



ES1002FL ~ ES1006FL Series

Small Surface Mount Super Fast Diodes

Voltage

200~600 V

Current

1 A

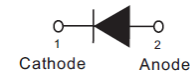
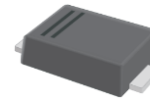
Features

- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOD-123FL-1 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.00054 ounces, 0.0155 grams

SOD-123FL-1



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

PARAMETER	SYMBOL	ES1002FL	ES1004FL	ES1006FL	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	200	400	600	V
Maximum RMS Voltage	V _{RMS}	140	280	420	V
Maximum DC Blocking Voltage	V _R	200	400	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	1			A
Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load	I _{FSM}	30			A
Maximum Forward Voltage at 1A	T _J = 25 °C V _F	0.95	1.25	1.7	V
Typical Forward Voltage at 1A	T _J = 125 °C V _F	0.78	0.86	1.05	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _J = 25 °C I _R	0.5			uA
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _J = 100 °C I _R	10			
Reverse recovery time	I _F =0.5A I _R =1A I _{RR} =0.25A T _{RR}	35			ns
Typical Junction Capacitance Measured at 1 MHz And Applied V _R = 4V	C _J	18			pF
Typical Thermal Resistance	(Note 1) R _{θJA} (Note 2) R _{θJC}	240			°C/W
		50			
Operating Junction Temperature Range	T _J	-55~150			°C
Storage Temperature Range	T _{STG}	-55~150			°C

NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm² copper pad area.



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TYPICAL CHARACTERISTIC CURVES

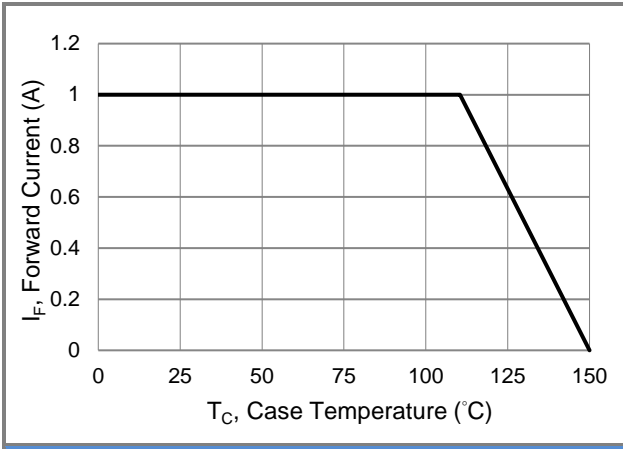


Fig.1 Forward Current Derating Curve

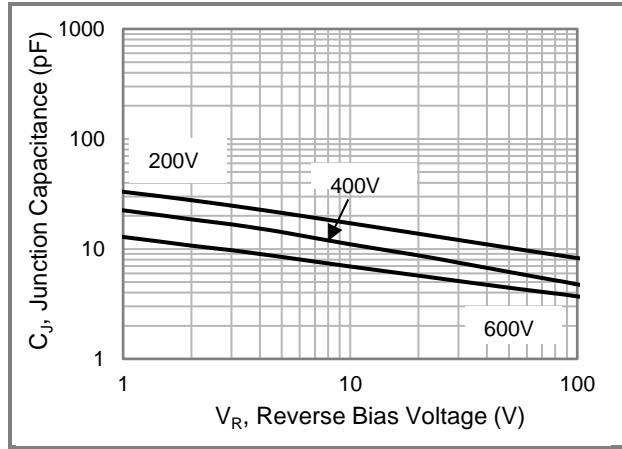


Fig.2 Typical Junction Capacitance

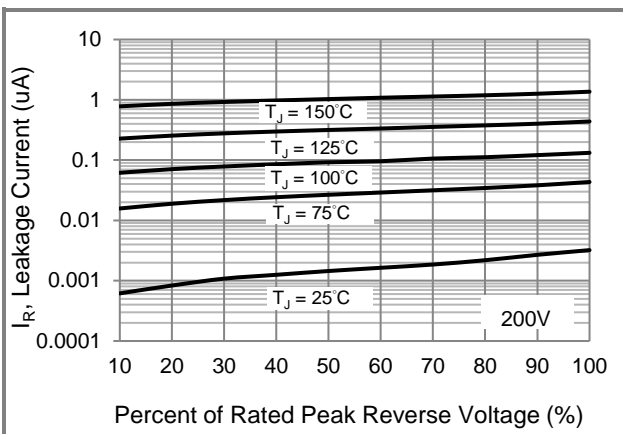


Fig.3 Typical Reverse Characteristics

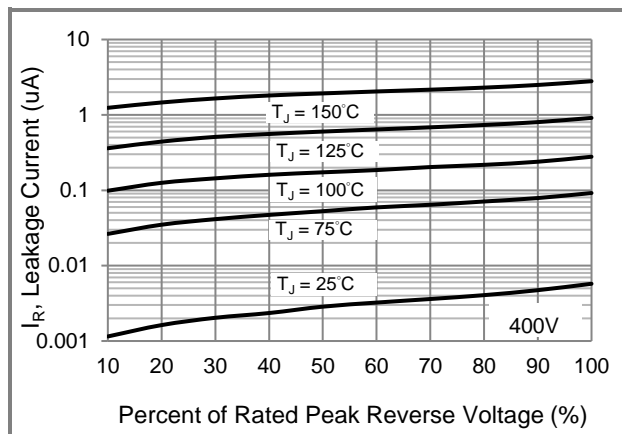


Fig.4 Typical Reverse Characteristics

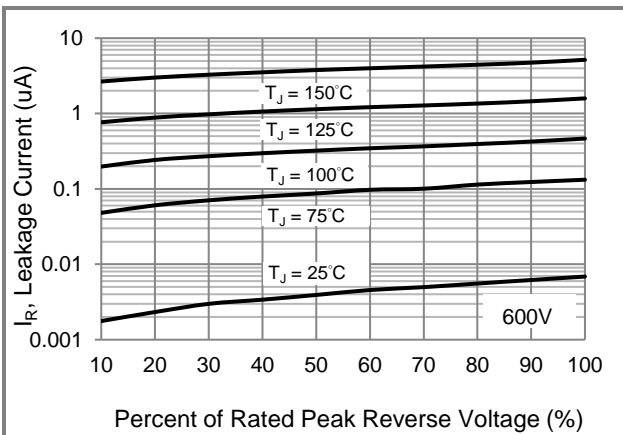


Fig.5 Typical Reverse Characteristics

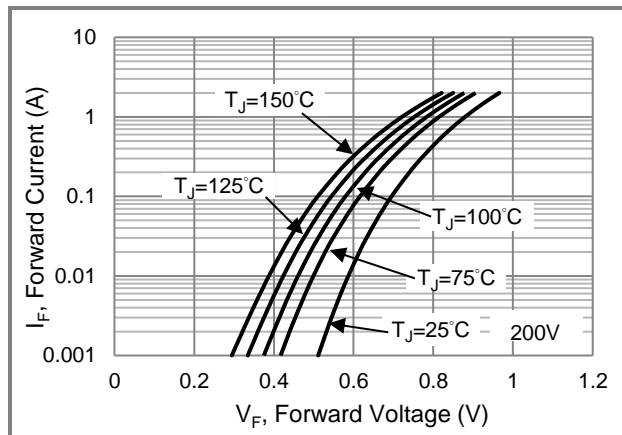


Fig.6 Typical Forward Characteristics

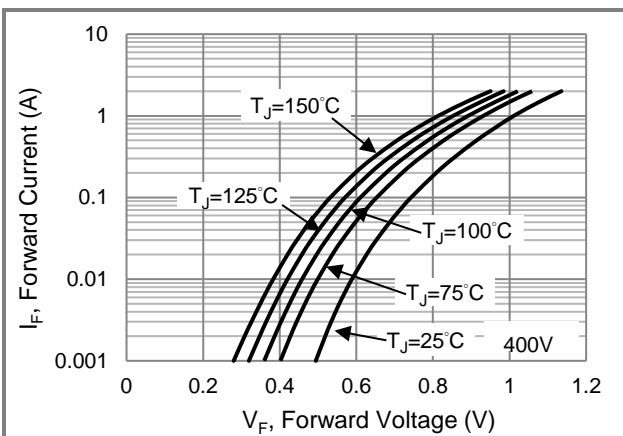


Fig.7 Typical Forward Characteristics

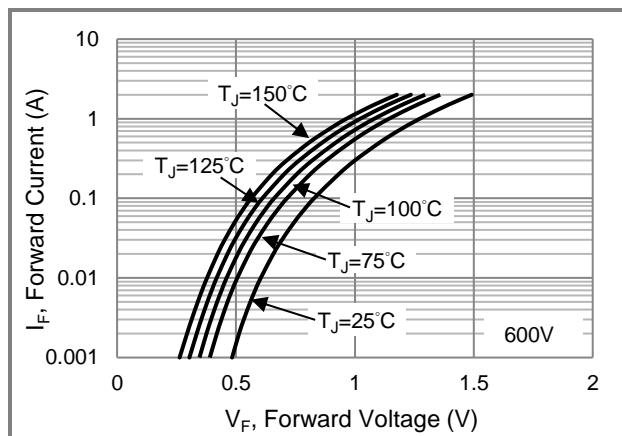


Fig.8 Typical Forward Characteristics

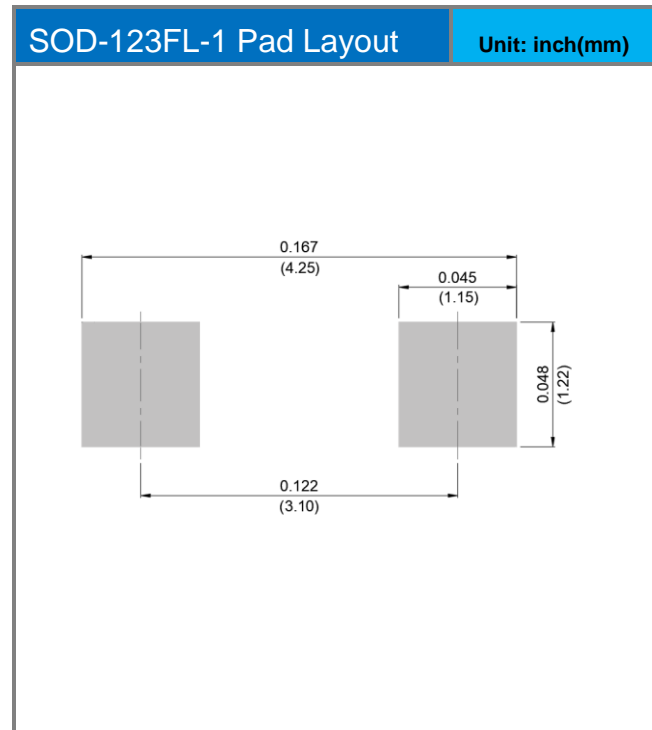
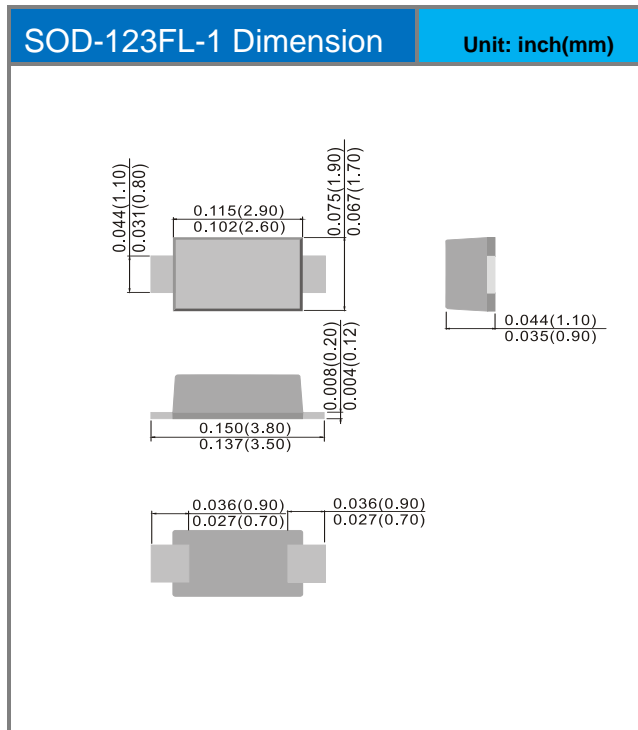


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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
ES1002FL_R1_00101	SOD-123FL-1	3K pcs / 7" reel	E1D	Halogen free RoHS compliant
ES1002FL_R2_00101	SOD-123FL-1	10K pcs / 13" reel	E1D	Halogen free RoHS compliant
ES1004FL_R1_00101	SOD-123FL-1	3K pcs / 7" reel	E1G	Halogen free RoHS compliant
ES1004FL_R2_00101	SOD-123FL-1	10K pcs / 13" reel	E1G	Halogen free RoHS compliant
ES1006FL_R1_00101	SOD-123FL-1	3K pcs / 7" reel	E1J	Halogen free RoHS compliant
ES1006FL_R1_00101	SOD-123FL-1	10K pcs / 13" reel	E1J	Halogen free RoHS compliant

Packaging Information & Mounting Pad Layout





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