



ES1001FL-AU~ES1006FL-AU

SMALL SURFACE MOUNT SUPER FAST DIODES

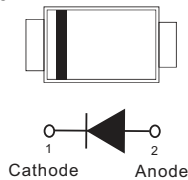
VOLTAGE 100 to 600 Volt **CURRENT** 1 Ampere

FEATURES

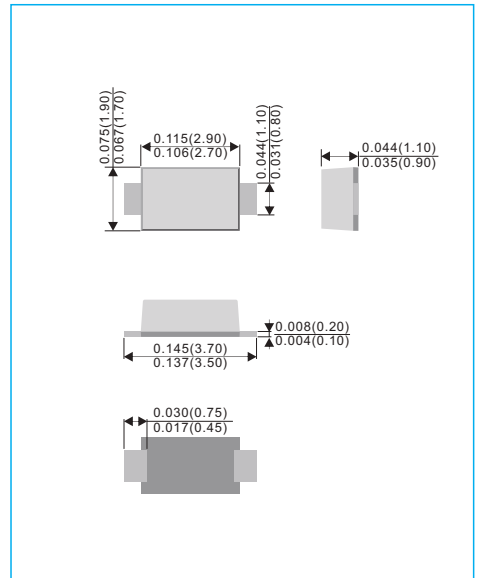
- For surface mounted applications in order to optimize board space
- Ideal for automated placement
- Glass passivated
- High temperature soldering : 260°C / 10 seconds at terminals
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOD-123FL, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Weight: 0.0006 ounces, 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 | 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 | $T_L=120^\circ\text{C}$ | $I_{F(AV)}$ | 1 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave | $T_L=25^\circ\text{C}$ | 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 | $T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$ | I_R | | | 0.5 10 | | μA |
| Reverse recovery time | $I_F=0.5\text{A}$ $I_R=1\text{A}$ $I_{RR}=0.25\text{A}$ | 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 | Units |
|---|------------------------------------|-------------|-------------|-------------|-------------|--------------------|
| Typical Thermal Resistane (Notes 1) (Notes 2) | $R_{\theta JA}$ $R_{\theta JC}$ | | | 200 30 | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | | | -55 to +150 | | $^\circ\text{C}$ |

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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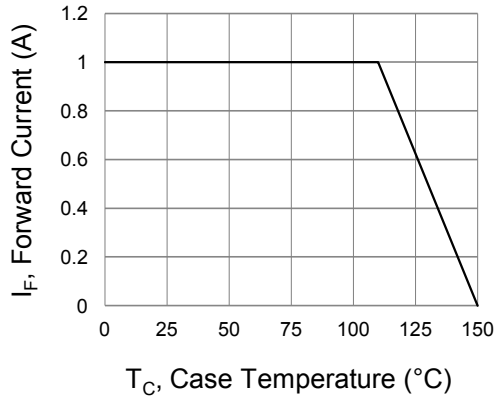


Fig.1 Forward Current Derating Curve

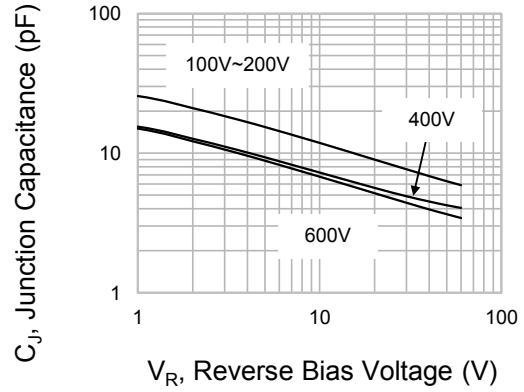


Fig.2 Typical Junction Capacitance

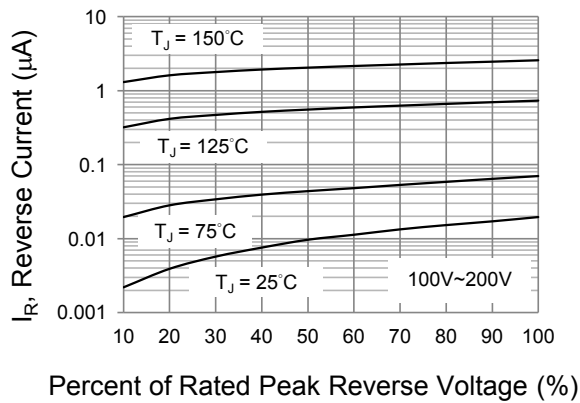


Fig.3 Typical Reverse Characteristics

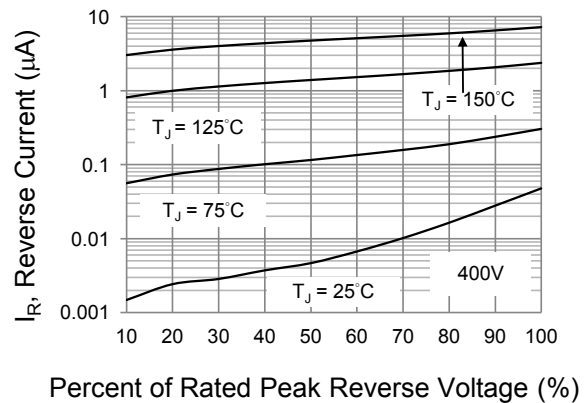


Fig.4 Typical Reverse Characteristics

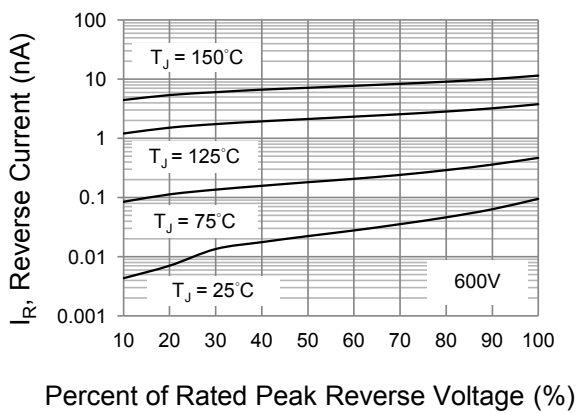


Fig.5 Typical Reverse Characteristics

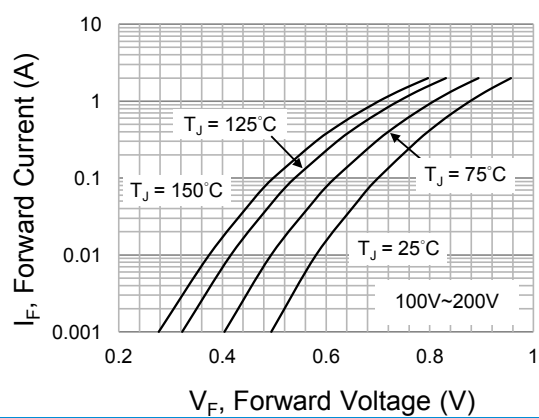


Fig.6 Typical Forward Characteristics



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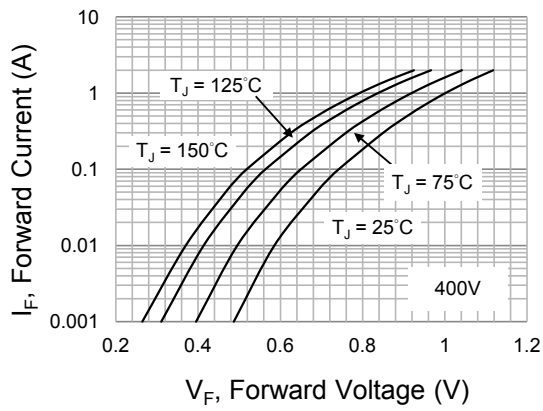


Fig.7 Typical Forward Characteristics

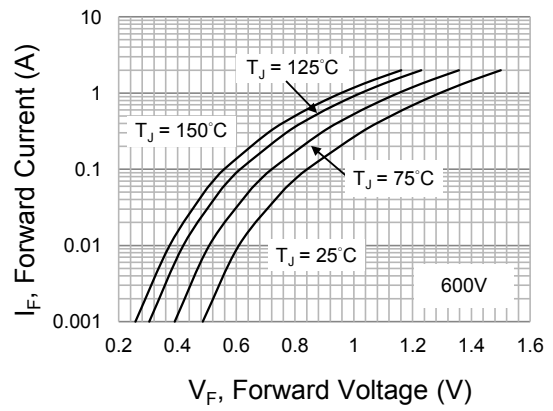
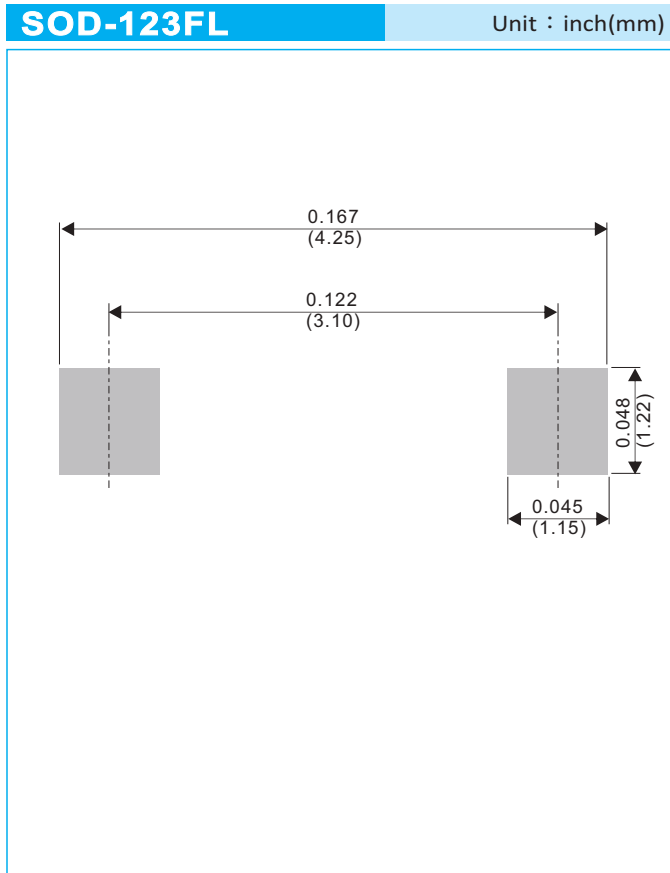


Fig.8 Typical Forward Characteristics



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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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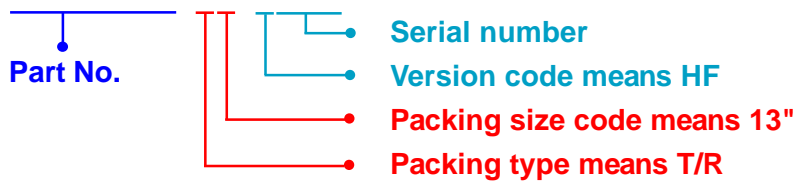
Part No_packing code_Version

ES1001FL-AU_R1_000A1

ES1001FL-AU_R2_000A1

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code XXXXX | | |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HF or RoHS | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | HF | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS | 1 | serial number |
| Bulk Packing (B/P) | B | 13" | 2 | | | |
| Tube Packing (T/P) | T | 26mm | X | | | |
| Tape and Reel (Right Oriented) (TRR) | S | 52mm | Y | | | |
| Tape and Reel (Left Oriented) (TRL) | L | PANASERT T/B CATHODE UP (PBCU) | U | | | |
| FORMING | F | PANASERT T/B CATHODE DOWN (PBCD) | D | | | |



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