

### »Features

- 80Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Tiny SOT363 package
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection five data/power line
- IEC 61000-4-2  $\pm 15kV$  contact  $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 7A (8/20 $\mu s$ )

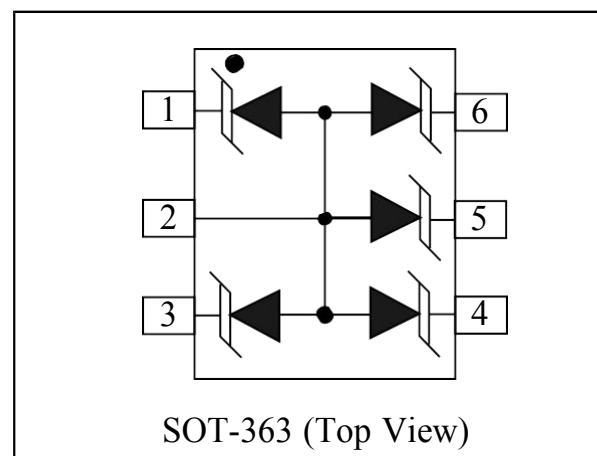
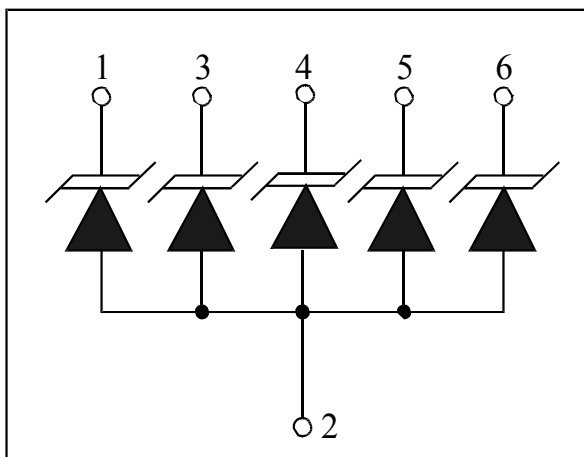
### »Applications

- Cellular Handsets & Accessories
- Personal Digital Assistants (PDAs)
- Notebooks & Handhelds
- Portable Instrumentation
- Digital Cameras

### »Mechanical Data

- SOT363 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

### »Schematic & PIN Configuration



»Absolute Maximum Rating

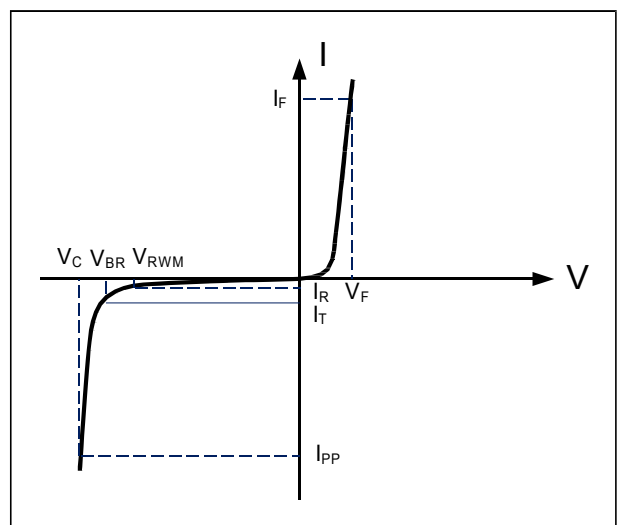
| Rating   | Symbol    | Value          | Units |
|--|-----------|----------------|-------|
| Peak Pulse Power ( $t_p = 8/20\mu s$ )                         | $P_{PP}$  | 80             | Watts |
| Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)               | $I_{pp}$  | 7              | A     |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 15<br>15       | kV    |
| Lead Soldering Temperature                                     | $T_L$     | 260(10seconds) | °C    |
| Junction Temperature   | $T_J$     | -55 to + 125   | °C    |
| Storage Temperature  | $T_{stg}$ | -55 to + 125   | °C    |

»Electrical Characteristics

| Parameter                 | Symbol    | Conditions                        | Min | Typical | Max | Units |
|---------------------------|-----------|-----------------------------------|-----|---------|-----|-------|
| Reverse Stand-Off Voltage | $V_{RWM}$ |                                   |     |         | 5.0 | V     |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T = 1mA$                       | 6.0 |         |     | V     |
| Reverse Leakage Current   | $I_R$     | $V_{RWM} = 5V, T = 25^\circ C$    |     | 50      | 500 | nA    |
| Clamping Voltage          | $V_C$     | $I_{PP} = 7A, t_p = 8/20\mu s$    |     | 12      |     | V     |
| Junction Capacitance      | $C_j$     | $V_R = 0V, f = 1MHz$<br>IO to IO  |     | 30      |     | pF    |
|                           |           | $V_R = 0V, f = 1MHz$<br>IO to GND |     | 70      |     |       |

»Electrical Parameters (TA = 25°C unless otherwise noted)

| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |
|           |   |
|           |   |



Note: 8/20μs pulse waveform.

»Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

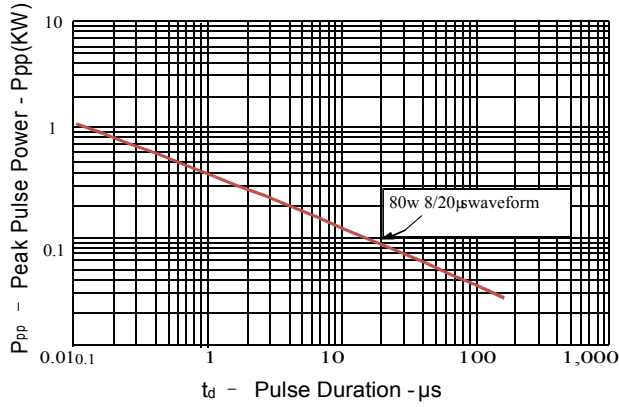


Figure 2: Power Derating Curve

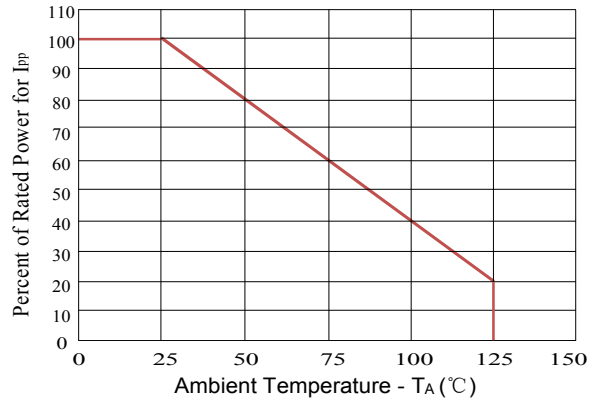


Figure3: Pulse Waveform

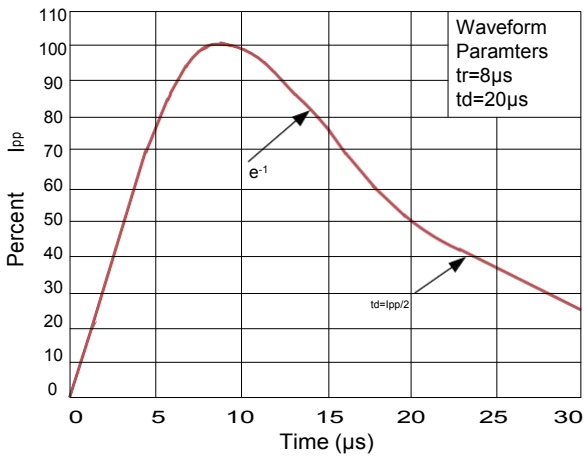
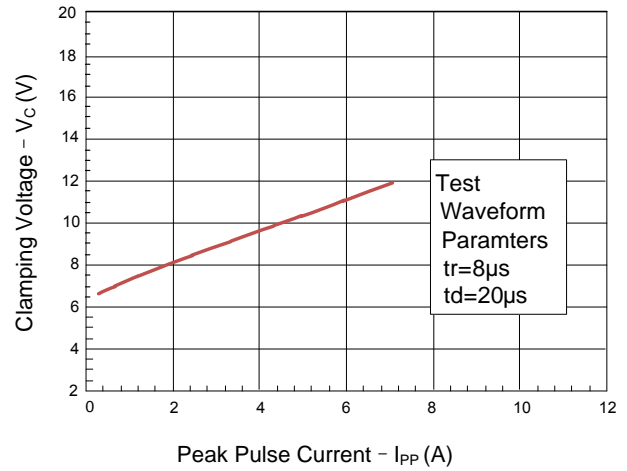
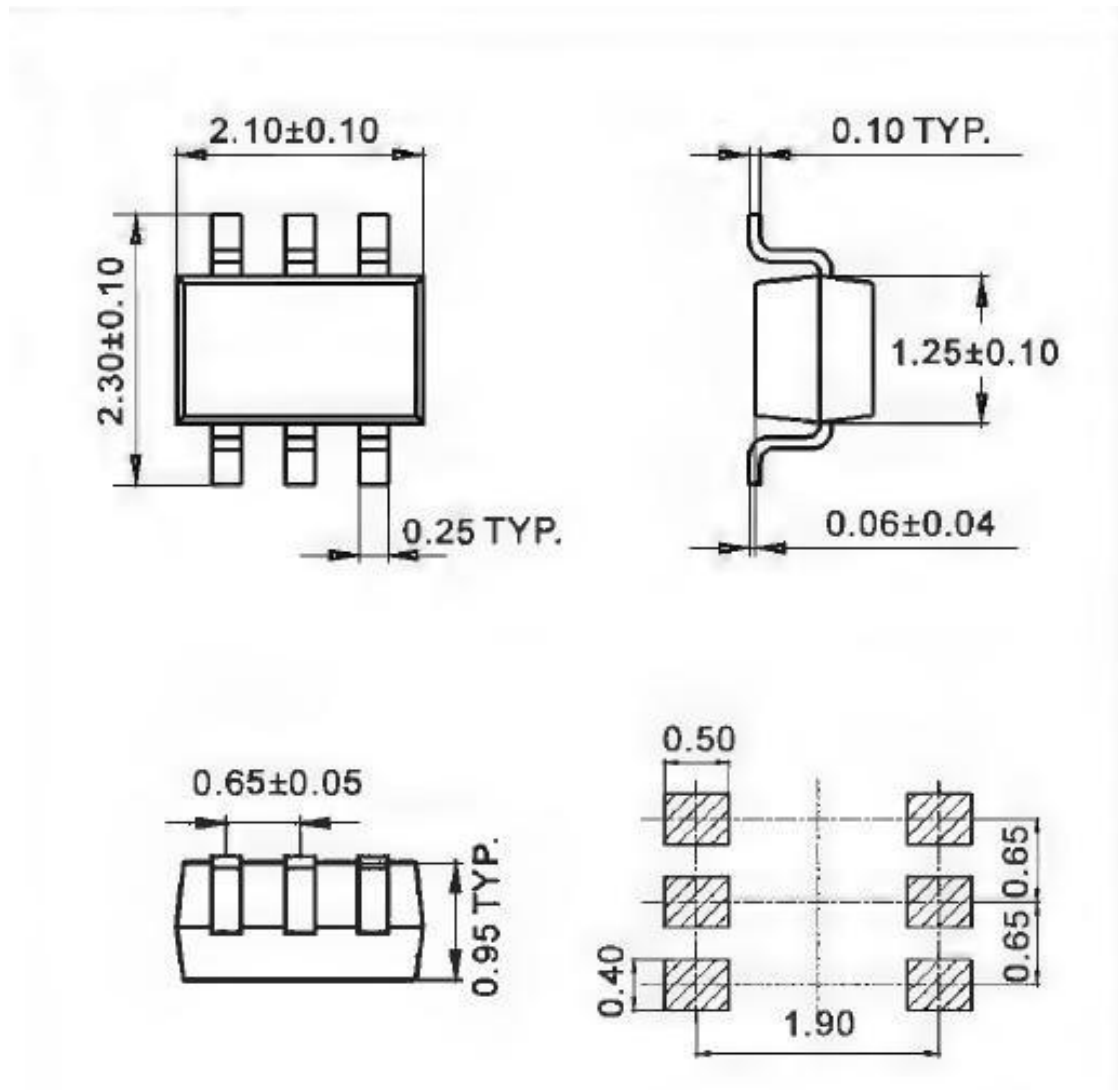


Figure 4: Clamping Voltage vs. Ipp



»Outline Drawing – SOT363



»Marking



»Ordering information

| Order code | Package | Base qty | Delivery mode |
|------------|---------|----------|---------------|
| BSMF05C    | SOT363  | 3k       | Tape and reel |