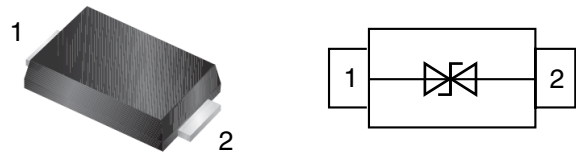


Power TVS in SOD123-FL

Features

- Glass passivated chip
- 200W peak pulse power(10/1000us)
- High accuracy, 5% tolerance
- Uni and Bidirectional unit
- Low clamping voltage
- Low Leakage current
- Very fast response time

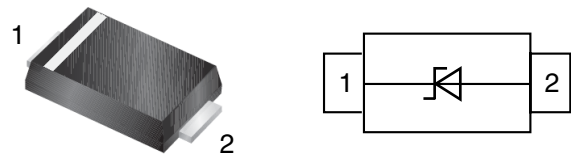
Bidirectional



Mechanical Data

- **Case:**SOD123-FL (plastic package).
RoHS compliant
- **Molding Compound Flammability Rating:**
UL 94 V-0
- **Terminals:** High temperature soldering guaranteed:
260 °C/10 sec. at terminals

Unidirectional



Applications

- Computers
- Telecom system
- Industrial equipments
- Consumer electronic applications
- Other VCC bus and I/O interfaces

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

| Parameter | Symbol | Value | Unit |
|--|-----------------------------------|----------------|------|
| Peak pulse power dissipation with a 10/1000us waveform ⁽¹⁾ | P _{PP} | 200 | W |
| Maximum peak reverse pulse current a 10/1000us waveform ⁽¹⁾ | I _{PP} | See Next Table | A |
| Peak forward surge current 8.3ms single half sine-wave ⁽²⁾ | I _{FSM} | 20 | A |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +150 | °C |

Notes:

- 1.Non-repetitive current pulse,per Fig.5 and detated above TA=25°C per Fig.1
- 2.Measured on 8.3ms single half sine-wave,or equivalent square wave,duty cycle=4 pulses per minute maximum

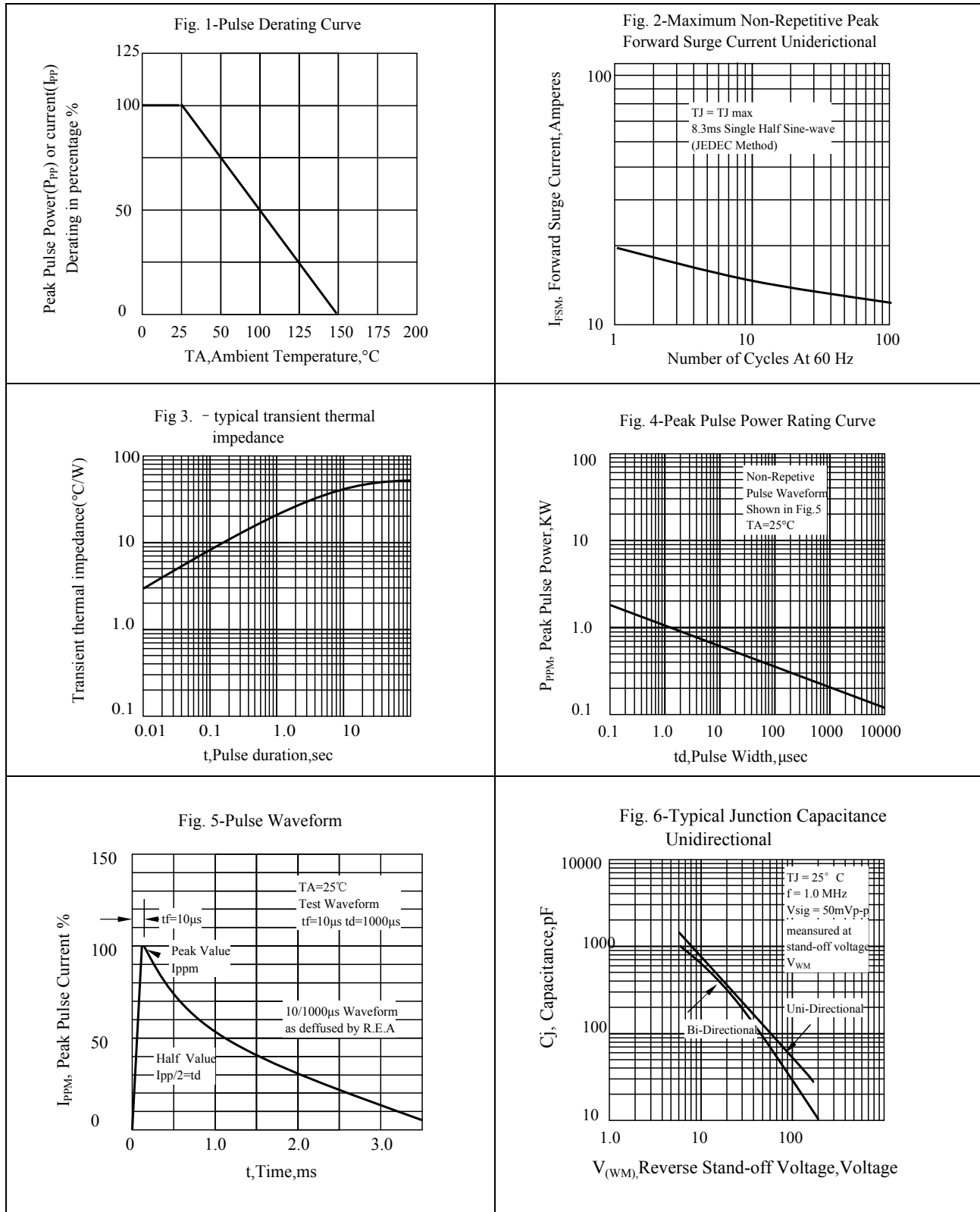
Electrical Characteristics

(T_A = 25 °C unless otherwise specified)

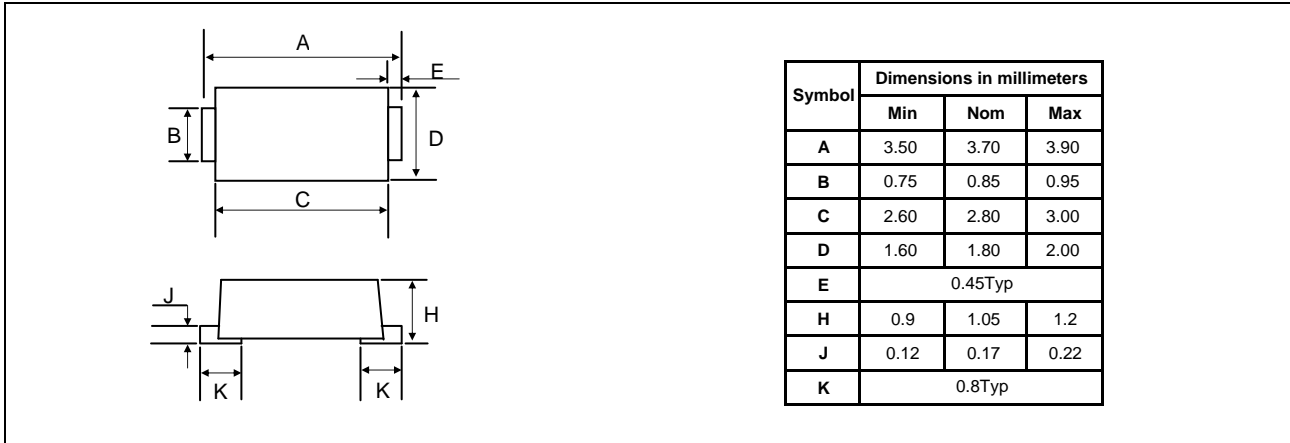
| Part Number | Direction | Maximum Working Voltage V _{RWM} (V) | Maximum Reverse Current@V _{RWM} I _R max(μA) | Breakdown Voltage@I _T | | | Peak Surge Current I _{PP} (A) | Maximum Clamping Voltage@I _{PP} V _C (V) |
|-------------|-----------|---|--|----------------------------------|------------------------|---------------------|---|--|
| | | | | V _{BR} min(V) | V _{BR} max(V) | I _T (mA) | | |
| SODJ5.0A | Uni-Dir | 5.0 | 800 | 6.4 | 7.07 | 10 | 21.74 | 9.2 |
| SODJ5.0CA | Bi-Dir | 5.0 | 1600 | 6.4 | 7.07 | 10 | 21.74 | 9.2 |
| SODJ6.0A | Uni-Dir | 6.0 | 800 | 6.67 | 7.37 | 10 | 19.42 | 10.3 |
| SODJ6.0CA | Bi-Dir | 6.0 | 1600 | 6.67 | 7.37 | 10 | 19.42 | 10.3 |
| SODJ6.5A | Uni-Dir | 6.5 | 500 | 7.22 | 7.98 | 10 | 17.86 | 11.2 |
| SODJ6.5CA | Bi-Dir | 6.5 | 1000 | 7.22 | 7.98 | 10 | 17.86 | 11.2 |
| SODJ7.0A | Uni-Dir | 7.0 | 200 | 7.78 | 8.60 | 10 | 16.67 | 12.0 |
| SODJ7.0CA | Bi-Dir | 7.0 | 400 | 7.78 | 8.60 | 1 | 16.67 | 12.0 |
| SODJ7.5A | Uni-Dir | 7.5 | 100 | 8.33 | 9.21 | 1 | 15.51 | 12.9 |
| SODJ7.5CA | Bi-Dir | 7.5 | 200 | 8.33 | 9.21 | 1 | 15.51 | 12.9 |
| SODJ8.0A | Uni-Dir | 8.0 | 50 | 8.89 | 9.83 | 1 | 14.71 | 13.6 |
| SODJ8.0CA | Bi-Dir | 8.0 | 100 | 8.89 | 9.83 | 1 | 14.71 | 13.6 |
| SODJ8.5A | Uni-Dir | 8.5 | 10 | 9.44 | 10.40 | 1 | 13.89 | 14.4 |
| SODJ8.5CA | Bi-Dir | 8.5 | 20 | 9.44 | 10.40 | 1 | 13.89 | 14.4 |
| SODJ9.0A | Uni-Dir | 9.0 | 5 | 10.00 | 11.10 | 1 | 12.99 | 15.4 |
| SODJ9.0CA | Bi-Dir | 9.0 | 10 | 10.00 | 11.10 | 1 | 12.99 | 15.4 |
| SODJ10A | Uni-Dir | 10.0 | 5 | 11.10 | 12.30 | 1 | 11.77 | 17.0 |
| SODJ10CA | Bi-Dir | 10.0 | 10 | 11.10 | 12.30 | 1 | 11.77 | 17.0 |
| SODJ11A | Uni-Dir | 11.0 | 1 | 12.20 | 13.50 | 1 | 10.99 | 18.2 |
| SODJ11CA | Bi-Dir | 11.0 | 1 | 12.20 | 13.50 | 1 | 10.99 | 18.2 |
| SODJ12A | Uni-Dir | 12.0 | 1 | 13.30 | 14.70 | 1 | 10.05 | 19.9 |
| SODJ12CA | Bi-Dir | 12.0 | 1 | 13.30 | 14.70 | 1 | 10.05 | 19.9 |
| SODJ13A | Uni-Dir | 13.0 | 1 | 14.40 | 15.90 | 1 | 9.30 | 21.5 |
| SODJ13CA | Bi-Dir | 13.0 | 1 | 14.40 | 15.90 | 1 | 9.30 | 21.5 |
| SODJ14A | Uni-Dir | 14.0 | 1 | 15.60 | 17.20 | 1 | 8.62 | 23.2 |
| SODJ14CA | Bi-Dir | 14.0 | 1 | 15.60 | 17.20 | 1 | 8.62 | 23.2 |
| SODJ15A | Uni-Dir | 15.0 | 1 | 16.70 | 18.50 | 1 | 8.20 | 24.4 |
| SODJ15CA | Bi-Dir | 15.0 | 1 | 16.70 | 18.50 | 1 | 8.20 | 24.4 |
| SODJ16A | Uni-Dir | 16.0 | 1 | 17.80 | 19.70 | 1 | 7.69 | 26.0 |
| SODJ16CA | Bi-Dir | 16.0 | 1 | 17.80 | 19.70 | 1 | 7.69 | 26.0 |
| SODJ17A | Uni-Dir | 17.0 | 1 | 18.90 | 20.90 | 1 | 7.25 | 27.6 |
| SODJ17CA | Bi-Dir | 17.0 | 1 | 18.90 | 20.90 | 1 | 7.25 | 27.6 |
| SODJ18A | Uni-Dir | 18.0 | 1 | 20.00 | 22.10 | 1 | 6.85 | 29.2 |
| SODJ18CA | Bi-Dir | 18.0 | 1 | 20.00 | 22.10 | 1 | 6.85 | 29.2 |
| SODJ19A | Uni-Dir | 19.0 | 1 | 21.10 | 23.30 | 1 | 6.50 | 30.8 |
| SODJ19CA | Bi-Dir | 19.0 | 1 | 21.10 | 23.30 | 1 | 6.50 | 30.8 |
| SODJ20A | Uni-Dir | 20.0 | 1 | 22.20 | 24.50 | 1 | 6.18 | 32.4 |
| SODJ20CA | Bi-Dir | 20.0 | 1 | 22.20 | 24.50 | 1 | 6.18 | 32.4 |

| Part Number | Direction | Maximum Working Voltage V_{RWM} (V) | Maximum Reverse Current @ V_{RWM} I_R max(μ A) | Breakdown Voltage @ I_T | | | Peak Surge Current I_{PP} (A) | Maximum Clamping Voltage @ I_{PP} V_C (V) |
|-------------|-----------|---------------------------------------|---|---------------------------|-----------------|------------|---------------------------------|---|
| | | | | V_{BR} min(V) | V_{BR} max(V) | I_T (mA) | | |
| SODJ22A | Uni-Dir | 22.0 | 1 | 24.40 | 26.90 | 1 | 5.64 | 35.5 |
| SODJ22CA | Bi-Dir | 22.0 | 1 | 24.40 | 26.90 | 1 | 5.64 | 35.5 |
| SODJ24A | Uni-Dir | 24.0 | 1 | 26.70 | 29.50 | 1 | 5.14 | 38.9 |
| SODJ24CA | Bi-Dir | 24.0 | 1 | 26.70 | 29.50 | 1 | 5.14 | 38.9 |
| SODJ26A | Uni-Dir | 26.0 | 1 | 28.90 | 31.90 | 1 | 4.75 | 42.1 |
| SODJ26CA | Bi-Dir | 26.0 | 1 | 28.90 | 31.90 | 1 | 4.75 | 42.1 |
| SODJ28A | Uni-Dir | 28.0 | 1 | 31.10 | 34.40 | 1 | 4.41 | 45.4 |
| SODJ28CA | Bi-Dir | 28.0 | 1 | 31.10 | 34.40 | 1 | 4.41 | 45.4 |
| SODJ30A | Uni-Dir | 30.0 | 1 | 33.30 | 36.80 | 1 | 4.13 | 48.4 |
| SODJ30CA | Bi-Dir | 30.0 | 1 | 33.30 | 36.80 | 1 | 4.13 | 48.4 |
| SODJ33A | Uni-Dir | 33.0 | 1 | 36.70 | 40.60 | 1 | 3.75 | 53.3 |
| SODJ33CA | Bi-Dir | 33.0 | 1 | 36.70 | 40.60 | 1 | 3.75 | 53.3 |
| SODJ36A | Uni-Dir | 36.0 | 1 | 40.00 | 44.20 | 1 | 3.44 | 58.1 |
| SODJ36CA | Bi-Dir | 36.0 | 1 | 40.00 | 44.20 | 1 | 3.44 | 58.1 |
| SODJ40A | Uni-Dir | 40.0 | 1 | 44.40 | 49.10 | 1 | 3.10 | 64.5 |
| SODJ40CA | Bi-Dir | 40.0 | 1 | 44.40 | 49.10 | 1 | 3.10 | 64.5 |
| SODJ43A | Uni-Dir | 43.0 | 1 | 47.80 | 52.80 | 1 | 2.88 | 69.4 |
| SODJ43CA | Bi-Dir | 43.0 | 1 | 47.80 | 52.80 | 1 | 2.88 | 69.4 |
| SODJ45A | Uni-Dir | 45.0 | 1 | 50.00 | 55.30 | 1 | 2.75 | 72.7 |
| SODJ45CA | Bi-Dir | 45.0 | 1 | 50.00 | 55.30 | 1 | 2.75 | 72.7 |
| SODJ48A | Uni-Dir | 48.0 | 1 | 53.30 | 58.90 | 1 | 2.59 | 77.4 |
| SODJ48CA | Bi-Dir | 48.0 | 1 | 53.30 | 58.90 | 1 | 2.59 | 77.4 |
| SODJ51A | Uni-Dir | 51.0 | 1 | 56.70 | 62.70 | 1 | 2.43 | 82.4 |
| SODJ51CA | Bi-Dir | 51.0 | 1 | 56.70 | 62.70 | 1 | 2.43 | 82.4 |
| SODJ54A | Uni-Dir | 54.0 | 1 | 60.00 | 66.30 | 1 | 2.30 | 87.1 |
| SODJ54CA | Bi-Dir | 54.0 | 1 | 60.00 | 66.30 | 1 | 2.30 | 87.1 |
| SODJ58A | Uni-Dir | 58.0 | 1 | 64.40 | 71.20 | 1 | 2.14 | 93.6 |
| SODJ58CA | Bi-Dir | 58.0 | 1 | 64.40 | 71.20 | 1 | 2.14 | 93.6 |
| SODJ60A | Uni-Dir | 60.0 | 1 | 66.70 | 73.70 | 1 | 2.07 | 96.8 |
| SODJ60CA | Bi-Dir | 60.0 | 1 | 66.70 | 73.70 | 1 | 2.07 | 96.8 |
| SODJ64A | Uni-Dir | 64.0 | 1 | 71.10 | 78.60 | 1 | 1.94 | 103.0 |
| SODJ64CA | Bi-Dir | 64.0 | 1 | 71.10 | 78.60 | 1 | 1.94 | 103.0 |
| SODJ70A | Uni-Dir | 70.0 | 1 | 77.80 | 86.00 | 1 | 1.77 | 113.0 |
| SODJ70CA | Bi-Dir | 70.0 | 1 | 77.80 | 86.00 | 1 | 1.77 | 113.0 |
| SODJ75A | Uni-Dir | 75.0 | 1 | 83.30 | 92.10 | 1 | 1.66 | 121.0 |
| SODJ75CA | Bi-Dir | 75.0 | 1 | 83.30 | 92.10 | 1 | 1.66 | 121.0 |
| SODJ78A | Uni-Dir | 78.0 | 1 | 86.70 | 95.80 | 1 | 1.59 | 126.0 |
| SODJ78CA | Bi-Dir | 78.0 | 1 | 86.70 | 95.80 | 1 | 1.59 | 126.0 |

Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



Package Dimensions



Ordering information

| Order code | Package | Packaging option | Base quantity | Packaging specification |
|-------------|-----------|------------------|----------------|-------------------------|
| SODJ Series | SOD123-FL | Tape and reel | 3000pcs / reel | EIA STD RS-481 |

Revision history

| Date | Revision | Changes |
|-------------|----------|-----------------|
| 23-May-2012 | 1.0 | Initial release |

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