

### Features

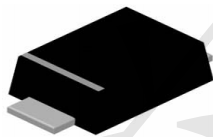
- For surface mounted applications
- Excellent clamping capability
- IEC-61000-4-2 ESD 30KV(Air),30KV(Contact)

### Applications

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

### Dimensions and Pin Configuration

#### SOD123FL



### Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

| Parameter                                      | Symbol    | Value          | Units |
|------------------------------------------------|-----------|----------------|-------|
| Peak Pulse Power Dissipation on 20 us Waveform | $P_{PPM}$ | See next table | W     |
| Peak Pulse Current of on 8/20us Waveform       | $I_{PPM}$ | See next table | A     |
| Operating Junction Temperature Range           | $T_J$     | -55 to 125     | °C    |
| Storage Temperature Range                      | $T_{STG}$ | -55 to 150     | °C    |
|                                                |           |                |       |

## Electrical Characteristics

| device     | $I_R$ at $V_{RWM}$ |         | $V_{BR}$ at $I_T$ <sup>(1)</sup> |    | 10/1000 $\mu s$ |                | 8/20 $\mu s$   |                | 0V, 1MHz  |       | $\alpha T$          |
|------------|--------------------|---------|----------------------------------|----|-----------------|----------------|----------------|----------------|-----------|-------|---------------------|
|            |                    | Max     | Min                              |    | $V_{CL}^{(2)}$  | $I_{PP}^{(3)}$ | $V_{CL}^{(2)}$ | $I_{PP}^{(3)}$ | $P_{PPM}$ | $C_o$ |                     |
|            |                    | Max     | Min                              |    | Max             |                | Max            | Max            |           | Typ   | Typ                 |
|            | V                  | $\mu A$ | V                                | mA | V               | A              | V              | A              | W         | pF    | $10^{-4}/^{\circ}C$ |
| TPTVS05B1F | 5                  | 50      | 5.5                              | 10 | 10.5            | 45             | 16             | 250            | 4000      | 1200  | 4.5                 |
| TPTVS07B1F | 7                  | 20      | 7.5                              | 10 | 12.0            | 28             | 20             | 180            | 3600      | 650   | 5.3                 |
| TPTVS12B1F | 12                 | 1       | 12.5                             | 1  | 19.0            | 18             | 24             | 250            | 6000      | 500   | 6.8                 |
| TPTVS15B1F | 15                 | 1       | 15.5                             | 1  | 19.0            | 17             | 24             | 230            | 5500      | 300   | 7.2                 |
| TPTVS18B1F | 18                 | 1       | 19.0                             | 1  | 25.0            | 12             | 32             | 180            | 5700      | 380   | 7.4                 |
| TPTVS24B1F | 24                 | 1       | 25.5                             | 1  | 25.0            | 10             | 32             | 180            | 5700      | 380   | 7.8                 |
| TPTVS28B1F | 28                 | 1       | 28.0                             | 1  | 25.0            | 9              | 35             | 180            | 6300      | 280   | 7.9                 |

**Typical Performance Characteristics ( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**

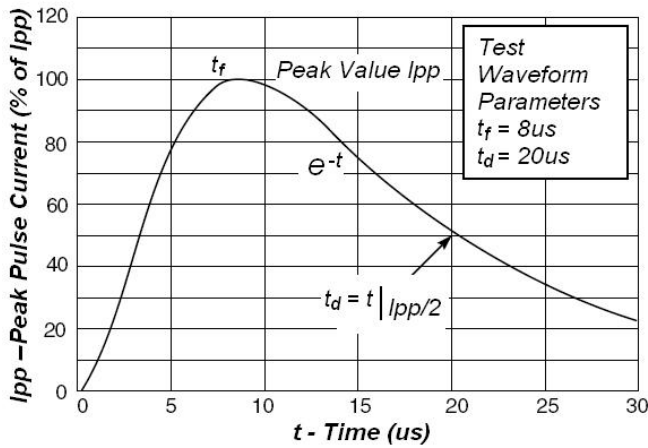


Fig.1 Pulse Waveform

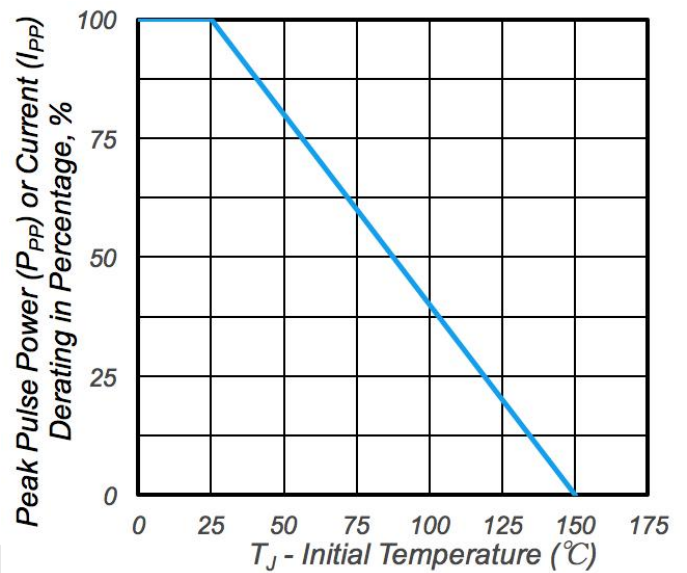
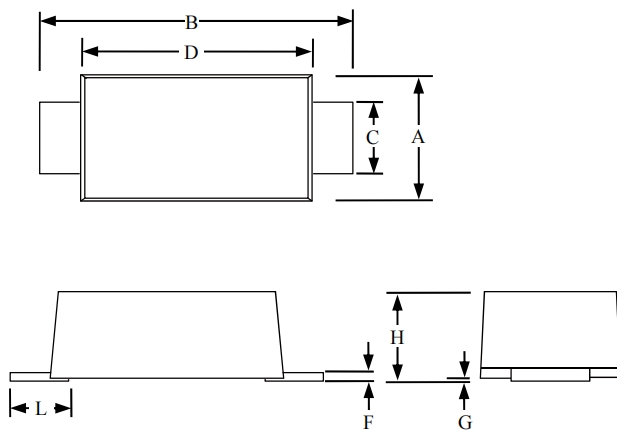


Fig.2 Pulse Derating Curve

**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  |