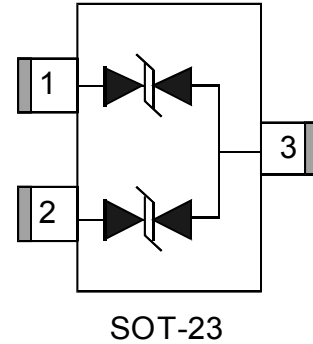


Features

- 350W peak pulse power ($t_p = 8/20\mu s$)
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 12A(8/20 μs)



Applications

- Dataline
- Automatic Teller Machines
- Net works
- Power line

Mechanical Data

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Absolute Maximum Rating

| Rating | Symbol | Value | Units |
|--|-----------|--------------|-------|
| Peak Pulse Power ($t_p = 8/20\mu s$) | P_{PP} | 350 | W |
| Peak Pulse Current ($t_p = 8/20\mu s$)(note1) | I_{pp} | 12 | A |
| ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact) | V_{ESD} | 30 30 | kV |
| Lead Soldering Temperature | T_L | 260/10S | °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} | | | | 12 | V |
| Reverse Breakdown Voltage | V_{BR} | $I_T=1mA$ | 13.3 | 15.0 | 17.0 | V |
| Reverse Leakage Current | I_R | $V_{RWM}=12V, T=25\text{ }^\circ C$ | | 0.1 | 0.5 | μA |
| Peak Pulse Current | I_{PP} | $t_p=8/20\mu s$ | | | 12 | A |
| Clamping Voltage | V_C | $I_{PP}=12A, t_p=8/20\mu s$ | | | 35 | V |
| Junction Capacitance | C_j | $V_R = 0V, f = 1MHz$ (Pin1、Pin2 to Pin3) | | 30 | 35 | pF |

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

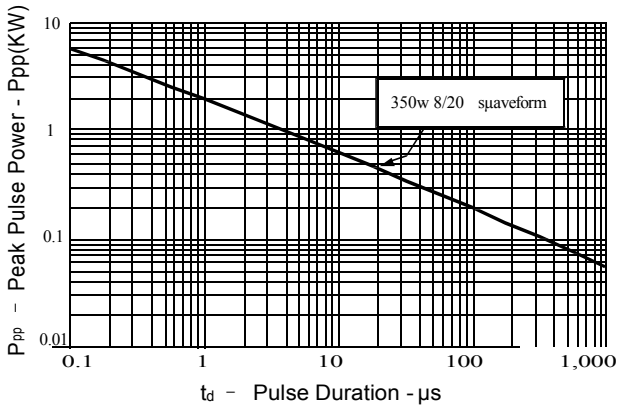


Figure 2: Power Derating Curve

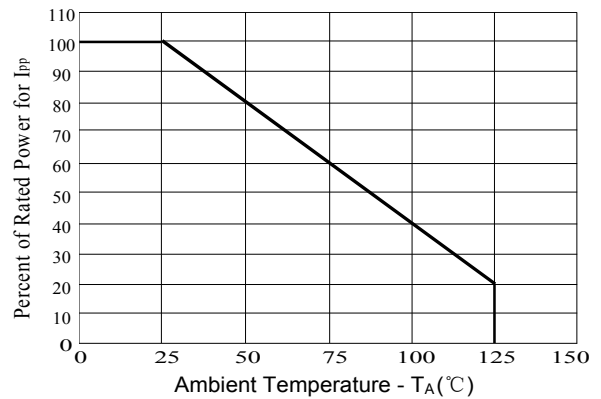


Figure3: Pulse Waveform

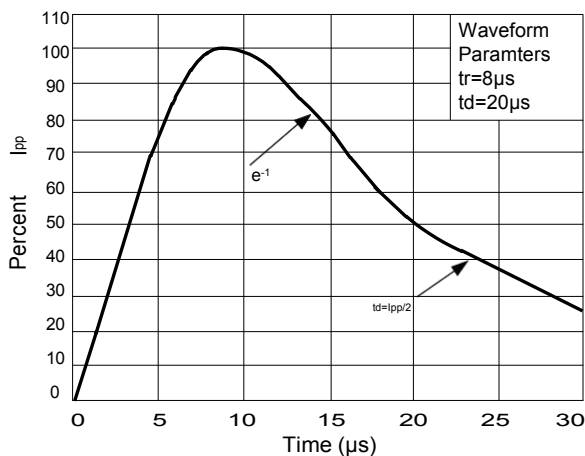
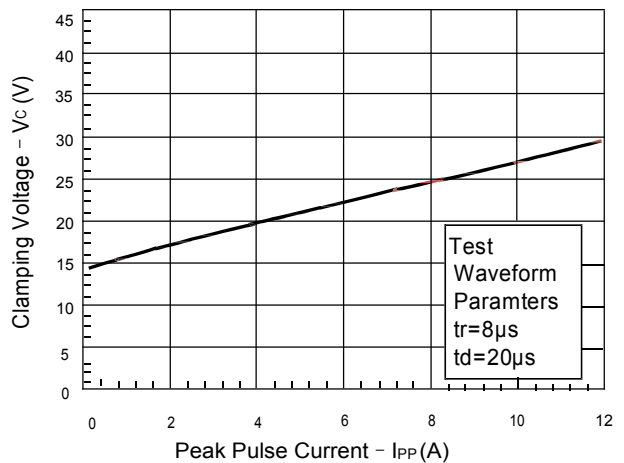
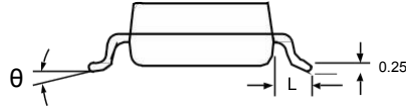
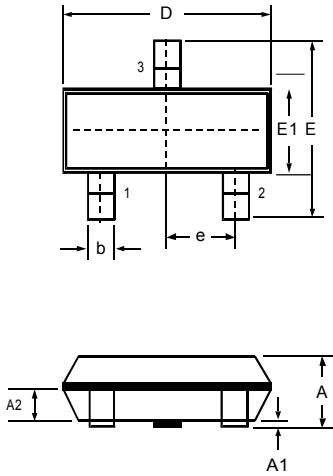


Figure 4: Clamping Voltage vs. Ipp

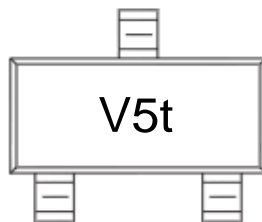


Outline Drawing – SOT-23



| SYMBOL | DIMENSIONS | | | |
|--------|------------|-------|-----------|-------|
| | MILLIMETER | | INCHES | |
| | MIN | MAX | MIN | MAX |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| E | 2.250 | 2.550 | 0.089 | 0.100 |
| E1 | 1.200 | 1.400 | 0.047 | 0.055 |
| e | 0.950 BSC | | 0.037 BSC | |
| L | 0.500 | 0.675 | 0.020 | 0.027 |
| θ | 0 | 8° | 0 | 8° |

Marking



Ordering information

| Order code | Package | Baseqty | Deliverymode |
|-------------|---------|---------|---------------|
| PESD12VL2BT | SOT-23 | 3000 | Tape and reel |