

CDSOD323-TxxLC - TVS Diode Series



Electrical & Thermal Characteristics (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

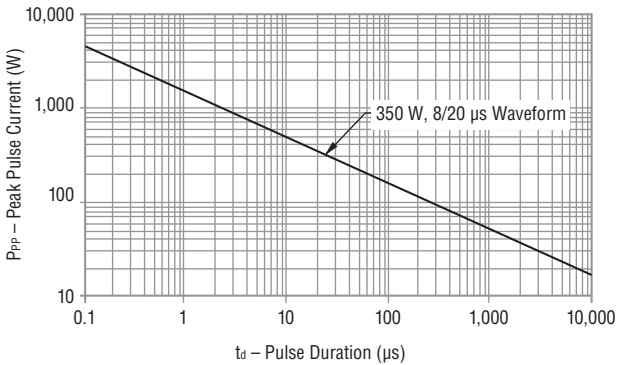
| Parameter | Symbol | CDSOD323- | | | | | | Unit |
|---|----------|---------------|---------------|--------------|--------------|--------------|--------------|---------------|
| | | Uni-T15L | Bi-T15LC | Uni-T18L | Bi-T18LC | Uni-T24L | Bi-T24LC | |
| Min. Breakdown Voltage @ 1 mA | V_{BR} | 16.7 | 16.7 | 20.0 | 20.0 | 26.7 | 26.7 | V |
| Working Peak Voltage | V_M | 15.0 | 15.0 | 18.0 | 18.0 | 24.0 | 24.0 | V |
| Maximum Clamping Voltage @ $I_P = 1\text{ A}$ | V_C | 24.0 | 24.0 | 29.0 | 29.0 | 43.0 | 43.0 | V |
| Typical Clamping Voltage @ $8/20\ \mu\text{s}$ @ I_{PP} | V_C | 31.8 V @ 10 A | 31.8 V @ 10 A | 45.0 V @ 8 A | 45.0 V @ 8 A | 56.0 V @ 6 A | 56.0 V @ 6 A | V |
| Maximum Leakage Current @ V_{WM} | I_D | 1 | | | | | | μA |
| Typical Capacitance @ 0 V, 1 MHz | C_J | 1.0 | | | | | | pF |

Notes:

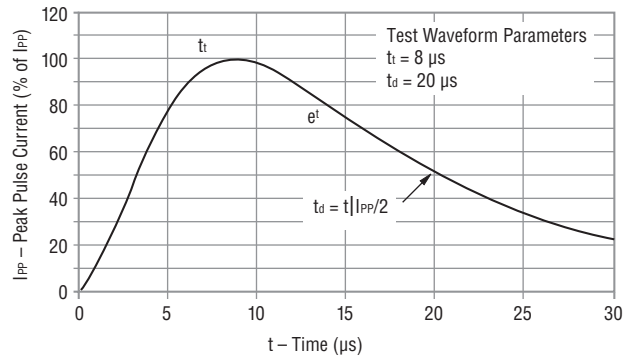
1. Part numbers with suffix "C" indicate bidirectional device, i.e. CDSOD323-T05LC.
2. For bidirectional devices only, the electrical specifications apply in both directions.
3. Unidirectional only: Positive potential is applied from pin 1 to 2.

Performance Graphs

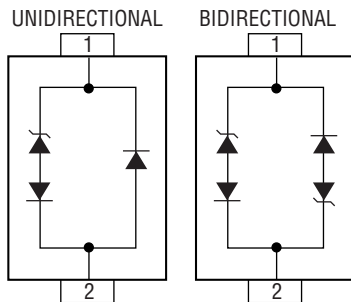
Peak Pulse Power vs. Pulse Time



Pulse Waveform



Block Diagram



How to Order

Common Code _____ **CD SOD323 - T 05 LC**

Chip Diode _____

Package _____
 • SOD323 = SOD-323 Package

Model _____
 T = Transient Voltage Suppressor

Working Peak Reverse Voltage _____
 05 = 5 V_{RWM} (Volts)

Suffix _____
 L = Ultralow Capacitance Unidirectional Diode
 LC = Ultralow Capacitance Bidirectional Diode

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

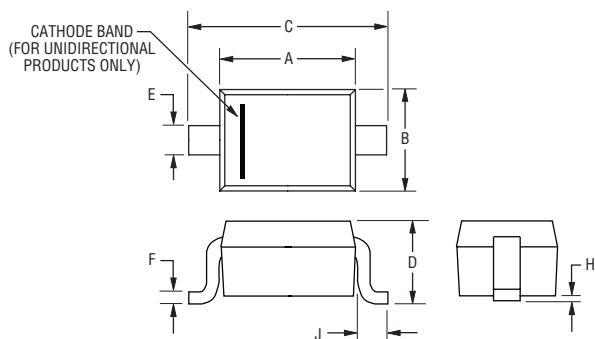
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Product Dimensions

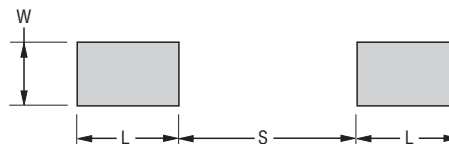
This is a molded JEDEC SOD-323 package with lead free 100 % Sn plating on the terminations. It weighs approximately 30 mg and has a flammability rating of UL 94V-0.



| Dimensions | |
|------------|---------------------------------------|
| A | $\frac{1.60 - 1.90}{(0.063 - 0.075)}$ |
| B | $\frac{1.15 - 1.45}{(0.045 - 0.057)}$ |
| C | $\frac{2.39 - 2.70}{(0.094 - 0.106)}$ |
| D | $\frac{0.92 - 1.14}{(0.036 - 0.045)}$ |
| E | $\frac{0.25 - 0.40}{(0.010 - 0.016)}$ |
| F | $\frac{0.08 - 0.20}{(0.003 - 0.008)}$ |
| H | $\frac{0.13}{(0.005)}$ MAX. |
| J | $\frac{0.30 - 0.45}{(0.012 - 0.018)}$ |

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Recommended Footprint



| Dimensions (Nominal) | |
|----------------------|------------------------|
| L | $\frac{0.80}{(0.031)}$ |
| S | $\frac{1.40}{(0.055)}$ |
| W | $\frac{0.50}{(0.020)}$ |

DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

Typical Part Marking

Each device has device marking outlined below and the unidirectional devices have an additional Polarity Band indicating the cathode.

| | |
|----------------------|-----|
| CDSOD323-T05L | T5 |
| CDSOD323-T05LC | S5 |
| CDSOD323-T08L | T8 |
| CDSOD323-T08LC | S8 |
| CDSOD323-T12L | T12 |
| CDSOD323-T12LC | S12 |
| CDSOD323-T15L | T15 |
| CDSOD323-T15LC | S15 |
| CDSOD323-T18L | T18 |
| CDSOD323-T18LC | S18 |
| CDSOD323-T24L | T24 |
| CDSOD323-T24LC | S24 |

Environmental Specifications

| | |
|----------------------------------|----|
| Moisture Sensitivity Level | 1 |
| ESD Classification (HBM) | 3B |

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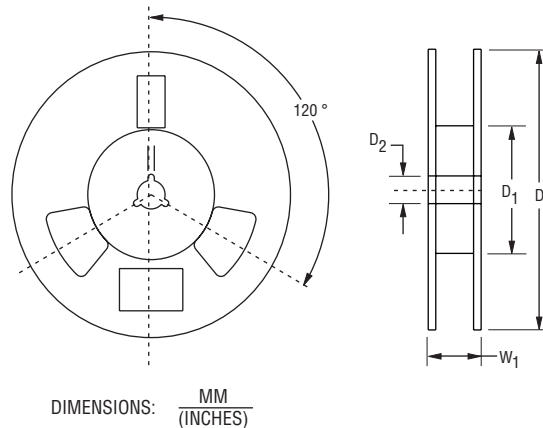
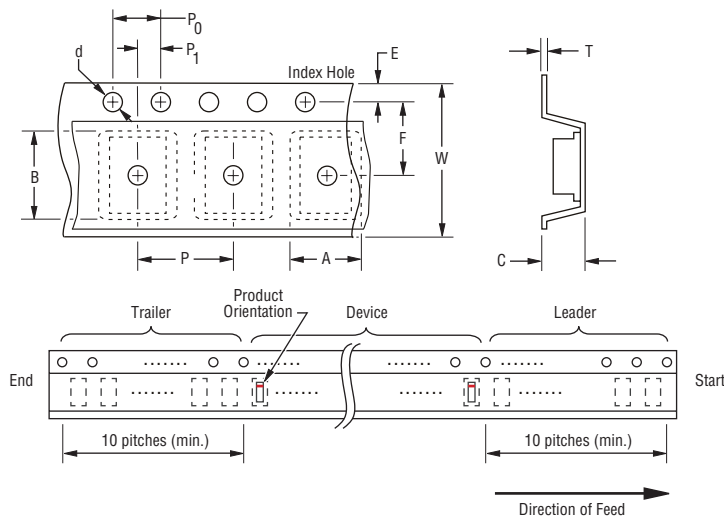
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Packaging Information

The surface mount product is packaged in an 8 mm x 4 mm tape and reel format per EIA-481 standard.



Devices are packed in accordance with EIA standard RS-481-A.

| Item | Symbol | SOD323 |
|------------------------|----------------|---|
| Carrier Width | A | $\frac{1.55 \pm 0.10}{(0.061 \pm 0.004)}$ |
| Carrier Length | B | $\frac{2.90 \pm 0.10}{(0.114 \pm 0.004)}$ |
| Carrier Depth | C | $\frac{1.35 \pm 0.10}{(0.053 \pm 0.004)}$ |
| Sprocket Hole | d | $\frac{1.55 \pm 0.05}{(0.061 \pm 0.002)}$ |
| Reel Outside Diameter | D | $\frac{178}{(7.008)}$ |
| Reel Inner Diameter | D ₁ | $\frac{80.0}{(3.150)}$ Min. |
| Feed Hole Diameter | D ₂ | $\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$ |
| Sprocket Hole Position | E | $\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$ |
| Punch Hole Position | F | $\frac{3.50 \pm 0.05}{(0.138 \pm 0.002)}$ |
| Punch Hole Pitch | P | $\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$ |
| Sprocket Hole Pitch | P ₀ | $\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$ |
| Embossment Center | P ₁ | $\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$ |
| Overall Tape Thickness | T | $\frac{0.20 \pm 0.10}{(0.008 \pm 0.004)}$ |
| Tape Width | W | $\frac{8.00 \pm 0.20}{(0.315 \pm 0.008)}$ |
| Reel Width | W ₁ | $\frac{13.5}{(0.531)}$ Max. |
| Quantity per Reel | -- | 3,000 |

BOURNS®

Asia-Pacific:

Tel: +886-2 2562-4117
Email: asiacus@bourns.com

Europe:

Tel: +36 88 885 877
Email: eurocus@bourns.com

The Americas:

Tel: +1-951 781-5500
Email: americus@bourns.com

www.bourns.com

REV. 12/19

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