# UMW PESD12VL2BT

## 1.Features

- 350 Watts peak pulse power ($t_p$=8/20μs)
- Bidirectional and 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)

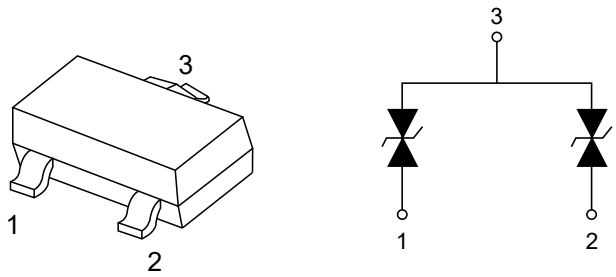
## 2.Applications

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

## 3.Mechanical Data

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

## 4.Pinning information




**SOT-23**

## 5.Absolute Maximum Ratings

| Parameter | 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) | $V_{ESD}$ | 30 | kV |
| ESD per IEC 61000-4-2(Contact) | | 30 | 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 |

## 6.Electrical Characteristics

| Parameter | Symbol | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | $V_{RWM}$ | | | | 12 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_T$=1mA | 13.3 | 15 | 17 | V |
| Reverse Leakage Current | $I_R$ | $V_{RWM}$=12V, T=25°C | | 0.1 | 0.5 | μA |
| Peak PulseCurrent | $I_{PP}$ | $t_p$=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 |

## 7.Typical characteristic

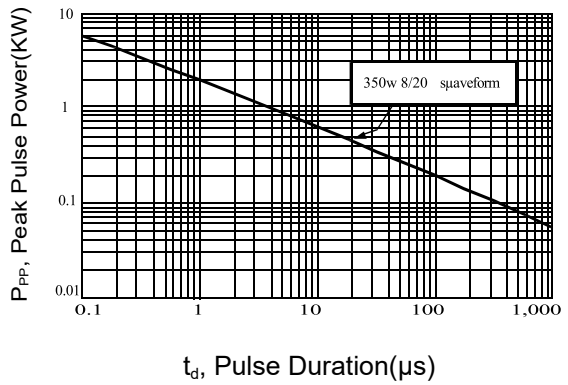



Figure 1: Peak Pulse Power vs. Pulse Time

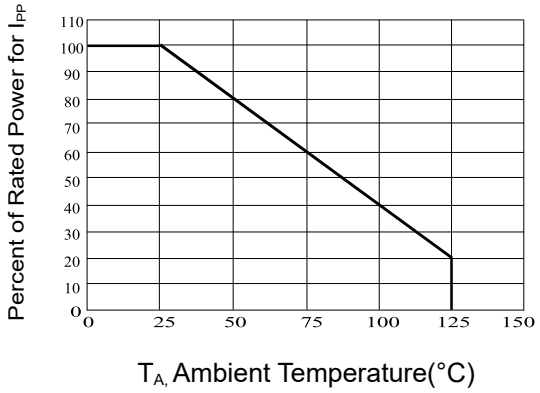



Figure 2: Power Derating Curve

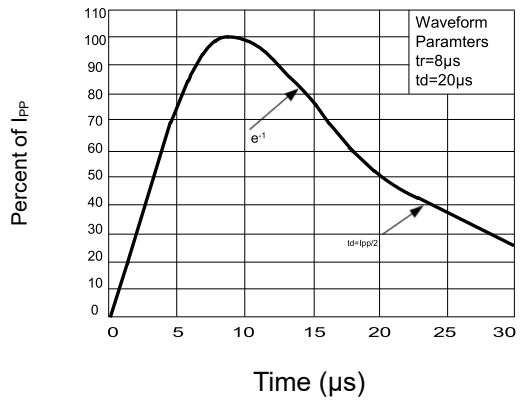



Figure 3: Pulse Waveform

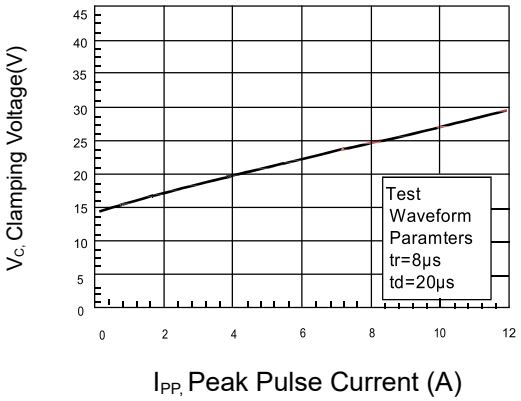
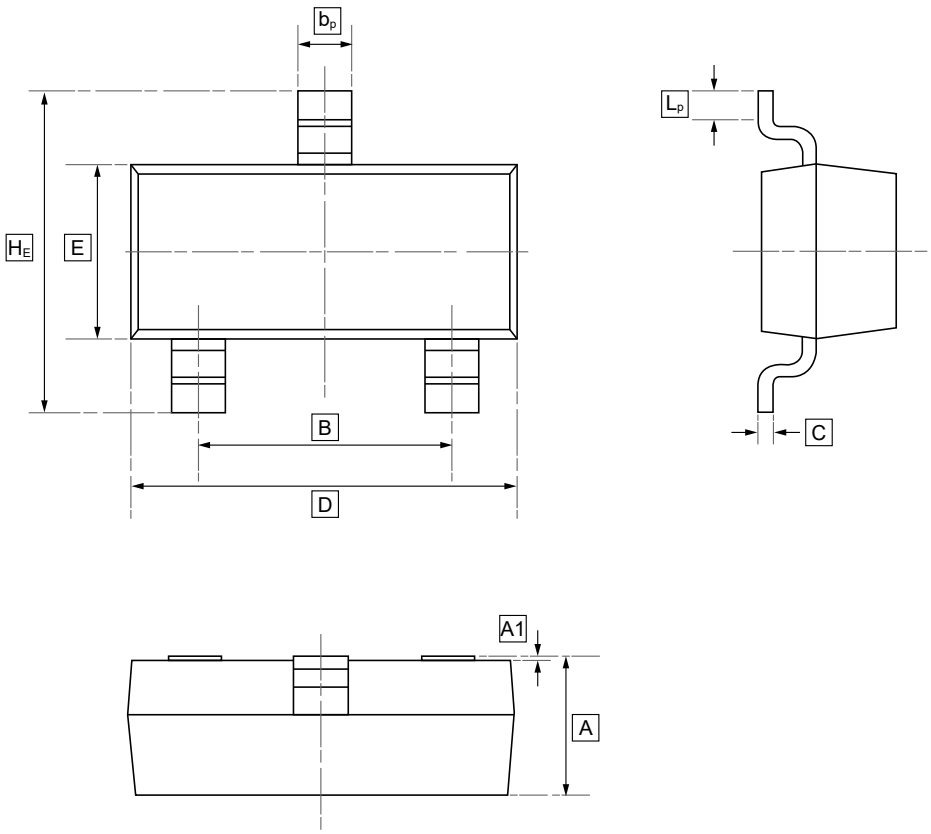



Figure 4: Clamping Voltage vs.$I_{PP}$

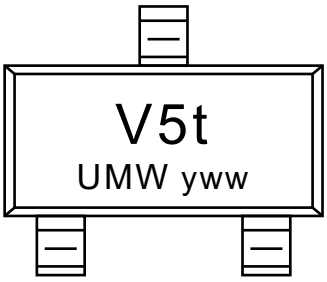
## 8.SOT-23 Package Outline Dimensions




**DIMENSIONS (mm are the original dimensions)**

| Symbol | A | B | $b_p$ | C | D | E | $H_E$ | A1 | $L_p$ |
|---|---|---|---|---|---|---|---|---|---|
| **Min** | 0.95 | 1.78 | 0.35 | 0.08 | 2.70 | 1.20 | 2.20 | 0.013 | 0.20 |
| **Max** | 1.40 | 2.04 | 0.50 | 0.19 | 3.10 | 1.65 | 3.00 | 0.100 | 0.50 |

## 9.Ordering information




yww: Batch Code

| Order Code | Package | Base QTY | Delivery Mode |
|---|---|---|---|
| UMW PESD12VL2BT | SOT-23 | 3000 | Tape and reel |

## 10.Disclaimer

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