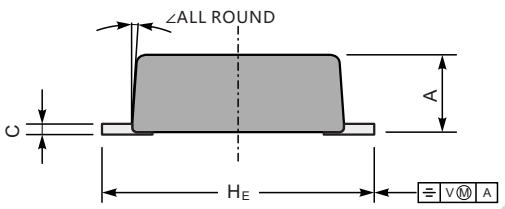


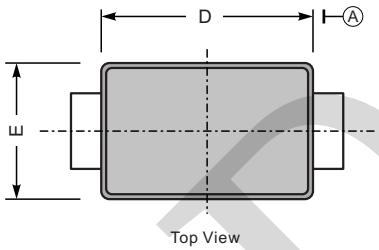
Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



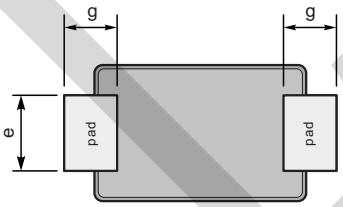
PACKAGE OUTLINE DIMENSIONS

SOD-123FL





Top View



Bottom View

UNIT		A	C	D	E	e	g	H_E	∠
mm	max	1.1	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

The recommended mounting pad size