

ES1001FL~ES1006FL

SMALL SURFACE MOUNT SUPER FAST DIODES

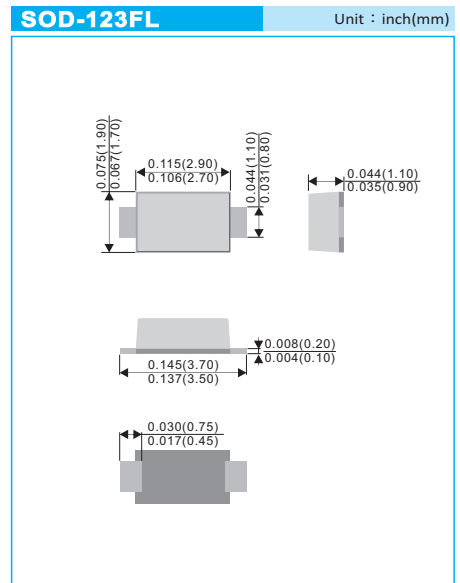
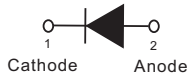
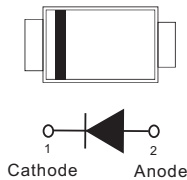
VOLTAGE 100 to 600 Volt **CURRENT** 1 Ampere

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
- 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
- Weight: 0.0006 ounces, 0.0173 grams
- Polarity: Color band denotes cathode end



ABSOLUTE RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	ES1001FL	ES1002FL	ES1004FL	ES1006FL	Units
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	ES1002FL	ES1004FL	ES1006FL	Units
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.

ES1001FL~ES1006FL

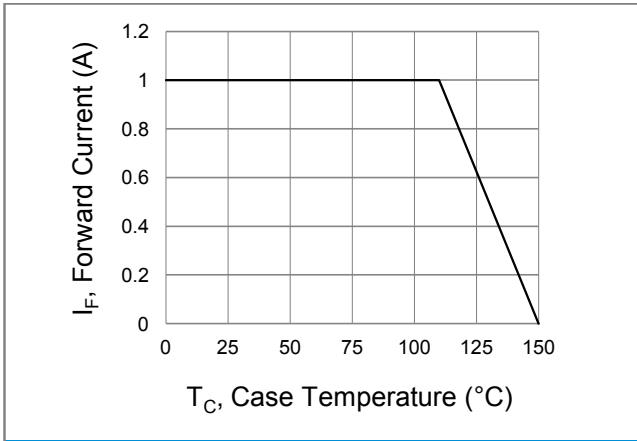


Fig.1 Forward Current Derating Curve

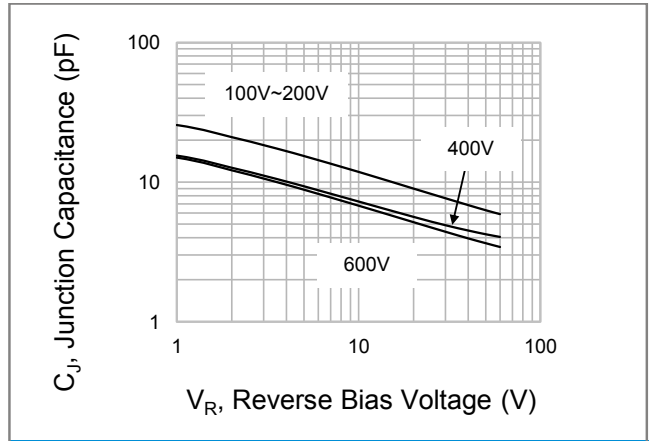


Fig.2 Typical Junction Capacitance

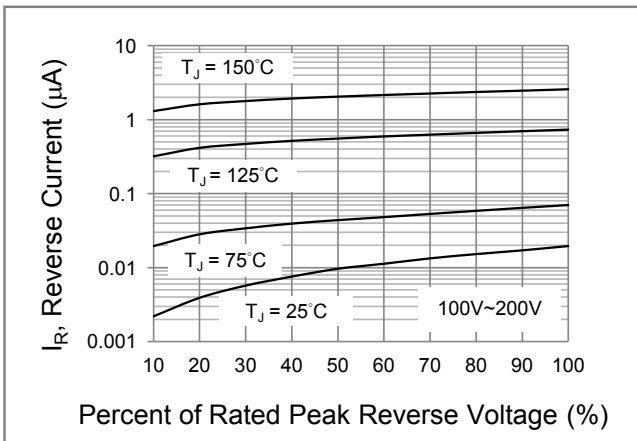


Fig.3 Typical Reverse Characteristics

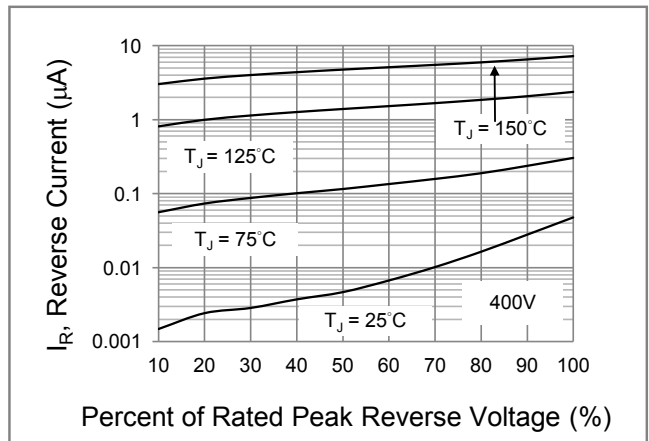


Fig.4 Typical Reverse Characteristics

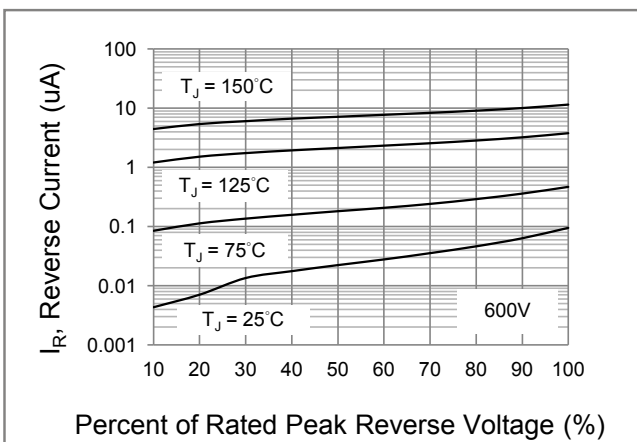


Fig.5 Typical Reverse Characteristics

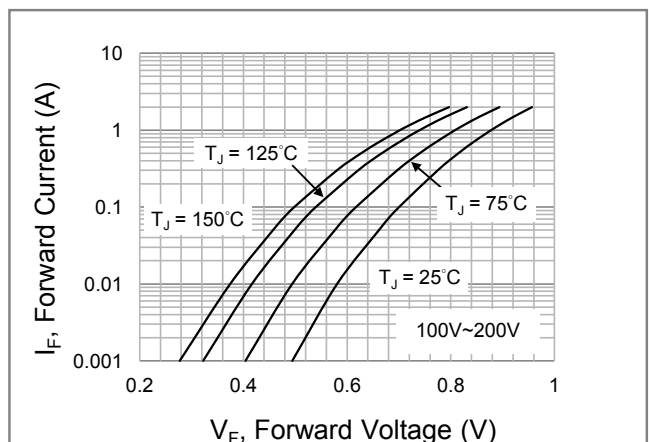


Fig.6 Typical Forward Characteristics

ES1001FL~ES1006FL

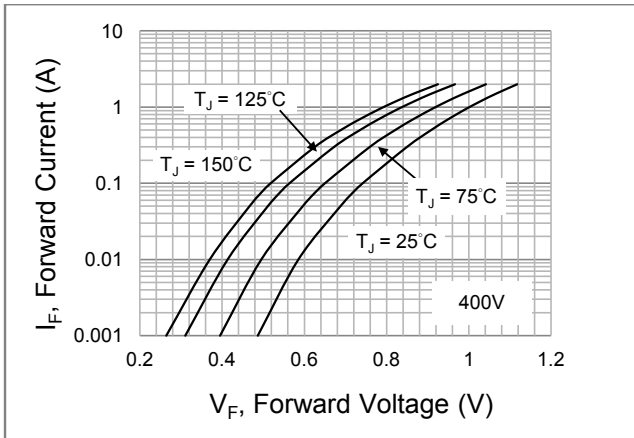


Fig.7 Typical Forward Characteristics

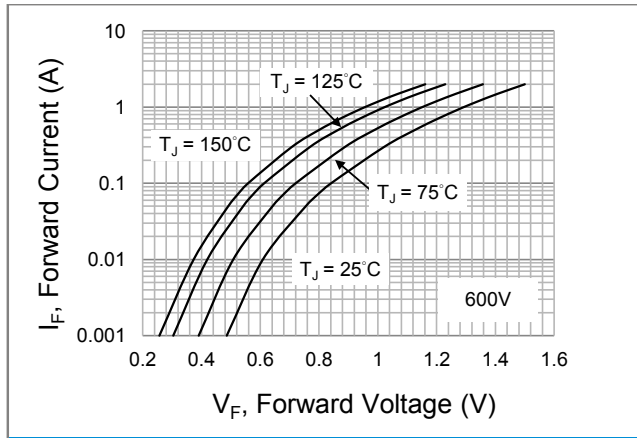
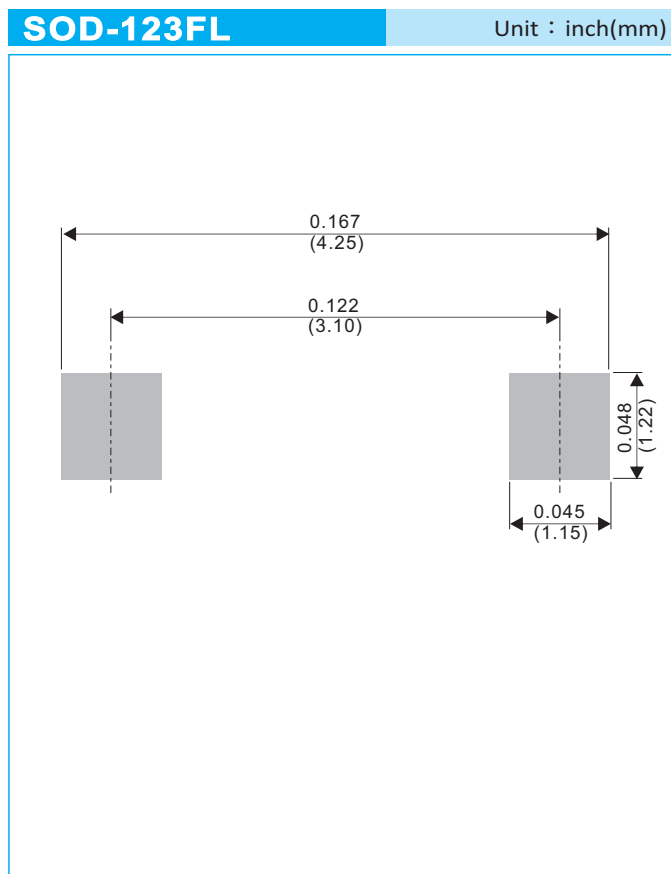


Fig.8 Typical Forward Characteristics

ES1001FL~ES1006FL

MOUNTING PAD LAYOUT



ORDER INFORMATION

- Packing information
T/R - 10K per 13" plastic Reel
T/R - 3K per 7" plastic Reel

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