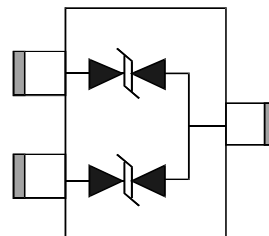


## Features

- 400W 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) 24A(8/20 $\mu s$ )



## 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 ( $t_p=8/20\mu s$ )                           | $P_{PP}$  | 400          | W     |
| Peak Pulse Current ( $t_p=8/20\mu s$ ) (note1)                 | $I_{pp}$  | 24           | A     |
| ESD per IEC 61000-4-2 (Air)<br>ESD per IEC 61000-4-2 (Contact) | $V_{ESD}$ | 30<br>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 | $V_{RWM}$ |                                           |     |         | 3.0  | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1mA$                                 | 4.0 | 6.5     | 8.0  | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=3.0V, T=25^\circ C$              |     | 0.1     | 0.5  | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu s$                           |     |         | 24   | A       |
| Clamping Voltage          | $V_C$     | $I_{PP}=24A, t_p=8/20\mu s$               |     |         | 18.0 | V       |
| Junction Capacitance      | $C_j$     | $V_R = 0V, f=1MHz$<br>(Pin1、Pin2 to Pin3) |     | 100     | 110  | pF      |

### Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

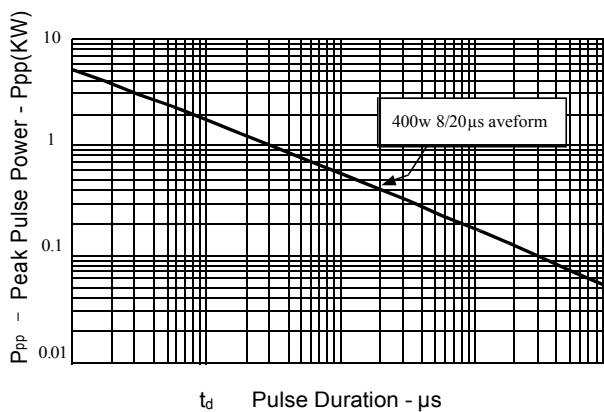


Figure 2: Power Derating Curve

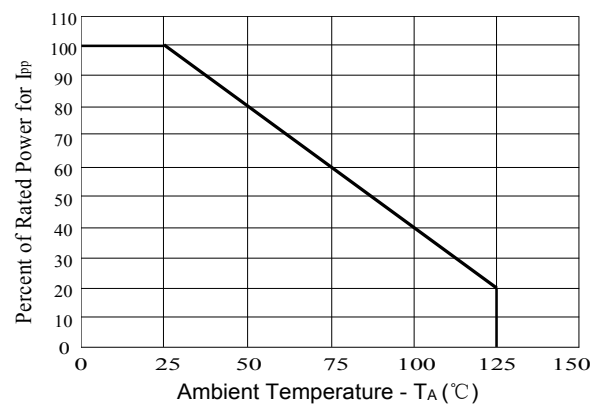


Figure3: Pulse Waveform

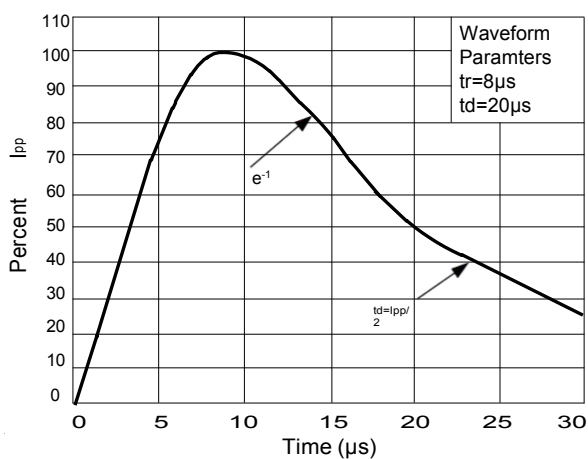
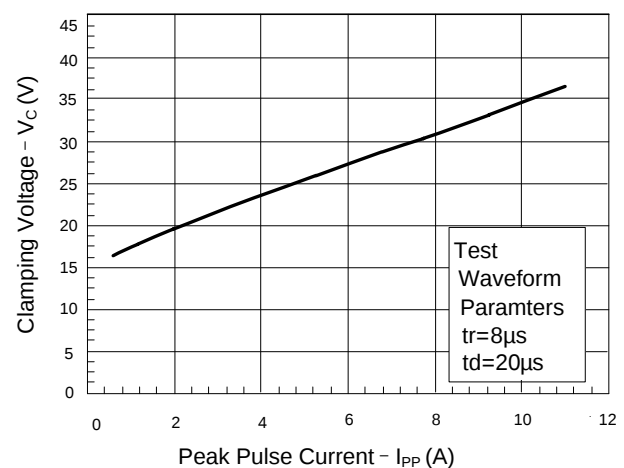
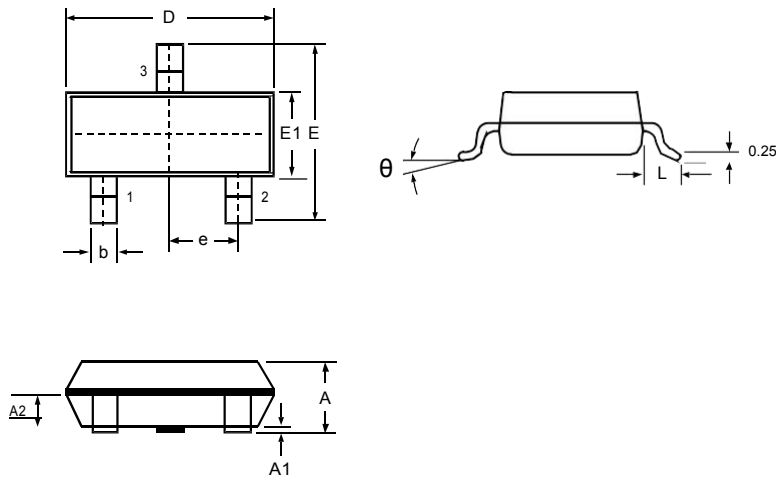


Figure 4: Clamping Voltage vs. Ipp

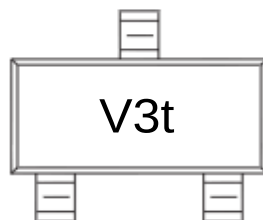


### Outline Drawing – SOT-23



| 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      | 0.300      | 0.500 | 0.012     | 0.020 |
| θ      | 0          | 8°    | 0         | 8°    |

### Marking



### Ordering information

| Order code  | Package | Baseqty | Deliverymode  |
|-------------|---------|---------|---------------|
| PESD3V3L2BT | SOT-23  | 3000    | Tape and reel |