## 1.Features

- 280W peak pulse power ($t_p$=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) 6A(8/20μs)

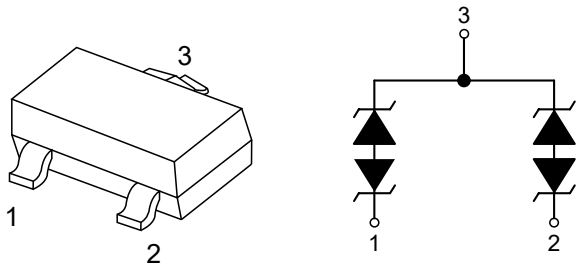
## 2.Applications

- 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 Compliant

## 4.Pinning information




**SOT-23**

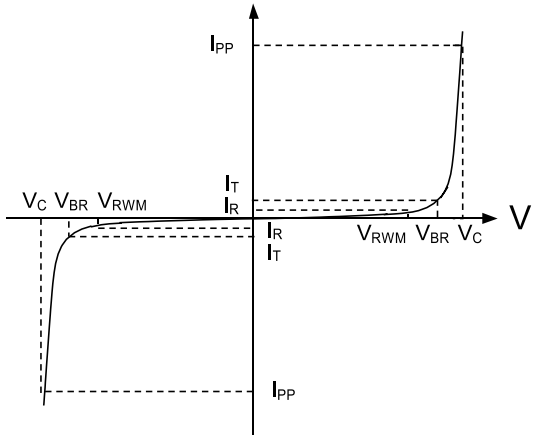
## 5.Absolute Maximum Ratings $T_A$= 25°C

| Parameter | Symbol | Value | Units |
|---|---|---|---|
| Peak Pulse Power ( $t_p$=8/20μs) | $P_{PP}$ | 280 | W |
| Peak Pulse Current ( $t_p$=8/20μs )(note1) | $I_{PP}$ | 6 | 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 Characteristic ($T_A$=25°C unless otherwise noted)

| Parameter | Symbol | Conditions | Min | Typ | Max | Units |
|---|---|---|---|---|---|---|
| Reverse Stand-Off Voltage | $V_{RWM}$ | | | | 24 | V |
| Reverse Breakdown Voltage | $V_{BR}$ | $I_T$=1mA | 26.7 | 30 | 34 | V |
| Reverse Leakage Current | $I_R$ | $V_{RWM}$=24V, T=25°C | | 0.1 | 0.5 | μA |
| Peak Pulse Current | $I_{PP}$ | $t_p$=8/20μs | | | 6 | A |
| Clamping Voltage | $V_C$ | $I_{PP}$=24A, $t_p$=8/20μs | | 48 | 55 | V |
| Junction capacitance | $C_J$ | $V_R$=0V, f=1MHz | | 12 | 15 | pF |

## 7.Electrical Parameters ($T_A$=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 |

Notes: 8/20μs pulse waveform.

## 8.Typical characteristic

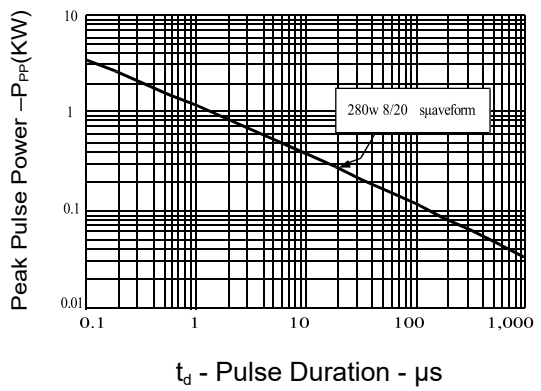



Figure 1: Peak Pulse Power vs. Pulse Time

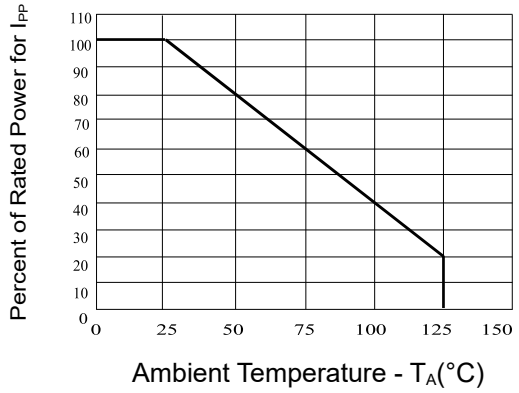



Figure 2: Power Derating Curve

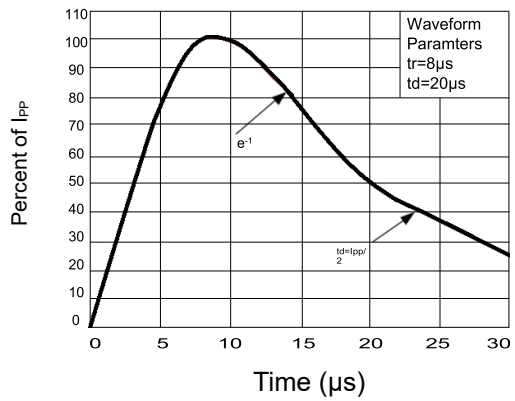



Figure 3: Pulse Waveform

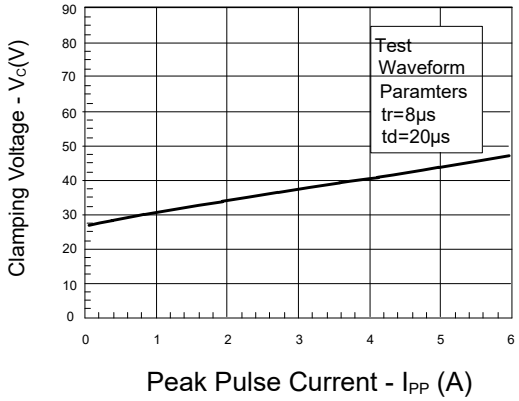
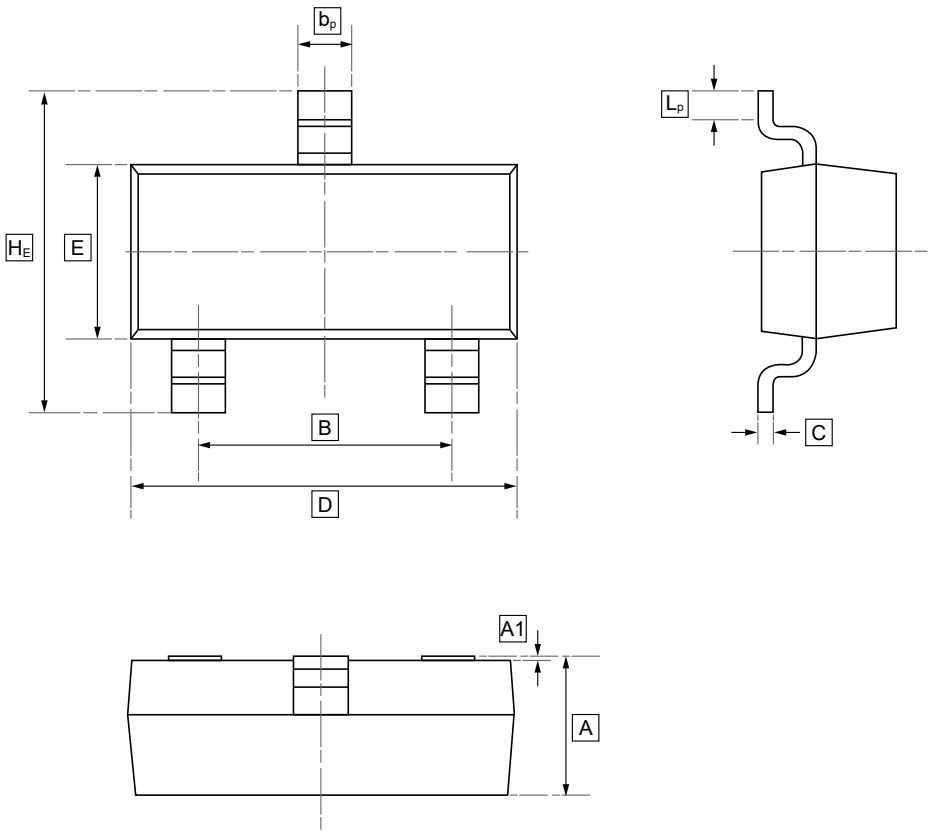



Figure 4: Clamping Voltage vs.Ipp

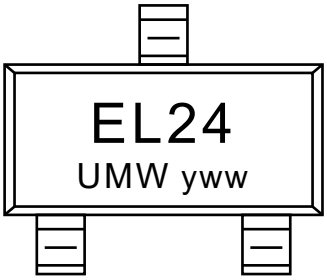
## 9.SOT-23 Package Outline Dimensions




**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 |

## 10.Ordering information




yww: Batch Code

| Order Code | Package | Base QTY | Delivery Mode |
|---|---|---|---|
| UMW ESDCAN24-2BLY | SOT-23 | 3000 | Tape and reel |

## 11.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

When applying our products, please do not exceed the maximum rated values, as this may affect the reliability of the entire system. Under certain conditions, any semiconductor product may experience faults or failures. Buyers are responsible for adhering to safety standards and implementing safety measures during system design, prototyping, and manufacturing when using our products to prevent potential failure risks that could lead to personal injury or property damage.

Unless explicitly stated in writing, UMW products are not intended for use in medical, life-saving, or life-sustaining applications, nor for any other applications where product failure could result in personal injury or death. If customers use or sell the product for such applications without explicit authorization, they assume all associated risks.

When reselling, applying, or exporting, please comply with export control laws and regulations of China, the United States, the United Kingdom, the European Union, and other relevant countries, regions, and international organizations.

This document and any actions by UMW do not grant any intellectual property rights, whether express or implied, by estoppel or otherwise. The product names and marks mentioned herein may be trademarks of their respective owners.