

ES1001FL-AU~ES1006FL-AU

SMALL SURFACE MOUNT SUPER FAST DIODES

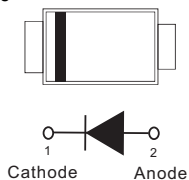
VOLTAGE 100 to 600 Volt **CURRENT** 1 Ampere

FEATURES

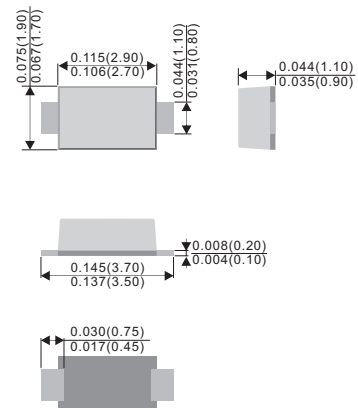
- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0173 grams
- Polarity: Color band denotes cathode end



SOD-123FL Unit : inch(mm)



ABSOLUTE RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	ES1001FL-AU	ES1002FL-AU	ES1004FL-AU	ES1006FL-AU	Unit
Marking Code		-	E1B	E1D	E1G	E1J	-
Maximum repetitive peak reverse voltage		V_{RRM}	100	200	400	600	V
Maximum RMS voltage		V_{RMS}	70	140	280	420	V
Maximum DC blocking voltage		V_{DC}	100	200	400	600	V
Maximum average forward current	$T_L=120^{\circ}C$	$I_F(AV)$	1				A
Peak forward surge current 8.3ms single half sine-wave	$T_L=25^{\circ}C$	I_{FSM}	30				A
Maximum instantaneous forward voltage	1.0A	V_F	0.95		1.25	1.7	V
Maximum DC reverse current at rated DC blocking voltage	$T_J=25^{\circ}C$ $T_J=100^{\circ}C$	I_R	0.5 10				μA
Reverse recovery time	$I_F=0.5A$ $I_R=1A$ $I_{RR}=0.25A$	T_{RR}	35				ns
Typical capacitance	4V,1MHz	C_J	7				pF

ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	ES1001FL-AU	ES1002FL-AU	ES1004FL-AU	ES1006FL-AU	Unit
Typical Thermal Resistane (Notes 1) (Notes 2)	$R_{\theta JA}$ $R_{\theta JC}$	200 30				$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150				$^{\circ}C$

NOTES : 1.Mounted on a FR4 PCB, single-sided copper, mini pad.

2.Mounted on a FR4 PCB, single-sided copper, with 10cm*10cm copper pad area.

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TYPICAL CHARACTERISTIC CURVES

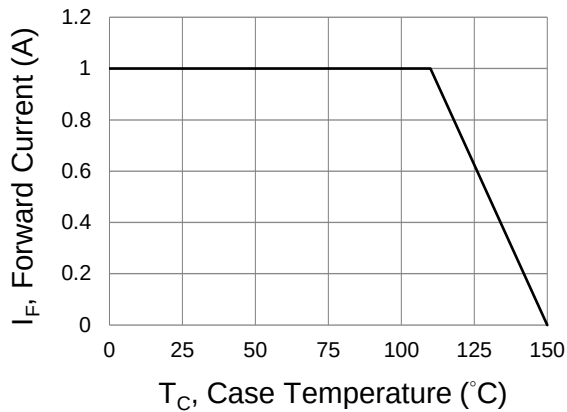


Fig.1 Forward Current Derating Curve

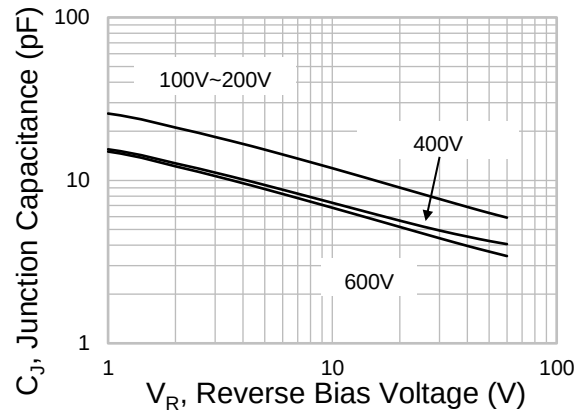


Fig.2 Typical Junction Capacitance

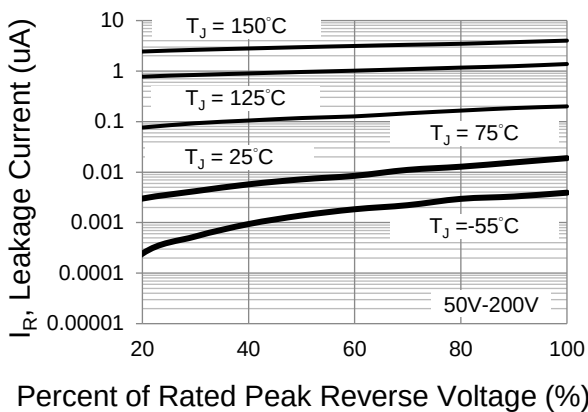


Fig.3 Typical Reverse Characteristics

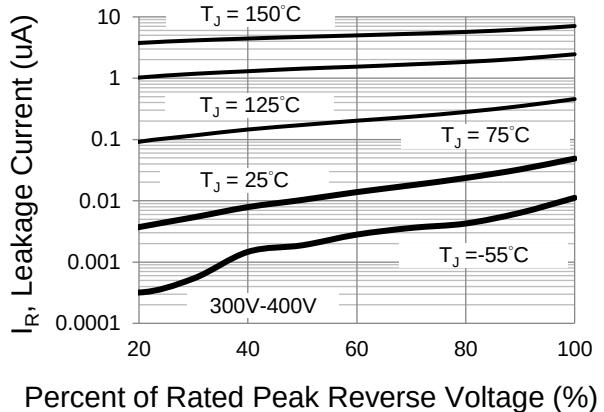


Fig.4 Typical Reverse Characteristics

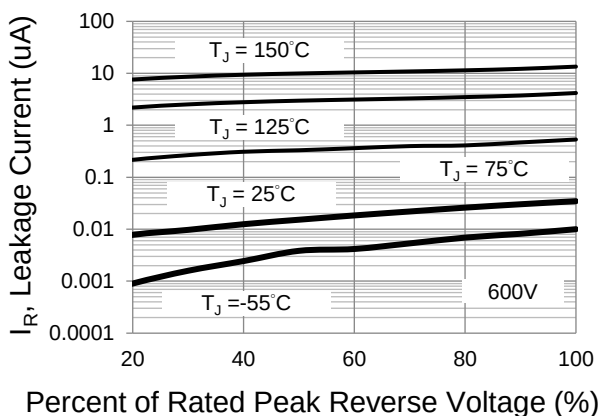


Fig.5 Typical Reverse Characteristics

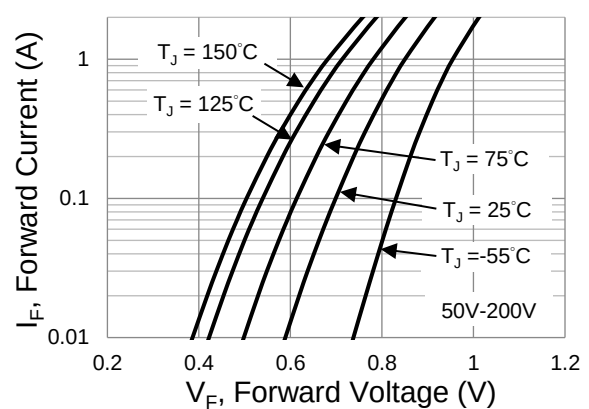
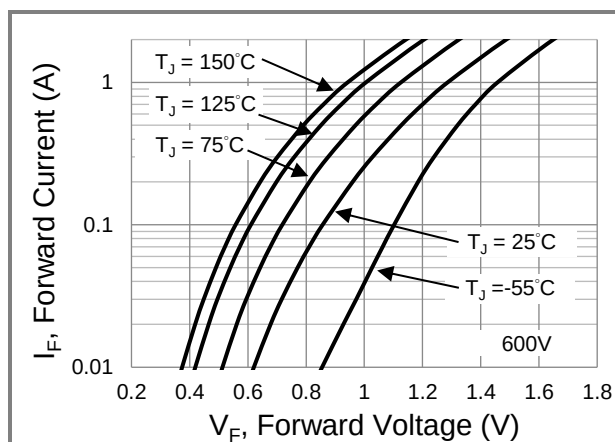
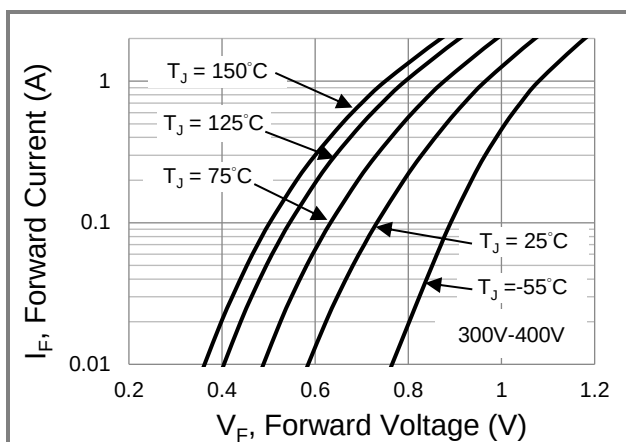


Fig.6 Typical Forward Characteristics

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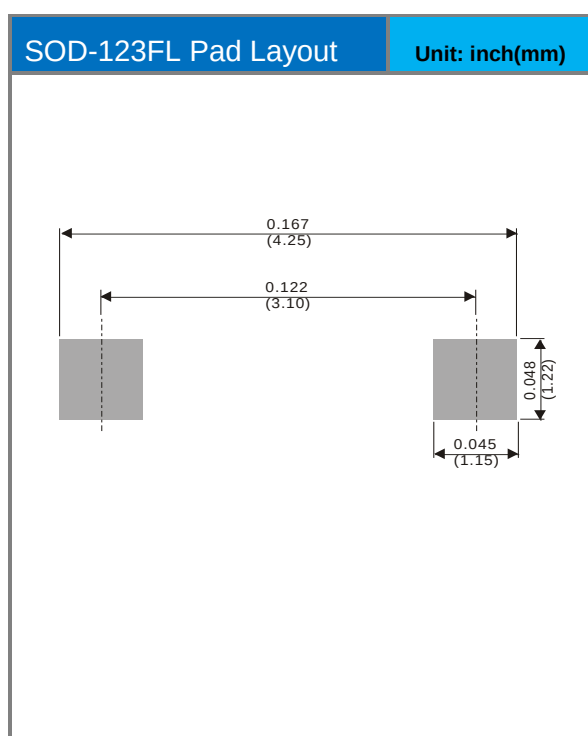


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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
ES1001FL-AU	SOD-123FL	3K pcs / 7" reel	E1B
ES1001FL-AU	SOD-123FL	10K pcs / 13" reel	E1B
ES1002FL-AU	SOD-123FL	3K pcs / 7" reel	E1D
ES1002FL-AU	SOD-123FL	10K pcs / 13" reel	E1D
ES1004FL-AU	SOD-123FL	3K pcs / 7" reel	E1G
ES1004FL-AU	SOD-123FL	10K pcs / 13" reel	E1G
ES1006FL-AU	SOD-123FL	3K pcs / 7" reel	E1J
ES1006FL-AU	SOD-123FL	10K pcs / 13" reel	E1J

Mounting Pad Layout



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