



## 350W Bi-directional TVS Diode Array

### FEATURES

- For surface mounted applications
- Low-profile package suited for automatic installed
- Transient protection for data lines

### APPLICATIONS

- Use in sensitive electronics protection

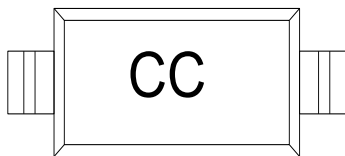
### MECHANICAL DATA

- Case : Molded, plastic SOD-323
- Polarity : Bi-direction
- Epoxy : UL94-V0 rated flame retardant

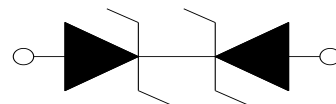
### IEC COMPATIBILITY

- IEC 61000-4-2(ESD)  $\pm 30\text{kV}$  (Air).
- IEC 61000-4-2(ESD)  $\pm 30\text{kV}$  (Contact).

### SOD-323 PACKAGE



### SCHEMATIC & PIN CONFIGURATION



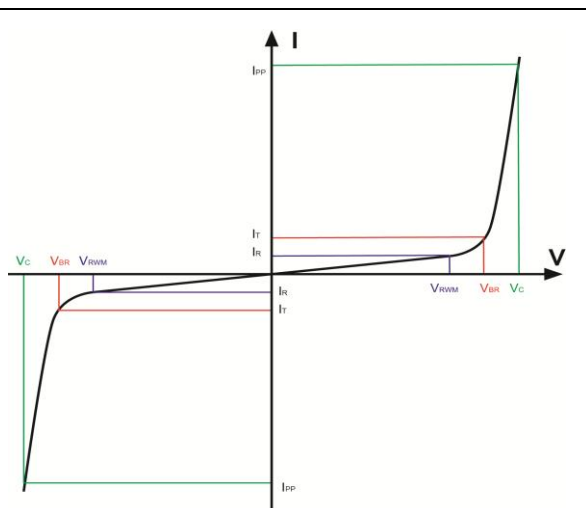
### Absolute Maximum Ratings ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| Symbol                 | Description                                       | Value       | Unit |
|------------------------|---------------------------------------------------|-------------|------|
| <b>P<sub>PP</sub></b>  | Peak Pulse Power (8/20μs)                         | 350         | Watt |
| <b>I<sub>PP</sub></b>  | Peak Pulse Current (8/20μs)                       | 26          | Amp  |
| <b>V<sub>ESD</sub></b> | ESD Voltage per IEC61000-4-2(Air)                 | ±30         | KV   |
|                        | ESD Voltage per IEC61000-4-2(Contact)             | ±30         |      |
| <b>T<sub>L</sub></b>   | Maximum Lead Temperature for Soldering during 10s | 260         | °C   |
| <b>T<sub>J</sub></b>   | Operating Temperature Range                       | -50 to +125 | °C   |
| <b>T<sub>STG</sub></b> | Storage Temperature Range                         | -50 to +150 | °C   |

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

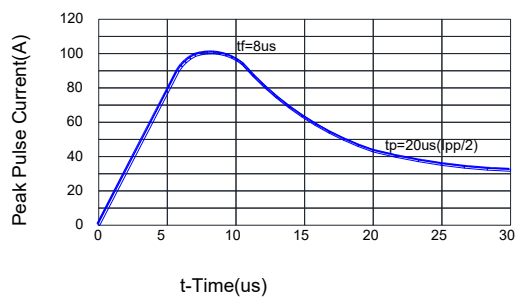
| Symbol    | Parameter               | Condition      | Min. | Typ. | Max. | Unit    |
|-----------|-------------------------|----------------|------|------|------|---------|
| $V_{BR}$  | Breakdown Voltage       | $I_T=1.0mA$    | 5.5  | 6.8  | 8.5  | Volt    |
| $V_{RWM}$ | Reverse Working Voltage |                |      |      | 5.0  | Volt    |
| $I_R$     | Reverse Current         | $V_R=5V$       |      |      | 1.0  | $\mu A$ |
| $V_C$     | Clamping Voltage        | @ $I_{PP}=7A$  |      |      | 7    | Volt    |
|           |                         | @ $I_{PP}=26A$ |      |      | 10.8 | Volt    |
| $C_T$     | Junction Capacitance    |                |      | 65   |      | pF      |

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

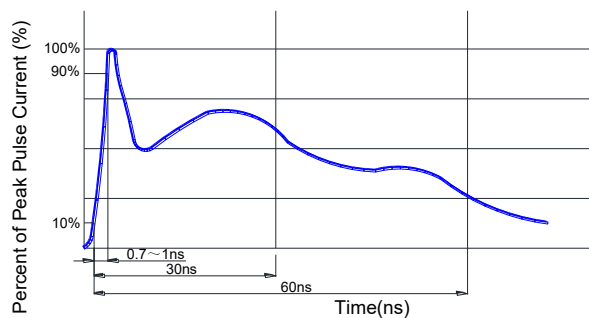


## Characteristics Curves

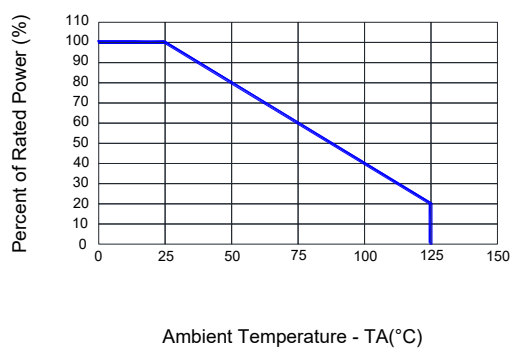
**Fig 1. 8/20us Pulse Waveform**



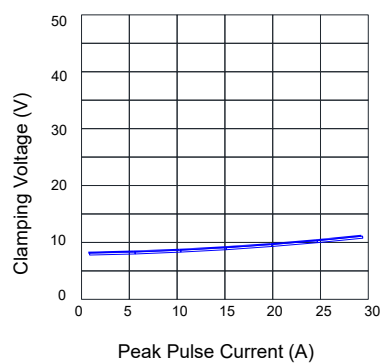
**Fig 2. ESD Pulse Waveform (according to IEC 61000-4-2)**



**Fig 3. Power Derating Curve**

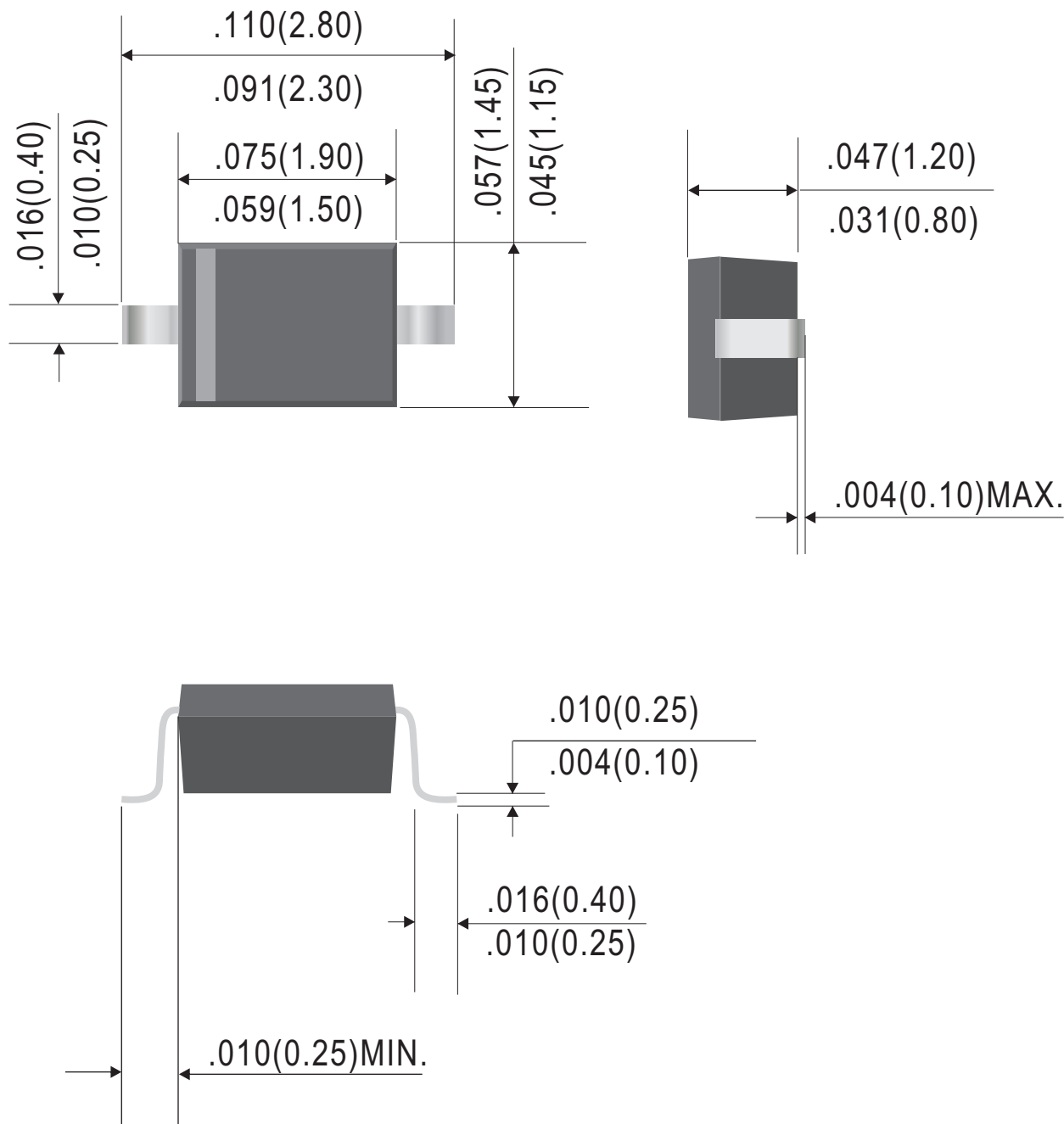


**Fig 4. VC vs. IPP**



# Outline Drawing

# SOD-323



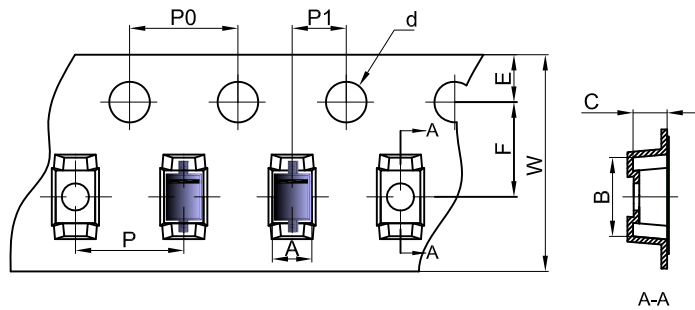
Dimensions in inches and (millimeters)

Rev.F

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### Packing information

#### SOD-323 Embossed Carrier Tape

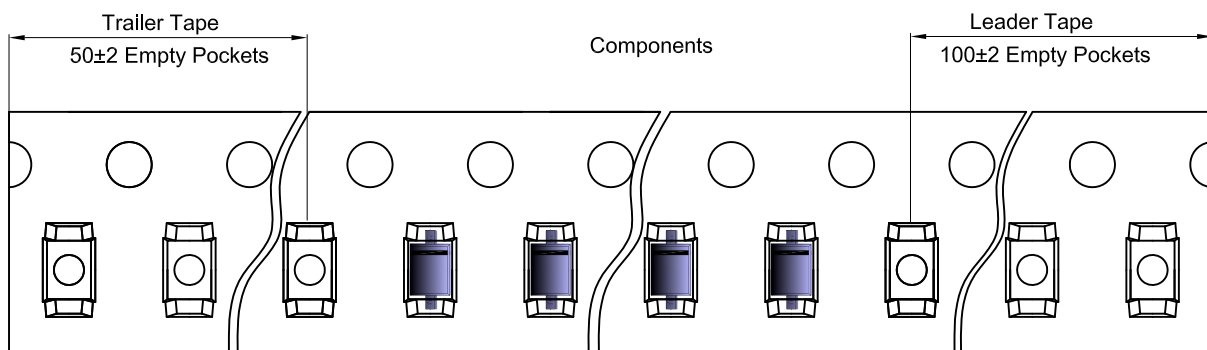


#### Packaging Description:

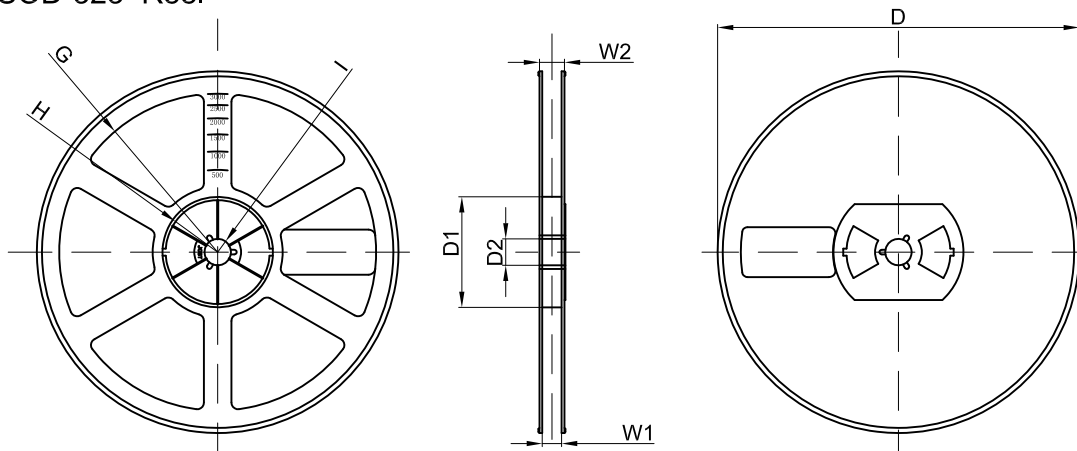
SOD-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

| Dimensions are in millimeter |      |     |      |       |      |      |      |      |      |      |
|------------------------------|------|-----|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B   | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOD-323                      | 1.48 | 3.3 | 1.25 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

#### SOD-323 Tape Leader and Trailer



#### SOD-323 Reel



| Dimensions are in millimeter |         |       |       |        |        |       |      |       |
|------------------------------|---------|-------|-------|--------|--------|-------|------|-------|
| Reel Option                  | D       | D1    | D2    | G      | H      | I     | W1   | W2    |
| 7"Dia                        | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

**Ordering Information:**

| Device PN                                                     | Marking <sup>(4)</sup> | Packing                |
|---------------------------------------------------------------|------------------------|------------------------|
| SESD3Z5C-T <sup>(1)</sup> H <sup>(2)</sup> -WS <sup>(3)</sup> | CC                     | Tape&Reel: 3 Kpcs/Reel |

Note: (1) Packing code, Tape & Reel Packing

(2) RoHS product for packing code suffix "G" : Halogen free product for packing code suffix "H"

(3) Willas brand abbreviation, Label Type does not display

(4) There may be additional marking, which relates to the lot trace code information (data code and vendor code), the logo or the environmental category on the device

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