

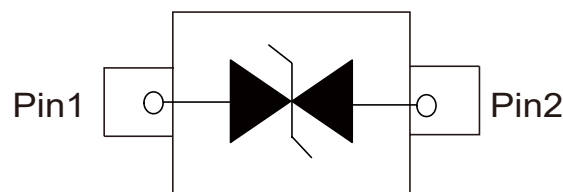
## 1.Features

- 90Watts 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  $\pm 25kV$  contact  $\pm 25kV_{air}$
- IEC 61000-4-4 (EFT) 40A(5/50ns)
- IEC 61000-4-5 (Lightning) 8A(8/20 $\mu s$ )

## 2.Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

## 3.Pinning information



**SOD-523**

## 4.Absolute Maximum Ratings

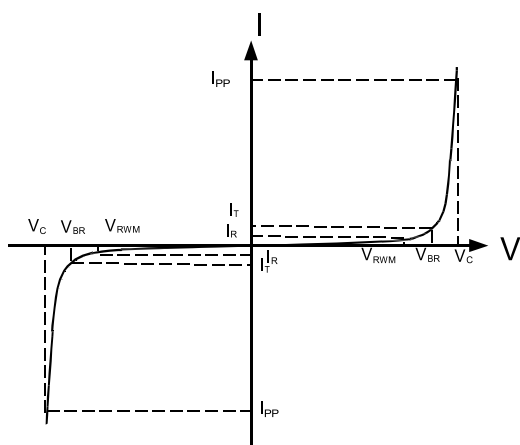
| Parameter                                     | Symbol    | Value          | Units       |
|---|-----------|----------------|-------------|
| Peak Pulse Power ( $t_p=8/20\mu s$ )          | $P_{PP}$  | 90             | Watts       |
| Peak Pulse Current ( $t_p=8/20\mu s$ )(note1) | $I_{PP}$  | 8              | A           |
| ESD per IEC 61000-4-2(Air)                    | $V_{ESD}$ | 25             | kV          |
| ESD per IEC 61000-4-2(Contact)                |           | 25             | kV          |
| Lead Soldering Temperature                    | $T_L$     | 260(10seconds) | $^{\circ}C$ |
| Junction Temperature                          | $T_J$     | -55 to 150     | $^{\circ}C$ |
| Storage Temperature                           | $T_{STG}$ | -55 to 150     | $^{\circ}C$ |



## 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   |     |     | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=5V$ , $T=25^{\circ}C$ |     |     | 0.2 | $\mu A$ |
| Clamping Voltage          | $V_C$     | $I_{PP}=8A$ , $t_p=8/20\mu s$  |     | 11  | 15  | V       |
| Junction capacitance      | $C_J$     | $V_R=0V$ , $f=1MHz$            |     | 18  | 23  | pF      |

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

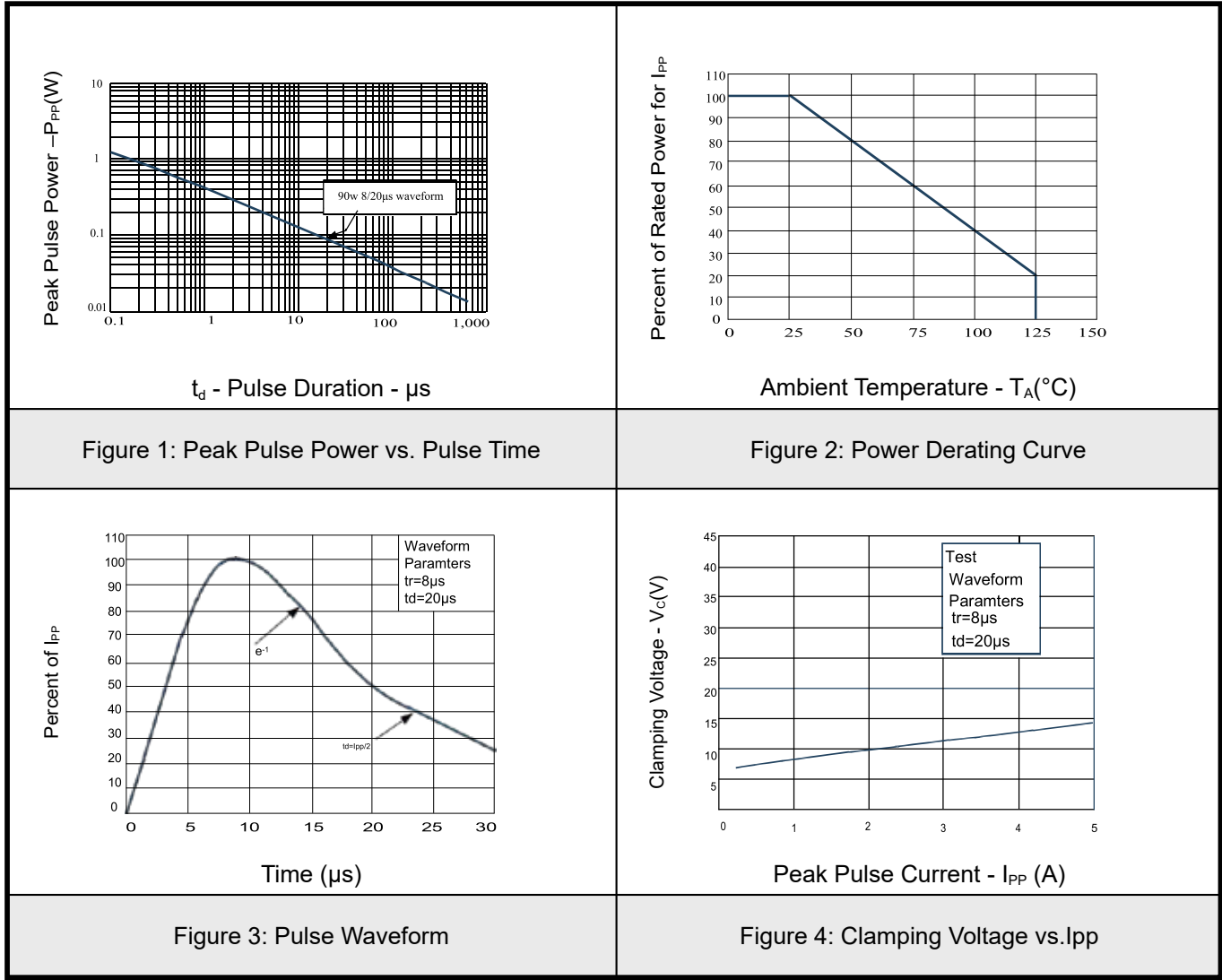


| Symbol    | Parameter                                   |
|-----------|---|
| $I_{PP}$  | Maximum Reverse Peak Pulse Current          |
| $V_C$     | Clamping Voltage @ $I_{PP}$                 |
| $V_{RWM}$ | Working Peak Reverse Voltage                |
| $I_R$     | Maximum Reverse Leakage Current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

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

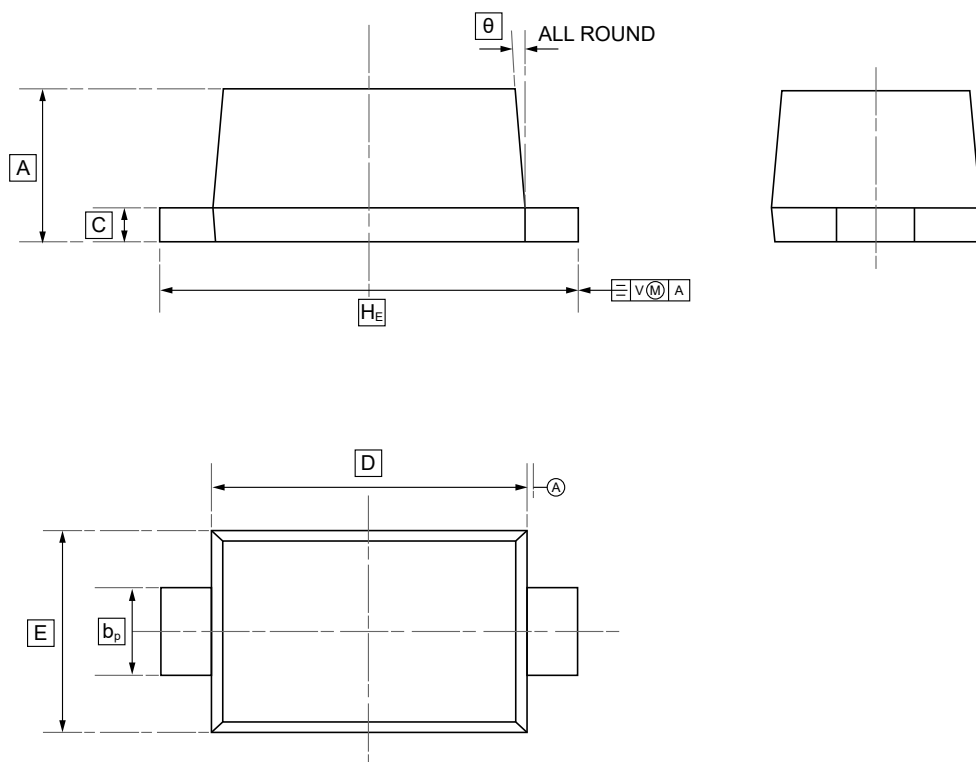


7. Typical characteristic





## 8.SOD-523 Package Outline Dimensions

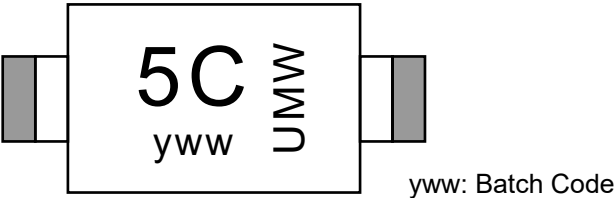


### DIMENSIONS (mm are the original dimensions)

| Symbol | A    | b <sub>p</sub> | C     | D    | E    | H <sub>E</sub> | θ  |
|--------|------|----------------|-------|------|------|----------------|----|
| Min    | 0.58 | 0.3            | 0.100 | 1.15 | 0.75 | 1.5            | 5° |
| Max    | 0.68 | 0.4            | 0.135 | 1.25 | 0.85 | 1.7            |    |



9.Ordering information



| Order Code    | Package | Base QTY | Delivery Mode |
|---------------|---------|----------|---------------|
| UMW D5V0L1B2T | SOD-523 | 3000     | Tape and reel |



## **10.Disclaimer**

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