



ES1AL THRU ES1JL

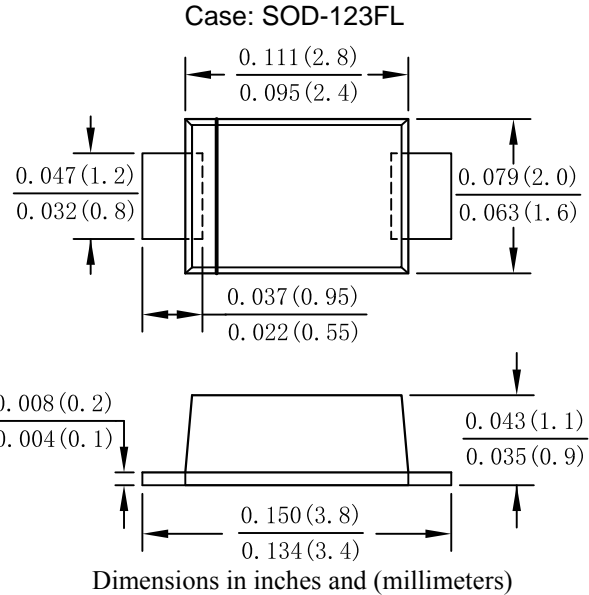
Single Phase 1.0AMP Surface Mount Super Fast Recovery Rectifier

Features

- Glass passivated device
- Ideal for surface mouted applications
- Low reverse leakage
- Metallurgically bonded construction
- High temperature soldering guaranteed:
260°C/10 seconds,0.375"(9.5mm) lead length,
5 lbs. (2.3kg) tension
- Plastic material-UL flammability 94V-0

Mechanical Data

- Case: SOD-123FL, molded plastic
- Terminals: plated leads solderable per
MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.
Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	SYMBOL	ES1AL	ES1BL	ES1DL	ES1GL	ES1JL	UNITS
	Code	EA	EB	ED	EG	EJ	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	V
Working Peak Reverse Voltage	V_{RWM}						
DC Blocking Voltage	V_{DC}						
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	V
Average Rectified Output Current @ $T_L = 90^\circ C$	$I_{F(AV)}$	1.0					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	30 24					A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	60 48					A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	22.5					A
I^2t Rating for Fusing ($t < 8.3ms$)	I^2t	3.735					A ² s
Forward Voltage per element @ $I_F = 1.0A$	V_{FM}	0.95			1.3	1.7	V
Peak Reverse Current @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage @ $T_A = 125^\circ C$	I_R	5.0 100					uA
Maximum reverse recovery time (NOTE 1) @ $T_A = 25^\circ C$ @ $T_A = 125^\circ C$	T_{rr}	35 200					ns
Typical Junction Capacitance (Note 2)	C_J	10					pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	60					°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55to+150					°C

Note:1.Measured with $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$.

2.Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C.

3. Device mounted on FR-4 substrate, 25.4 25.4mm,2oz,single-sided,PC boards with 2.1 2.1mm copper pac



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FIG. 1- FORWARD CURRENT DERATING CURVE

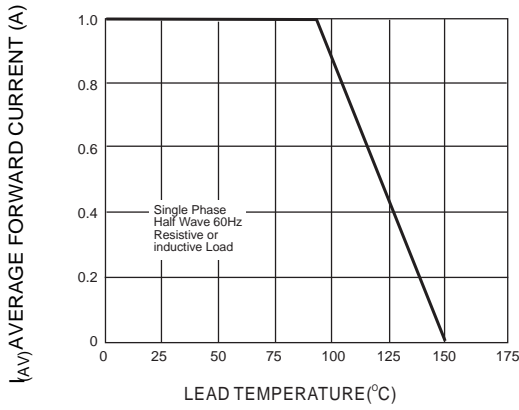


FIG. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

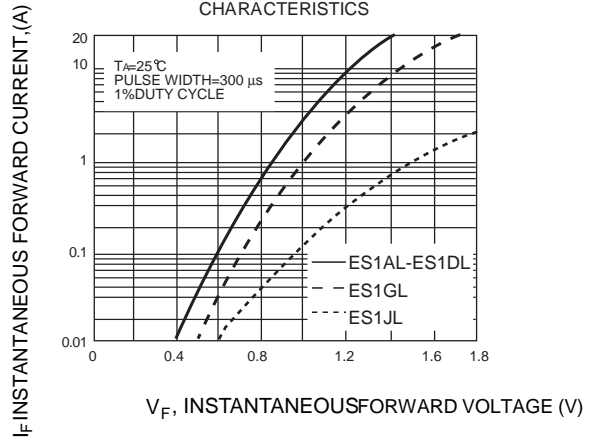


FIG. 3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

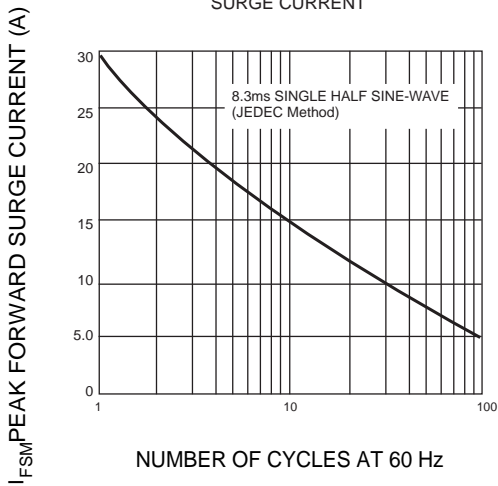


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

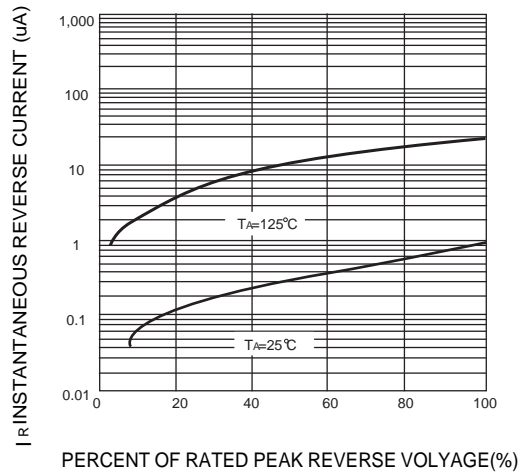
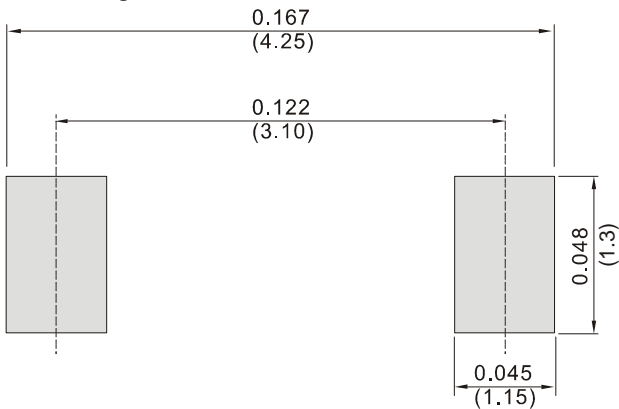


Fig.5 TYPICAL CAPACITANCE





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