



# ES1001FL~ES1002FL

## SMALL SURFACE MOUNT ULTRAFAST DIODES

**VOLTAGE** 100 to 200 Volts **CURRENT** 1.0 Amperes

SOD-123FL/DO-219AB

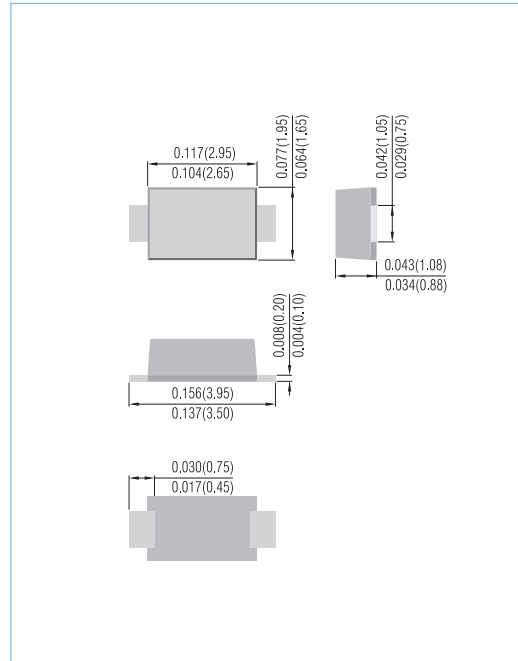
Unit: inch ( mm )

### FEATURES

- For surface mounted applications
- Low profile package
- Ideal for automated placement
- Glass Passivated
- High temperature soldering : 26°C / 10 seconds at terminals
- Pb free product : 99% Sn above can meet RoHS environment substance directive request

### MECHANICAL DATA

- Case: JEDEC DO-219AB, Molded plastic over passivated junction.
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes positive end (cathode)
- Standard Packaging : 8mm tape (EIA-481)
- Approx. Weight: 0.0168 gram



### MAXIMUM RATINGS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER  | Test condition                             | Symbol         | ES1001FL    | ES1002FL | UNITS |
|--|--|----------------|-------------|----------|-------|
| Maximum repetitive peak reverse voltage                |  | $V_{RRM}$      | 100         | 200      | V     |
| Maximum RMS voltage                                    |  | $V_{RMS}$      | 70          | 140      | V     |
| Maximum DC blocking voltage                            |  | $V_{DC}$       | 100         | 200      | V     |
| Maximum average forward rectified current              | $T_{ip}=105^{\circ}C$<br>$T_A=65^{\circ}C$ | $I_{F(AV)}$    | 1.2         | 0.5      | A     |
| Peak forward surge current 8.3ms single half sine-wave | $T_L=25^{\circ}C$                          | $I_{FSM}$      | 16.5        |          | A     |
| Operating junction and storage temperature range       |  | $T_J, T_{STG}$ | -50 to +150 |          | °C    |

### ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER   | Test condition                           | Symbol   | ES1001FL | ES1002FL | UNITS |
|---|--|----------|----------|----------|-------|
| Maximum instantaneous forward voltage                   | 1.0A                                     | $V_F$    | 0.95     |          | V     |
| Maximum DC reverse current at rated DC blocking voltage | $T_A=25^{\circ}C$<br>$T_A=100^{\circ}C$  | $I_R$    | 10       | 50       | uA    |
| Reverse recovery time                                   | $I_F=0.5A$<br>$I_R=1A$<br>$t_{rr}=0.25A$ | $t_{rr}$ | 35       |          | ns    |
| Typical capacitance                                     | 4V,1MHz                                  | $C_J$    | 4        |          | pF    |



# ES1001FL~ES1002FL

## THERMAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| PARAMETER                                  | Test condition | Symbol          | ES1001FL | ES1002FL | UNITS |
|--|----------------|-----------------|----------|----------|-------|
| Thermal resistance junction to ambient air |                | $R_{\theta JA}$ | 180      |          | °C/W  |

## RATING AND CHARACTERISTIC CURVES

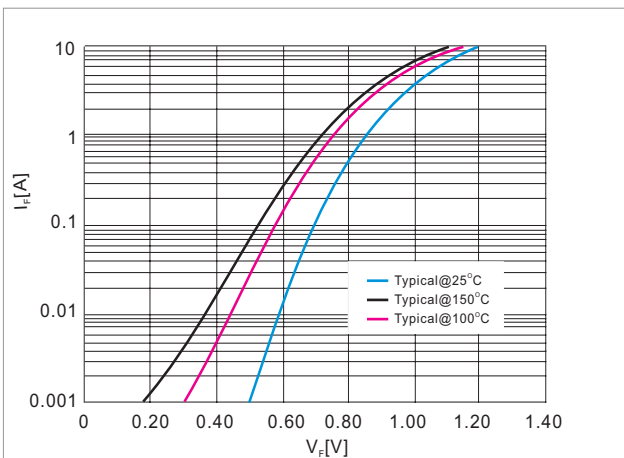


Fig.1-Typical forward characteristics

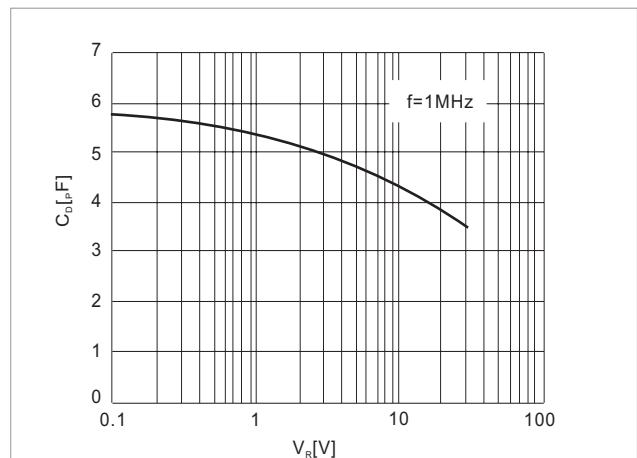


Fig.3-Typ. diode capacitance vs. Reverse voltage

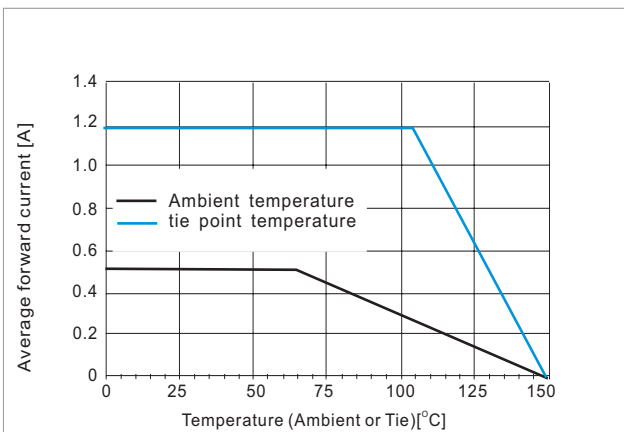


Fig.2-Forward current derating curve

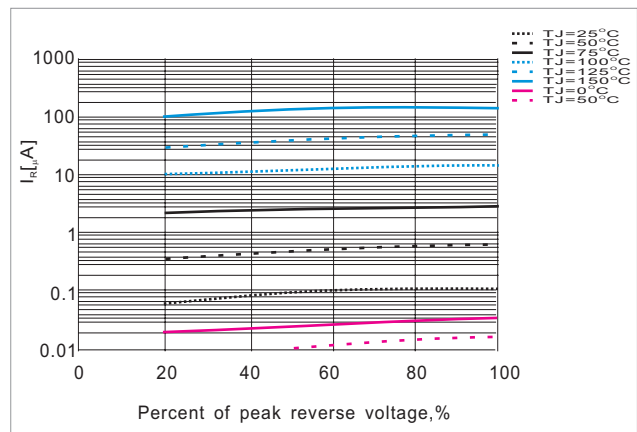
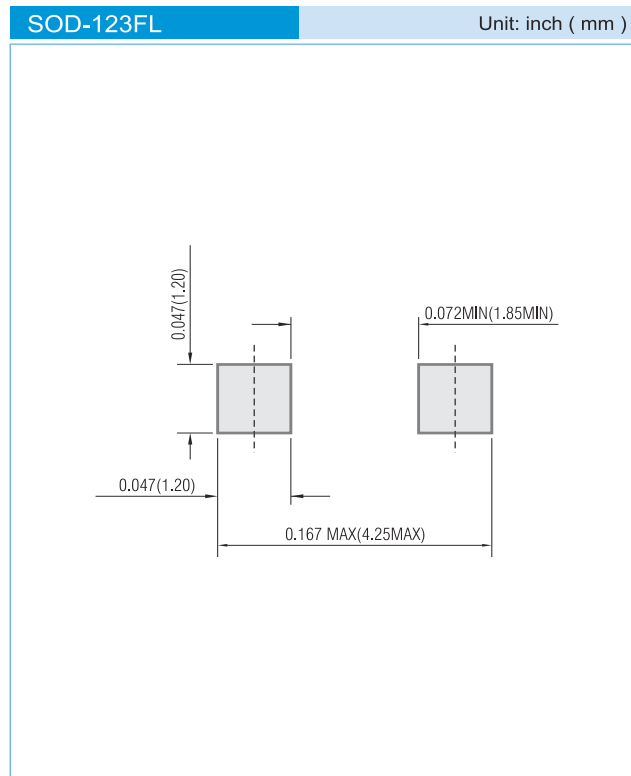


Fig.4-Typical reverse characteristics



## ES1001FL~ES1002FL

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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

### LEGAL STATEMENT

#### Copyright PanJit International, Inc 2005

The information presented in this document is believed to be accurate and reliable. The specifications and information herein are subject to change without notice. Pan Jit makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose. Pan Jit products are not authorized for use in life support devices or systems. Pan Jit does not convey any license under its patent rights or rights of others.