

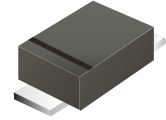
## US2AWF-HF Thru. US2MWF-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 2 Amp

RoHS Device

Halogen Free



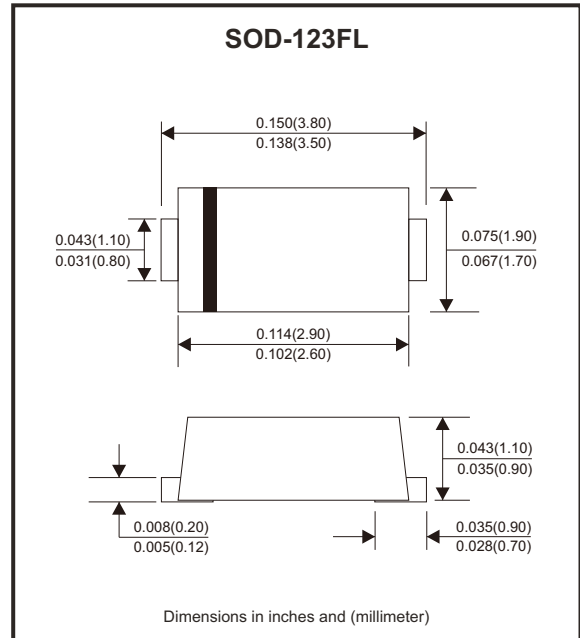
### Features

- For surface mounted applications.
- Low profile package.
- Glass passivated chip junction.
- Easy to pick and place.
- High efficiency.

### Mechanical data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, method 2026.

### Circuit Diagram



### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20%

| Parameter  | Symbols                              | US2AWF<br>-HF | US2BWF<br>-HF | US2DWF<br>-HF | US2GWF<br>-HF | US2JWF<br>-HF | US2KWF<br>-HF | US2MWF<br>-HF | Units |
|--|--------------------------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|-------|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>                     | 50            | 100           | 200           | 400           | 600           | 800           | 1000          | V     |
| Maximum RMS voltage  | V <sub>RMS</sub>                     | 35            | 70            | 140           | 280           | 420           | 560           | 700           | V     |
| Maximum DC blocking voltage  | V <sub>DC</sub>                      | 50            | 100           | 200           | 400           | 600           | 800           | 1000          | V     |
| Maximum average forward rectified current at T <sub>c</sub> = 125°C                | I <sub>F(AV)</sub>                   | 2             |               |               |               |               |               |               | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I <sub>FSM</sub>                     | 50            |               |               |               |               |               |               | A     |
| Max. instantaneous forward voltage at 2A   | V <sub>F</sub>                       | 1.0           |               | 1.3           |               | 1.68          |               |               | V     |
| Maximum DC reverse current at rated DC blocking voltage                            | I <sub>R</sub>                       | 5<br>100      |               |               |               |               |               |               | μA    |
| Maximum reverse recovery time (Note 1)   | t <sub>rr</sub>                      | 50            |               |               |               | 75            |               |               | ns    |
| Typical thermal resistance (Note 2)  | R <sub>θJA</sub><br>R <sub>θJC</sub> | 75<br>22      |               |               |               |               |               |               | °C/W  |
| Operating and storage temperature range  | T <sub>j</sub> , T <sub>stg</sub>    | -55 ~ +150    |               |               |               |               |               |               | °C    |

Notes: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1A, I<sub>rr</sub> = 0.25A.  
2. P.C.B. mounted with 2.0" x 2.0" (5 x 5 cm) copper pad areas.

## Rating and Characteristic Curves (US2AWF-HF Thru. US2MWF-HF)

Fig.1 - Forward Current Derating Curve

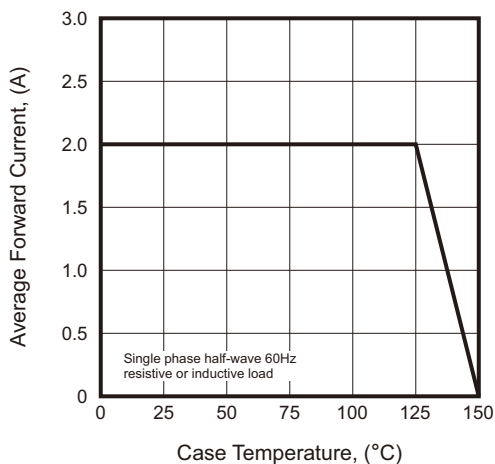


Fig.2 - Typical Reverse Characteristics

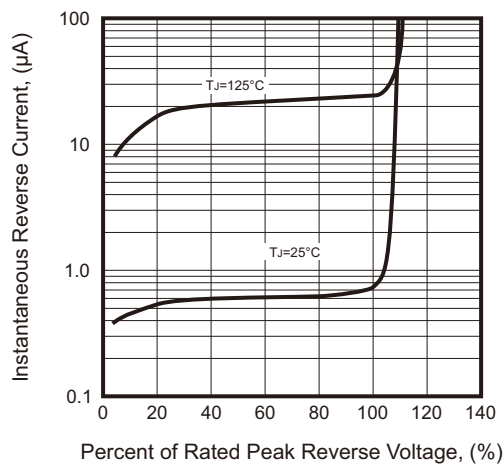


Fig.3 - Typical Forward Characteristic

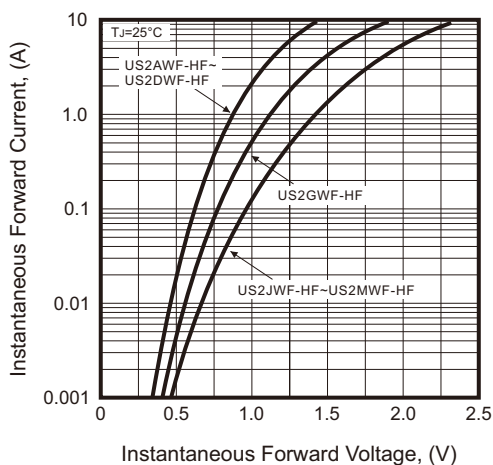
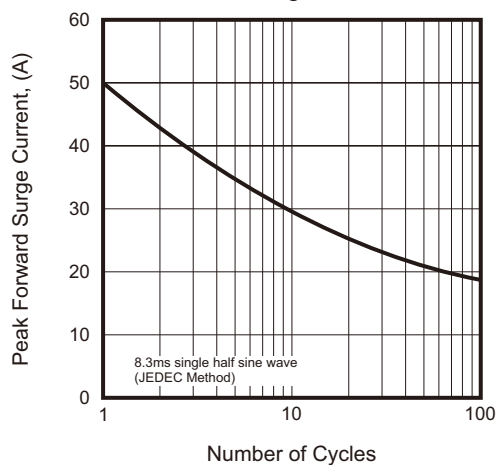
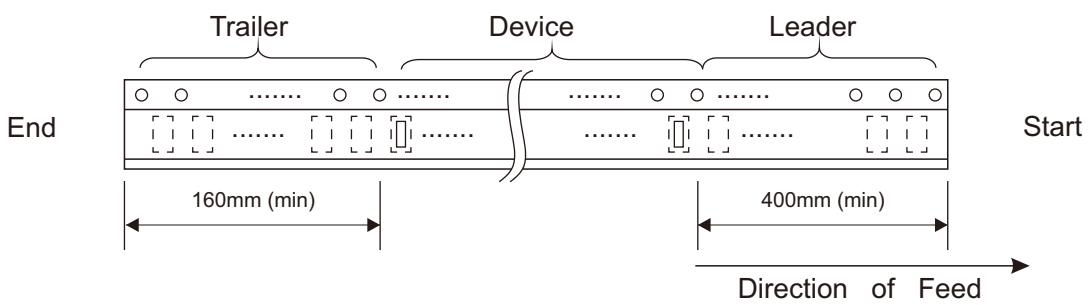
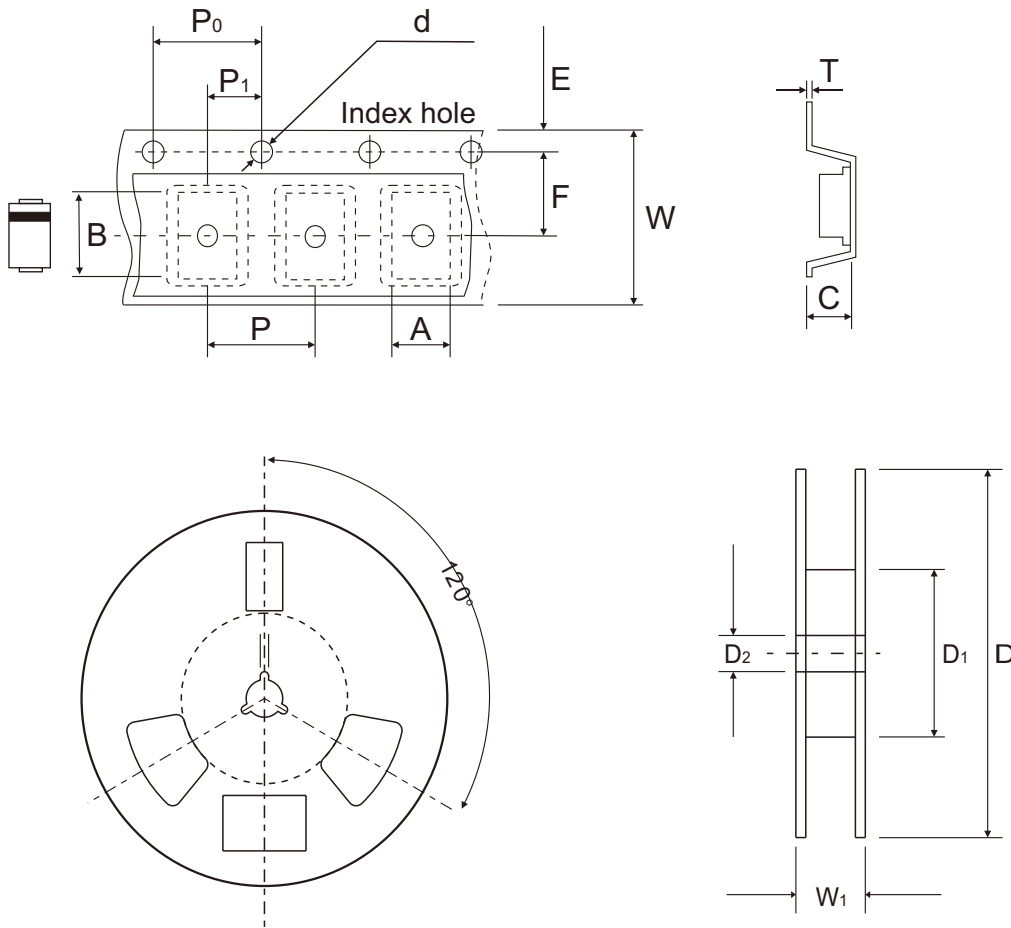


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



## Reel Taping Specification



| SOD-123FL | SYMBOL | A             | B             | C             | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|-----------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
|           | (mm)   | 2.05 ± 0.10   | 3.90 ± 0.10   | 1.28 ± 0.05   | 1.55 ± 0.05   | 180 ± 1.00    | 60.00 ± 1.50   | 13.00 ± 0.20   |
|           | (inch) | 0.081 ± 0.004 | 0.154 ± 0.004 | 0.050 ± 0.002 | 0.061 ± 0.002 | 7.087 ± 0.039 | 2.362 ± 0.059  | 0.512 ± 0.008  |

| SOD-123FL | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub>           |
|-----------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|--------------------------|
|           | (mm)   | 1.75 ± 0.10   | 3.50 ± 0.10   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.05    | 0.25 ± 0.02   | 8.00 ± 0.30   | 10.70 + 2.00<br>- 1.00   |
|           | (inch) | 0.069 ± 0.004 | 0.138 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.010 ± 0.001 | 0.315 ± 0.012 | 0.421 + 0.079<br>- 0.039 |

Company reserves the right to improve product design, functions and reliability without notice.

REV:A