

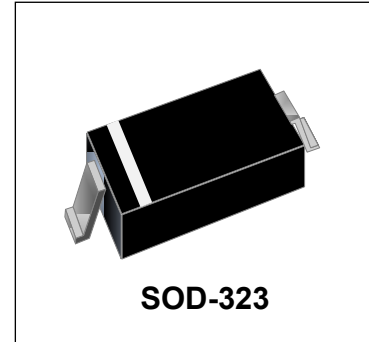


## Features

- 540 watts peak pulse power ( $t_p = 8/20\mu s$ )
- Protects one I/O or power line
- Working Voltages: 36V
- Low Leakage Current
- Response Time is Typically  $< 1\text{ ns}$

## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 18\text{kV}$  (air),  $\pm 15\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 $\mu s$ )



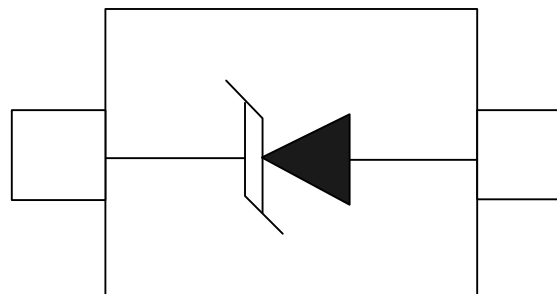
## Mechanical Characteristics

- JEDEC SOD-323 package
- Molding compound flammability rating: UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

## Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

## Schematic & PIN Configuration

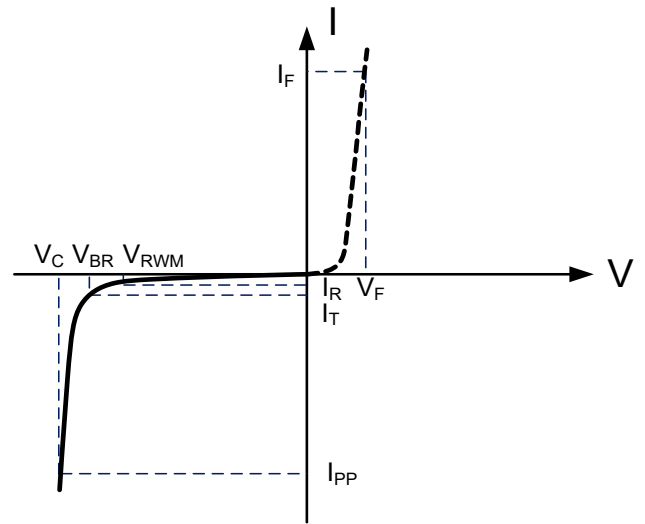


SOD-323 (Top View)

| Absolute Maximum Rating                            |           |              |             |
|--|-----------|--------------|-------------|
| Rating   | Symbol    | Value        | Units       |
| Peak Pulse Power ( $t_p=8/20\mu s$ )               | $P_{PP}$  | 540          | Watts       |
| Peak Forward Voltage ( $I_F = 1A, t_p=8/20\mu s$ ) | $V_{FP}$  | 1.3          | V           |
| Operating Temperature                              | $T_J$     | -55 to + 125 | $^{\circ}C$ |
| Storage Temperature                                | $T_{STG}$ | -55 to +150  | $^{\circ}C$ |

### Electrical Parameters (T=25 $^{\circ}C$ )

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

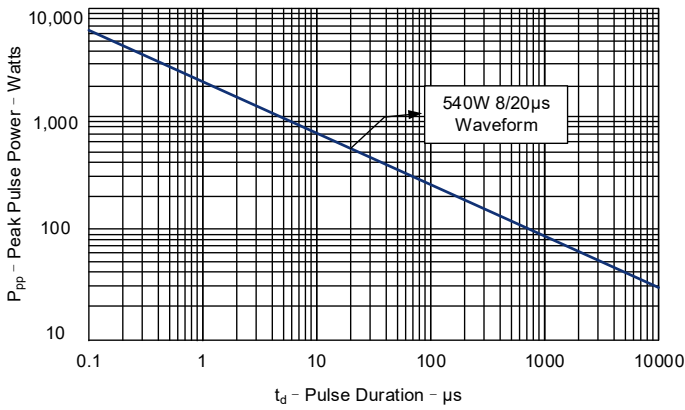


### Electrical Characteristics

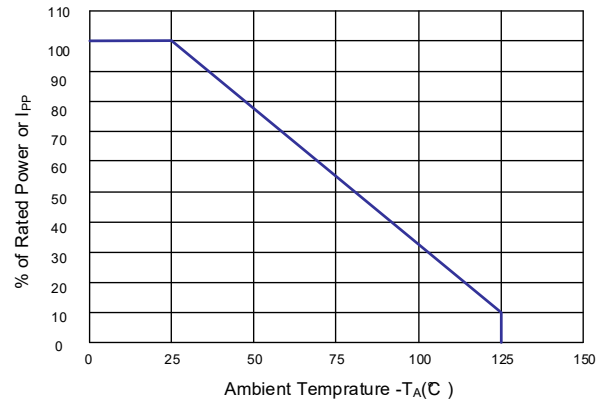
| DW36D-S                   |           |                              |         |         |         |         |
|---------------------------|-----------|------------------------------|---------|---------|---------|---------|
| Parameter                 | Symbol    | Conditions                   | Minimum | Typical | Maximum | Units   |
| Reverse Stand-Off Voltage | $V_{RWM}$ |                              |         |         | 36      | V       |
| Reverse Breakdown Voltage | $V_{BR}$  | $I_T=1mA$                    | 40      |         |         | V       |
| Reverse Leakage Current   | $I_R$     | $V_{RWM}=36V, T=25^{\circ}C$ |         |         | 1       | $\mu A$ |
| Peak Pulse Current        | $I_{PP}$  | $t_p=8/20\mu s$              |         |         | 6       | A       |
| Maximum Clamping Voltage  | $V_C$     | $I_{PP}=6A, t_p=8/20\mu s$   |         | 90      |         | V       |
| Junction Capacitance      | $C_j$     | $V_R=0V, f=1MHz$             |         | 25      |         | pF      |

## Typical Characteristics

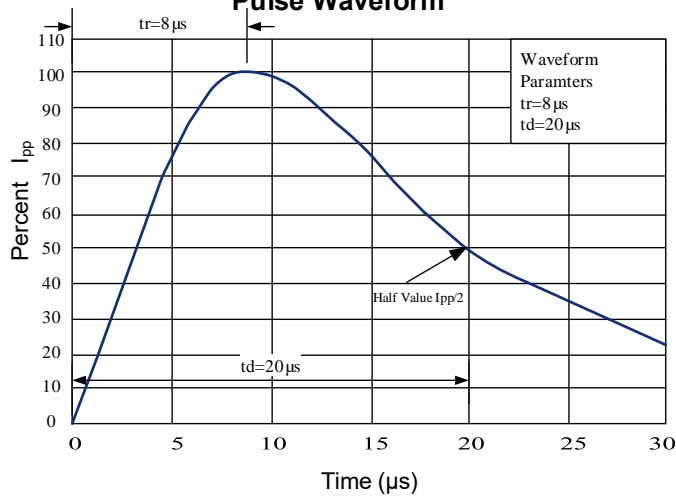
Peak Pulse Power vs. Pulse Time



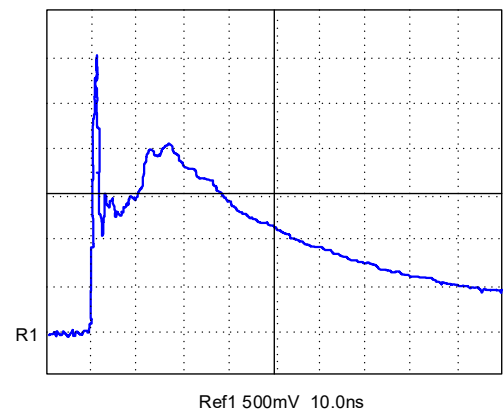
Power Derating Curve



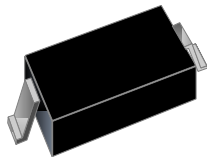
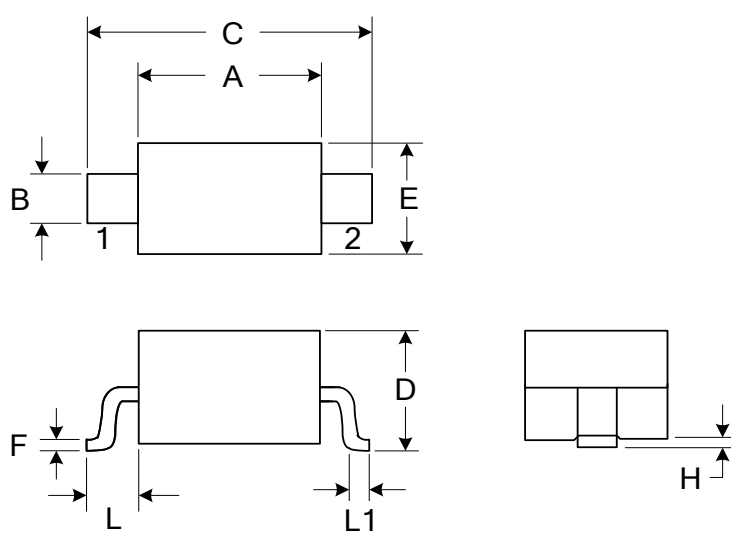
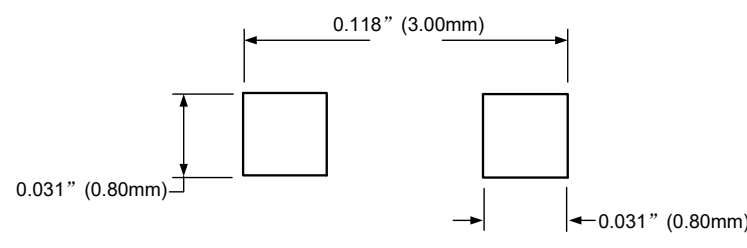
Pulse Waveform



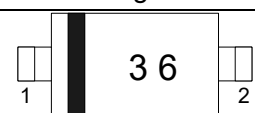
ESD Pulse Waveform (Per IEC 61000-4-2)



## Outline Drawing – SOD-323

| PACKAGE OUTLINE  |            | <br>SOD-323                          |          |       |  |
|--|------------|---|----------|-------|--|
|                           |            | <b>DIMENSIONS</b>   |          |       |  |
| SYMBOL   | MILLIMETER |   | INCHES   |       |  |
|  | MIN        | MAX   | MIN      | MAX   |  |
| A  | 1.60       | 1.80  | 0.063    | 0.071 |  |
| B  | 0.25       | 0.35  | 0.010    | 0.014 |  |
| C  | 2.50       | 2.70  | 0.098    | 0.106 |  |
| D  | 0.80       | 1.00  | 0.031    | 0.039 |  |
| E  | 1.20       | 1.40  | 0.047    | 0.055 |  |
| F  | 0.08       | 0.15  | 0.003    | 0.006 |  |
| L  | 0.475 REF  |   | 0.019REF |       |  |
| L1   | 0.25       | 0.40  | 0.010    | 0.016 |  |
| H  | 0.00       | 0.10  | 0.000    | 0.004 |  |
| <b>MOUNTING PAD</b><br> |            | <b>Notes</b><br>1. Controlling Dimensions in Millimeters.<br>2. Dimensions are exclusive of mold flash and metal burrs. |          |       |  |

## Marking Codes

| Part Number | Marking Code  |
|-------------|---|
| DW36D-S     |  |

## Package Information

Qty: 3k/Reel