

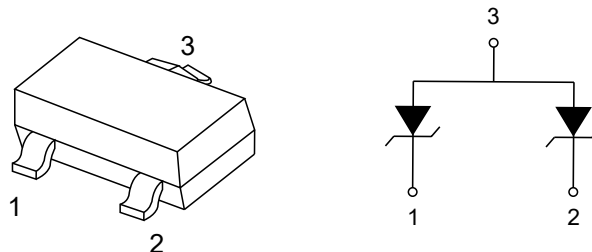
## 1.Features

- 45 Watts peak pulse power ( $t_p=8/20\mu s$ )
- Unidirectional configurations
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j=0.7pF$  typ.)
- Protection two data lines
- IEC 61000-4-2  $\pm 15kV$  contact  $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 3.5A (8/20 $\mu s$ )

## 2.Applications

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

## 3.Pinning information



**SOT-23**



#### 4. Absolute Maximum Rating

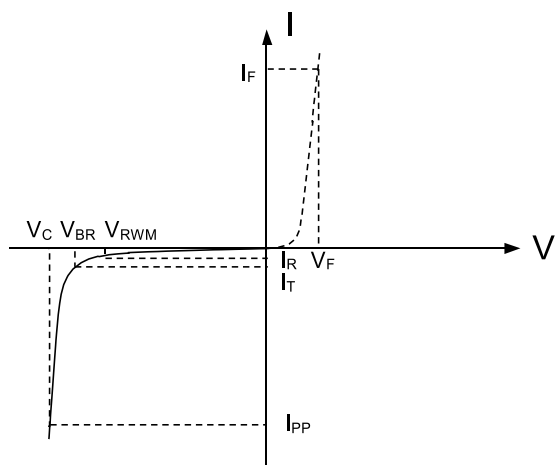
| Parameter                                     | Symbol    | Value          | Units |
|-----------------------------------------------|-----------|----------------|-------|
| Peak Pulse Power ( $t_p=8/20\mu s$ )          | $P_{PP}$  | 45             | Watts |
| Peak Pulse Current ( $t_p=8/20\mu s$ )(note1) | $I_{PP}$  | 3.5            | A     |
| ESD per IEC 61000-4-2(Air)                    | $V_{ESD}$ | 15             | kV    |
| ESD per IEC 61000-4-2(Contact)                |           | 15             | 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    |



## 5. Electrical Characteristics

| Parameter                 | Symbol    | Conditions                   | Min | Typ | Max | Units   |
|---------------------------|-----------|------------------------------|-----|-----|-----|---------|
| Reverse Stand-Off Voltage | $V_{RWM}$ |                              |     |     | 5   | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1mA$                    | 6   | 7   | 8   | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5V, T=25^{\circ}C$  |     | 0.5 | 1   | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu s$              |     |     | 3.5 | A       |
| Clamping Voltage          | $V_C$     | $I_{PP}=3.5A, t_p=8/20\mu s$ |     | 12  | 15  | V       |
| Junction capacitance      | $C_J$     | $V_R=0V, f=1MHz$             |     | 0.7 | 0.8 | pF      |

## 6. Electrical Parameters ( $T_A=25^{\circ}C$ unless otherwise noted )

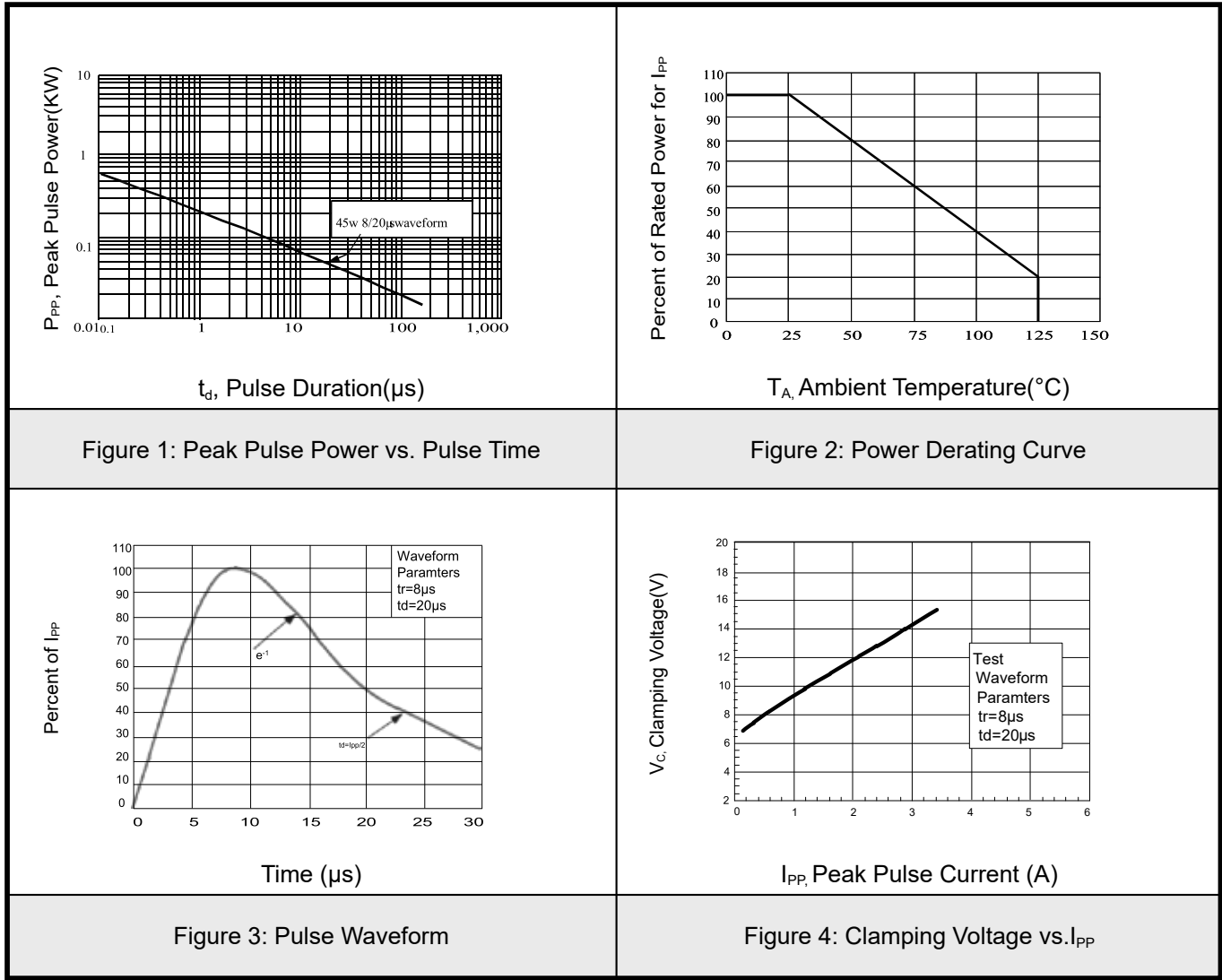


| Symbol    | Parameter                                   |
|-----------|---------------------------------------------|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current @ $V_{RWM}$ |
| $V_{BR}$  | Breakdown Voltage @ $I_T$                   |
| $I_T$     | Test Current                                |

Notes: 8/20 $\mu s$  pulse waveform.

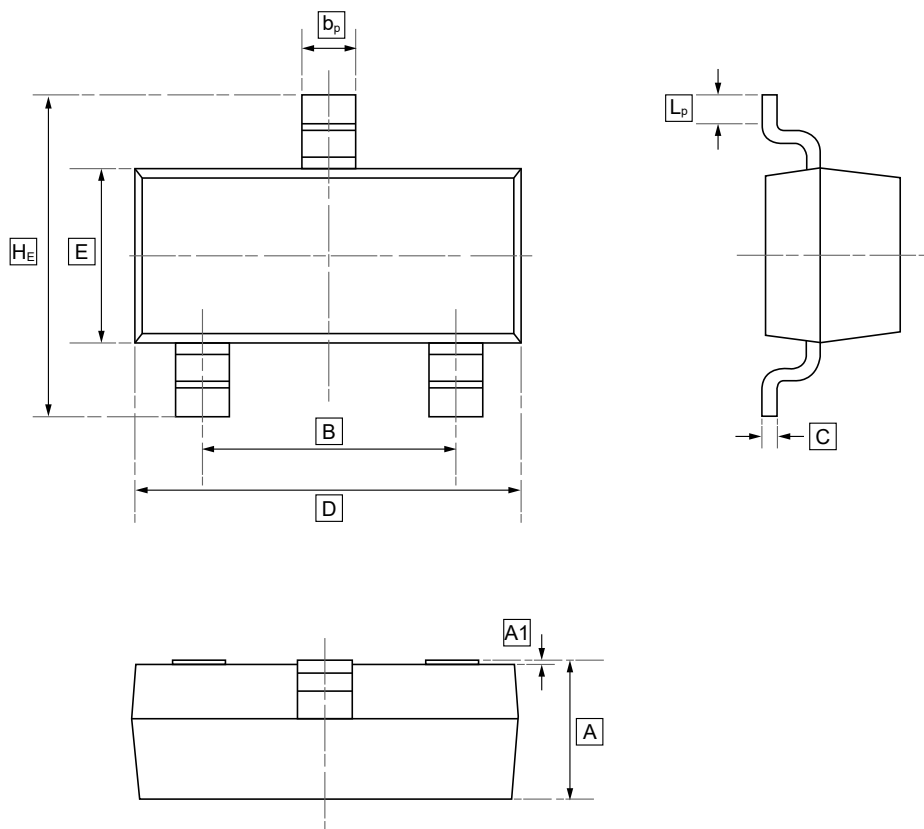


7. Typical characteristic





## 8.SOT-23 Package Outline Dimensions

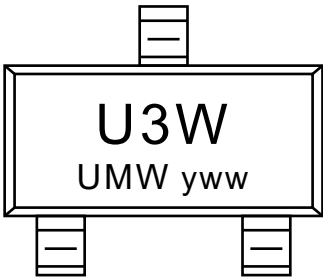


**DIMENSIONS (mm are the original dimensions)**

| 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 PESD5V0X1BT | SOT-23  | 3000     | Tape and reel |



## **10.Disclaimer**

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