EVVOSEMI®
THINK CHANGE DO

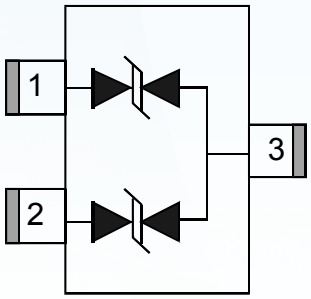
ESD TVS MOS LDO Diode Sensor DC-DC

# Product Specification

| | |
|---|---|
| Domestic Part Number | PESD12VL2BT |
| Overseas Part Number | PESD12VL2BT |
| Equivalent Part Number | PESD12VL2BT |

## Features

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



SOT-23

## 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 ( $t_p$=8/20μs ) | $P_{PP}$ | 350 | W |
| Peak Pulse Current ( $t_p$=8/20μs )(note1) | $I_{pp}$ | 12 | A |
| ESD per IEC 61000-4-2(Air)<br>ESD per IEC 61000-4-2(Contact) | $V_{ESD}$ | 30<br>30 | kV |
| Lead SolderingTemperature | $T_L$ | 260/10S | ℃ |
| JunctionTemperature | $T_J$ | -55 to + 125 | ℃ |
| StorageTemperature | $T_{stg}$ | -55 to + 125 | ℃ |

## 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 ℃ | | 0.1 | 0.5 | μA |
| Peak Pulse Current | $I_{PP}$ | $t_p$=8/20μs | | | 12 | A |
| Clamping Voltage | $V_C$ | $I_{PP}$=12A,$t_p$=8/20μs | | | 35 | V |
| Junction Capacitance | $C_j$ | $V_R$ = 0V, f =1MHz (Pin1 、Pin2 to Pin3) | | 30 | 35 | pF |

## TypicalCharacteristics

**Figure 1: Peak Pulse Power vs. Pulse Time**

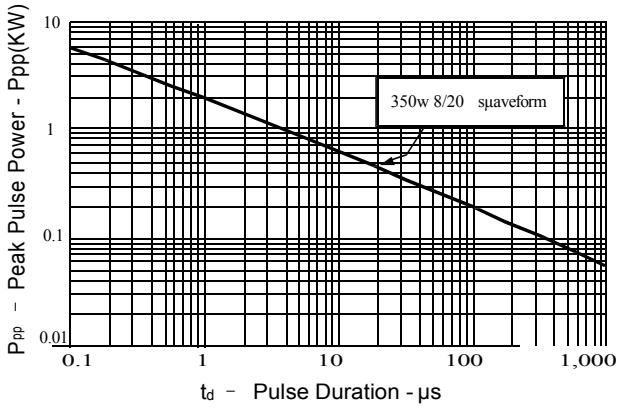



**Figure 2: Power Derating Curve**

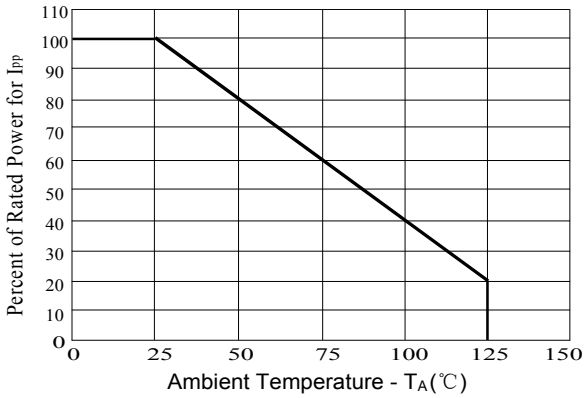



**Figure3: Pulse Waveform**

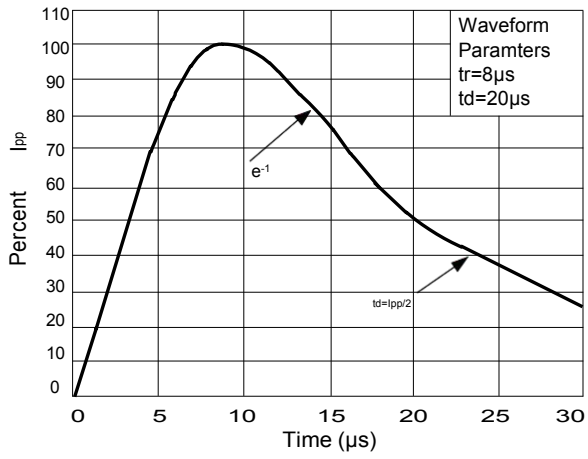
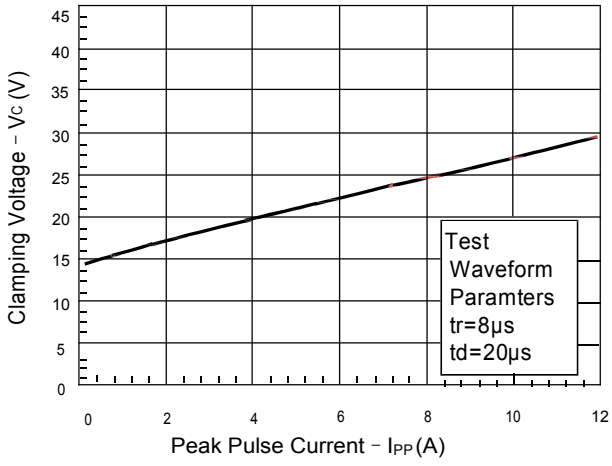
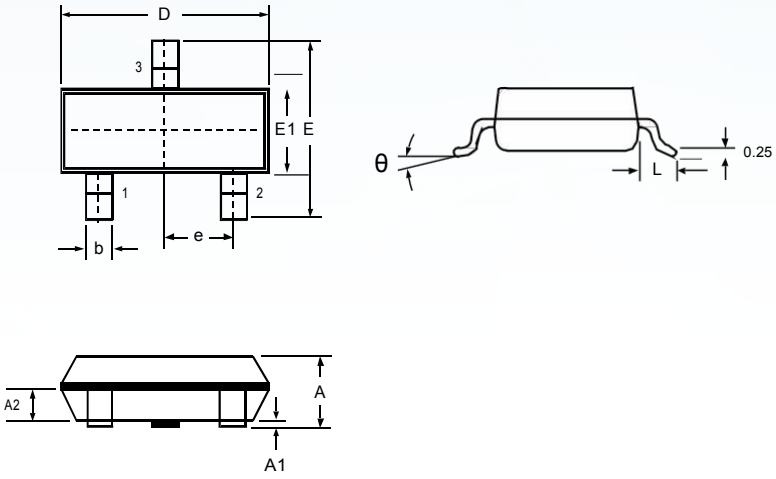



**Figure 4: Clamping Voltage vs.Ipp**

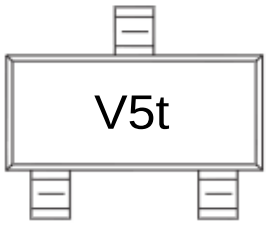


## Outline Drawing – SOT-23




| DIMENSIONS | | | | |
|---|---|---|---|---|
| SYMBOL | 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 |

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