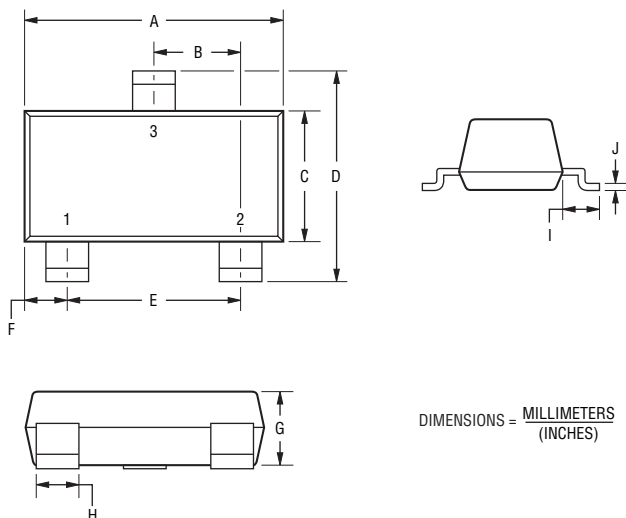


CDSOT23-0502B - Surface Mount TVS Diode

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Product Dimensions

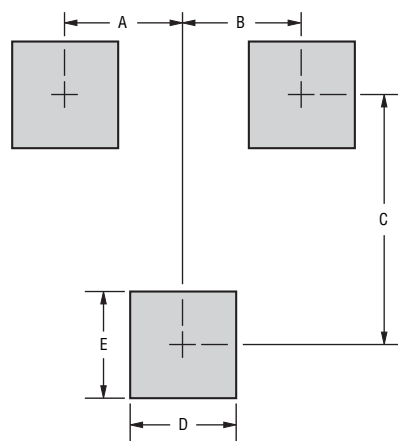
This is a molded SOT23-3L package with lead free 100 % Matte Sn on the lead frame. It weighs approximately 8 mg and has a flammability rating of UL 94V-0.



DIMENSIONS = $\frac{\text{MILLIMETERS}}{(\text{INCHES})}$

| Dimensions | |
|------------|---------------------------------------|
| A | $\frac{2.82 - 3.02}{(0.111 - 0.119)}$ |
| B | $\frac{0.95}{(0.037)}$ TYP. |
| C | $\frac{1.20 - 1.40}{(0.047 - 0.055)}$ |
| D | $\frac{2.25 - 2.55}{(0.089 - 0.100)}$ |
| E | $\frac{1.80 - 2.00}{(0.071 - 0.079)}$ |
| F | $\frac{0.45 - 0.60}{(0.018 - 0.024)}$ |
| G | $\frac{0.90 - 1.05}{(0.035 - 0.041)}$ |
| H | $\frac{0.30 - 0.40}{(0.012 - 0.016)}$ |
| I | $\frac{0.55}{(0.022)}$ REF. |
| J | $\frac{0.08 - 0.15}{(0.003 - 0.006)}$ |

Recommended Footprint



DIMENSIONS = $\frac{\text{MILLIMETERS}}{(\text{INCHES})}$

| Dimensions | |
|------------|------------------------|
| A | $\frac{0.95}{(0.037)}$ |
| B | $\frac{0.95}{(0.037)}$ |
| C | $\frac{2.00}{(0.079)}$ |
| D | $\frac{0.85}{(0.033)}$ |
| E | $\frac{0.85}{(0.033)}$ |

How to Order

Common Code CD SOT23 - 05 02 B
 Chip Diode
 Package SOT23 = SOT-23-3L Package
 Working Peak Voltage 05 = 5 V
 Lines 02 = 2 Lines
 Suffix B = Bidirectional Diode

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

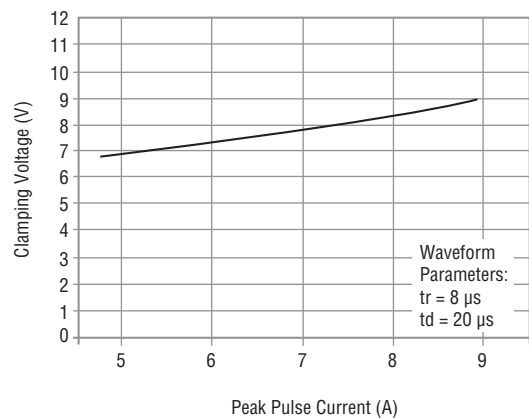
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CDSOT23-0502B - Surface Mount TVS Diode

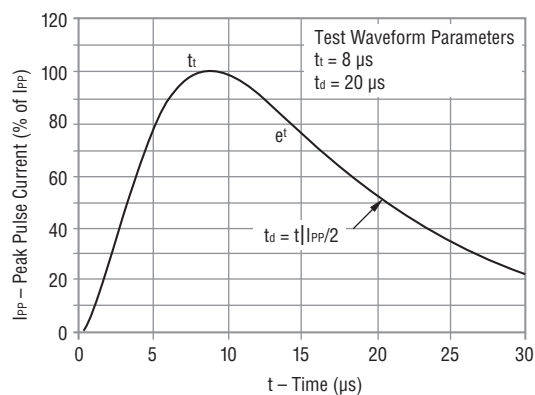
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Rating & Characteristic Curves

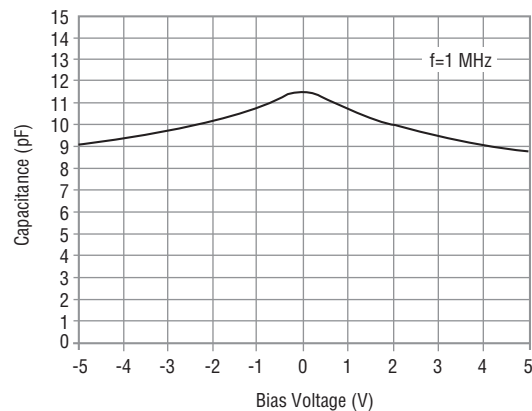
Clamping Voltage vs Peak Pulse Current



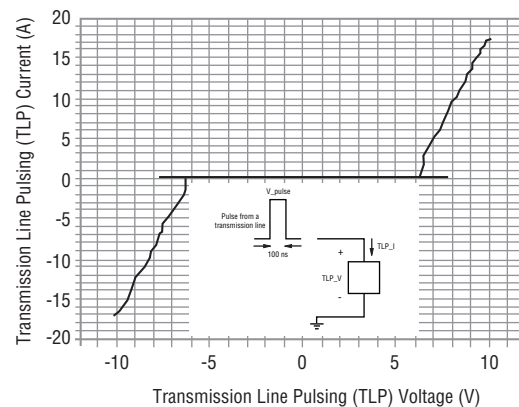
Pulse Waveform



Typical variation of C_{IN} vs. V_{IN}



Transmission Line Pulse Measurement



Typical Part Marking

CDSOT23-0502B 52B

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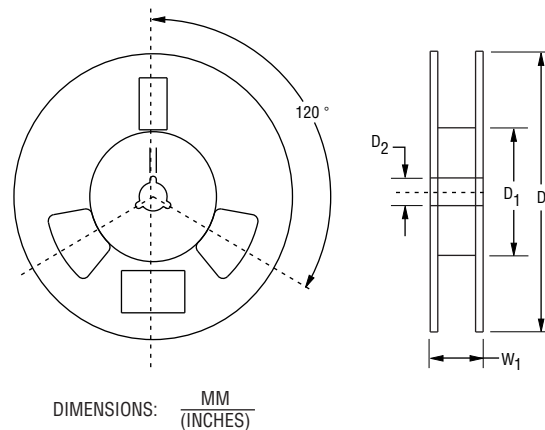
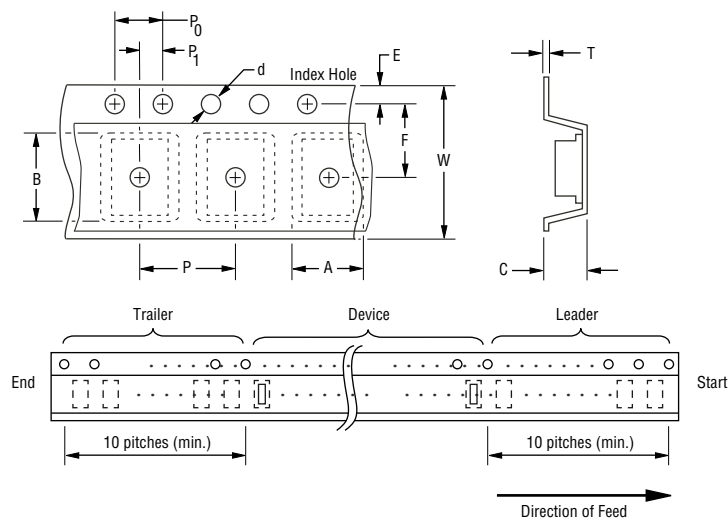
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CDSOT23-0502B - Surface Mount TVS Diode

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Packaging Information

The product is dispensed in tape and reel format (see diagram below).



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

| Item | Symbol | SOT-23 |
|------------------------|----------------|---|
| Carrier Width | A | $\frac{2.25 \pm 0.10}{(0.088 - 0.004)}$ |
| Carrier Length | B | $\frac{2.34 \pm 0.10}{(0.092 - 0.004)}$ |
| Carrier Depth | C | $\frac{1.22 \pm 0.10}{(0.048 - 0.004)}$ |
| Sprocket Hole | d | $\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$ |
| Reel Outside Diameter | D | $\frac{178}{(7.008)}$ |
| Reel Inner Diameter | D ₁ | $\frac{50.0}{(1.969)}$ 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 | $\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$ |
| 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 | $\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$ |
| Reel Width | W ₁ | $\frac{14.4}{(0.567)}$ Max. |
| Quantity per Reel | -- | 3,000 |

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REV. 08/19

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