

## ES1001FL~ES1006FL

### SMALL SURFACE MOUNT SUPER FAST DIODES

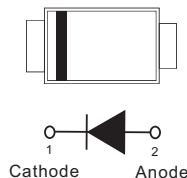
**VOLTAGE** 100 to 600 Volts **CURRENT** 1.0 Amperes

#### FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass Passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- In compliance with EU RoHS 2002/95/EC directives

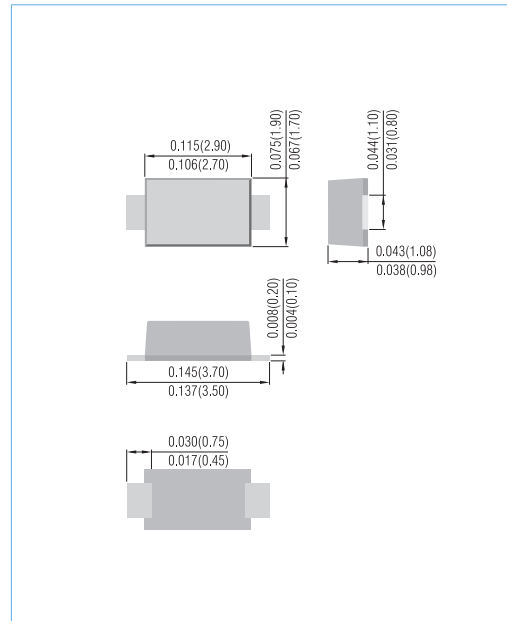
#### MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0006 ounce, 0.0172 gram
- Polarity : Color band cathode



SOD-123FL

Unit: inch ( mm )



#### 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				$\mu A$
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
Thermal resistance junction to ambient air	$R_{\theta JA}$ $R_{\theta JC}$	165 20				$^{\circ}C/W$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150				$^{\circ}C$

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### RATING AND CHARACTERISTIC CURVES

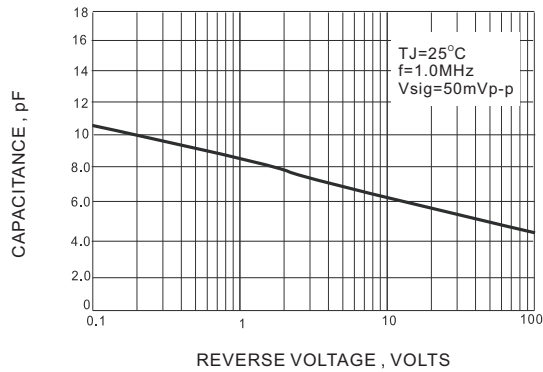


Fig. 1-TYPICAL JUNCTION CAPACITANCE

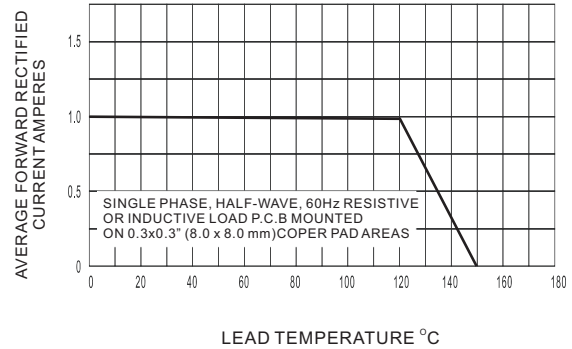


Fig. 2-Average Forward Current Derating

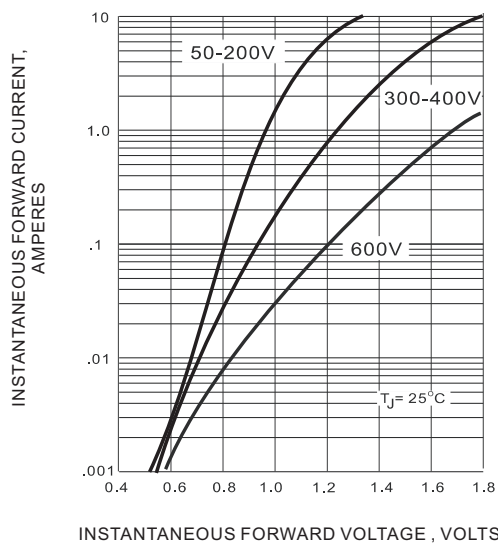


Fig. 3-TYPICAL FORWARD CHARACTERISTICS

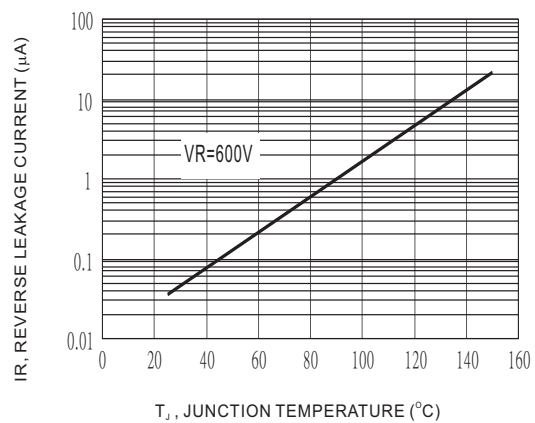


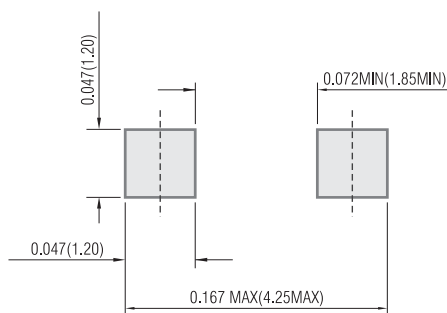
Fig. 4-TYPICAL LEAKAGE CURRENT vs JUNCTION TEMPERATURE

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### MOUNTING PAD LAYOUT

SOD-123FL

Unit: inch ( mm )



### ORDER INFORMATION

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

### LEGAL STATEMENT

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