

### Features

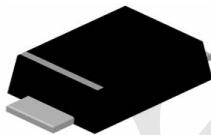
- For surface mounted applications
- Excellent clamping capability
- 6000 W peak pulse power capability with a 8/20 $\mu$ s Waveform.
- IEC-61000-4-2 ESD 30KV(Air),30KV(Contact)

### Applications

- Package: SMF/SOD-123FL
- Moisture Sensitivity: Meet MSL 1

### Dimensions and Pin Configuration

#### SOD123FL



**Marking:12CA**

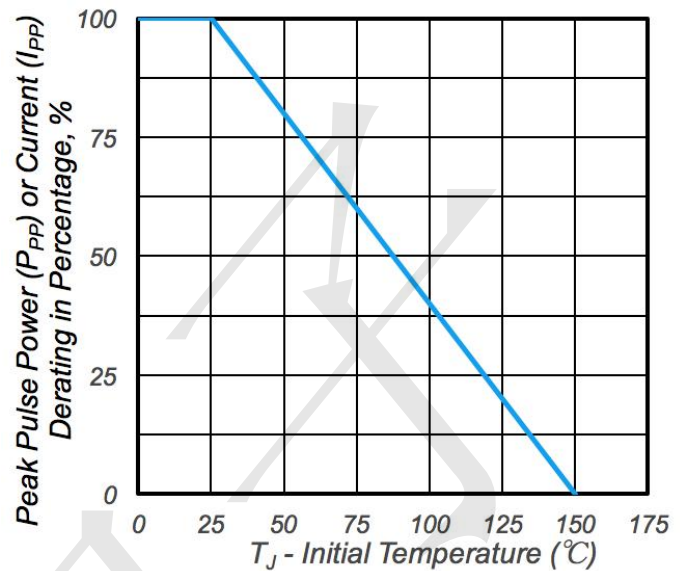
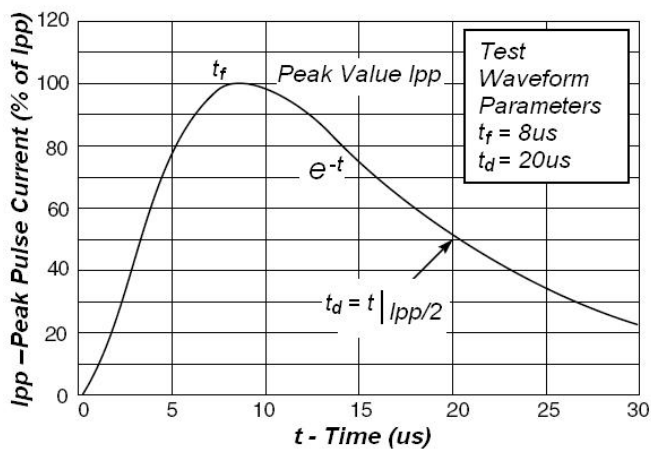
### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

| Parameter                                   | Symbol           | Value       | Unit |
|---------------------------------------------|------------------|-------------|------|
| Peak Pulse Power (tp=8/20 $\mu$ s waveform) | P <sub>pp</sub>  | 6000        | W    |
| Peak Pulse Current (8/20 $\mu$ s)           | I <sub>pp</sub>  | 200         | A    |
| ESD per IEC 61000-4-2 (Air)                 | V <sub>ESD</sub> | ±30         | kV   |
| ESD per IEC 61000-4-2 (Contact)             |                  | ±30         |      |
| Operating Temperature Range                 | T <sub>J</sub>   | -55 to +125 | °C   |
| Storage Temperature Range                   | T <sub>stg</sub> | -55 to +150 | °C   |

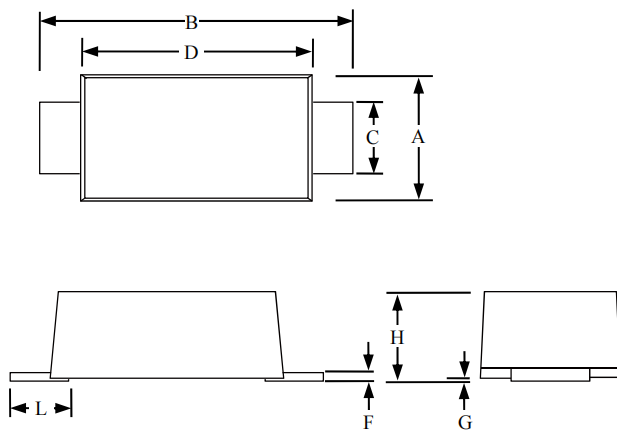
**Electrical Characteristics** (TA=25°C unless otherwise specified)

| Parameter               | Symbol           | Min  | Typ | Max | Unit | Test Condition                |
|-------------------------|------------------|------|-----|-----|------|-------------------------------|
| Reverse Working Voltage | V <sub>RWM</sub> |      |     | 12  | V    |                               |
| Breakdown Voltage       | V <sub>BR</sub>  | 13.3 |     |     | V    | I <sub>T</sub> = 1mA          |
| Reverse Leakage Current | I <sub>R</sub>   |      |     | 2   | μA   | V <sub>RWM</sub> = 12V        |
| Clamping Voltage        | V <sub>C</sub>   |      | 25  |     | V    | I <sub>PP</sub> = 100A        |
| Clamping Voltage        | V <sub>C</sub>   |      | 33  |     | V    | I <sub>PP</sub> = 200A        |
| Junction Capacitance    | C <sub>J</sub>   |      |     | 700 | pF   | V <sub>R</sub> = 0V, f = 1MHz |

**Ratings and Characteristic Curves** ( $T_A=25^\circ\text{C}$  unless otherwise noted)



**Package Outline Dimensions: SOD123FL**



| SOD-123FL |        |     |       |             |     |      |
|-----------|--------|-----|-------|-------------|-----|------|
| Dimension | Inches |     |       | Millimeters |     |      |
|           | MIN    | NOM | MAX   | MIN         | NOM | MAX  |
| A         | 0.059  |     | 0.079 | 1.5         |     | 2    |
| B         | 0.134  |     | 0.154 | 3.4         |     | 3.9  |
| C         | 0.028  |     | 0.047 | 0.7         |     | 1.2  |
| D         | 0.098  |     | 0.114 | 2.5         |     | 2.9  |
| F         | 0.002  |     | 0.01  | 0.05        |     | 0.26 |
| G         | -      |     | 0.004 | -           |     | 0.1  |
| H         | 0.037  |     | 0.053 | 0.95        |     | 1.35 |
| L         | 0.014  |     | 0.035 | 0.35        |     | 0.9  |