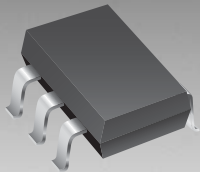


\*RoHS COMPLIANT



**BOURNS®**

## Features

- RoHS compliant\*
- Unidirectional & bidirectional configurations
- Protects 4 or 5 lines
- ESD, EFT & surge protection

## Applications

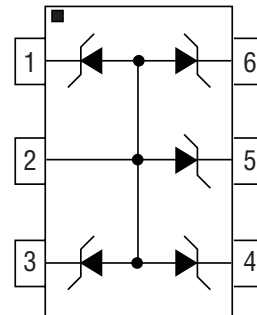
- Cell phones
- PDAs and notebooks
- Digital cameras
- MP3 Players and GPS

# CDSOT563-T05C – SMT TVS Diode Array

## General Information

The CDSOT563-T05C device provides ESD and EFT protection for high speed data ports meeting IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) requirements. The Transient Voltage Suppressor array offers a Working Peak Reverse Voltage of 5 V.

The SOT563 packaged device will mount directly onto the industry standard SOT563 footprint. Bourns® Chip Diodes are easy to handle with standard pick and place equipment and the flat configuration minimizes roll away.



## Electrical & Thermal Characteristics (@ T<sub>A</sub> = 25 °C Unless Otherwise Noted)

| Parameter   | Symbol           | CDSOT563-T05C | Unit |
|---|------------------|---------------|------|
| Peak Pulse Power (t <sub>p</sub> = 8/20 μs) <sup>(NOTE 1)</sup> | P <sub>PK</sub>  | 100           | W    |
| Peak Pulse Current (t <sub>p</sub> = 8/20 μs)                   | I <sub>PPM</sub> | 9             | A    |
| Storage Temperature   | T <sub>STG</sub> | -55 to +150   | °C   |
| Operating Temperature   | T <sub>OPR</sub> | -55 to +150   | °C   |
| Minimum Breakdown Voltage @ 1 mA                                | V <sub>BR</sub>  | 6             | V    |
| Maximum Working Peak Voltage                                    | V <sub>M</sub>   | 5             | V    |
| Maximum Clamping Voltage @ 8/20 μs @ I <sub>PP</sub>            | V <sub>PP</sub>  | 12            | V    |
| Maximum Leakage Current @ V <sub>WM</sub>                       | I <sub>L</sub>   | 1             | μA   |
| Maximum Forward Voltage @ 10 mA                                 | V <sub>F</sub>   | 1             | V    |
| Typical Capacitance @ 0 V, 1 MHz                                | C <sub>P</sub>   | 40            | pF   |

Notes:

1. See Peak Pulse Power vs. Pulse Time.

**BOURNS®**

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[www.bourns.com](http://www.bourns.com)

\*RoHS Directive 2002/95/EC Jan 27, 2003 including Annex.

Specifications are subject to change without notice.

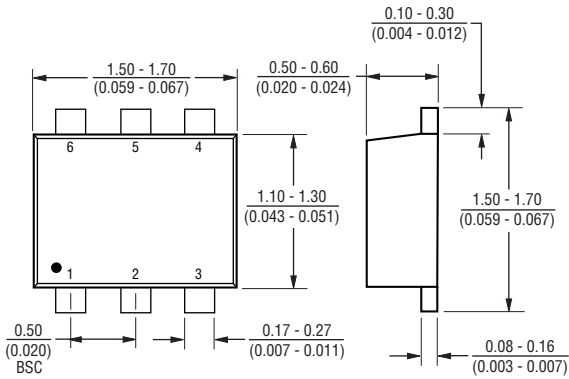
Customers should verify actual device performance in their specific applications.

# CDSOT563-T05C – SMT TVS Diode Array



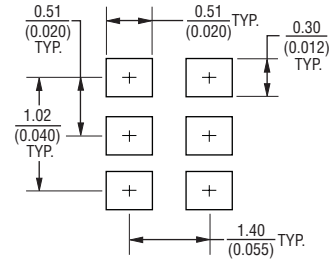
## Product Dimensions

This is an RoHS compliant molded JEDEC SOT-563 package with 100 % Tin (Sn) on the lead frame. It weighs approximately 15 mg and has a flammability rating of UL 94V-0.



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

## Recommended Footprint



## How To Order

Common Code CD SOT563 - T 05C

CD = Chip Diode

Package SOT563 = SOT-563 Package

Model T = Transient Voltage Suppressor Diode

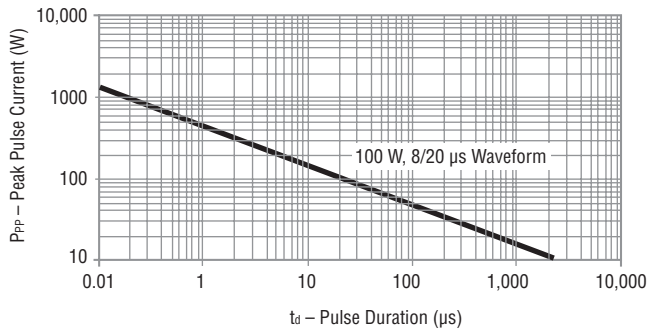
Maximum Working Peak Voltage 05C = 5 V

## Typical Part Marking

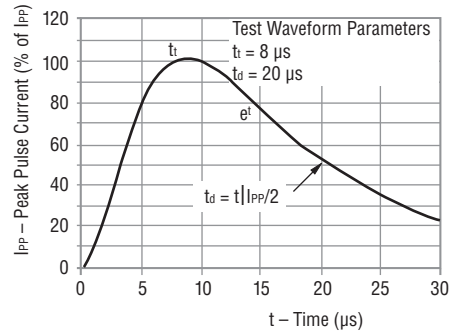
CDSOT563-T05C .....E5U

## Performance Graphs

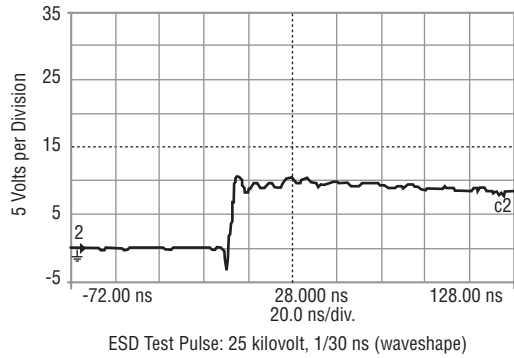
### Peak Pulse Power vs Pulse Time



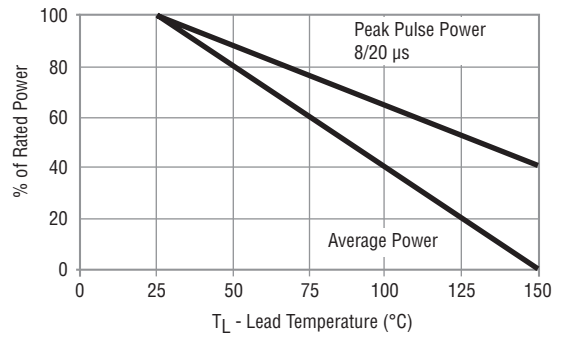
### Pulse Waveform



### Overshoot & Clamping Voltage



### Power Derating Curve

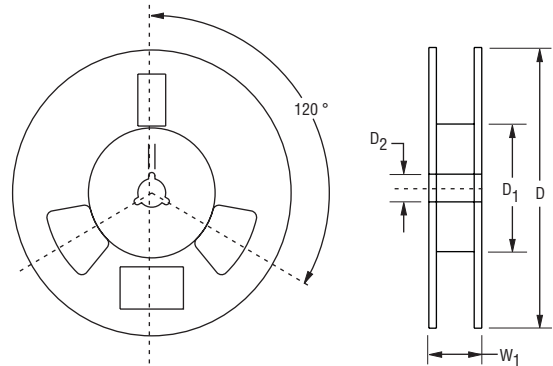
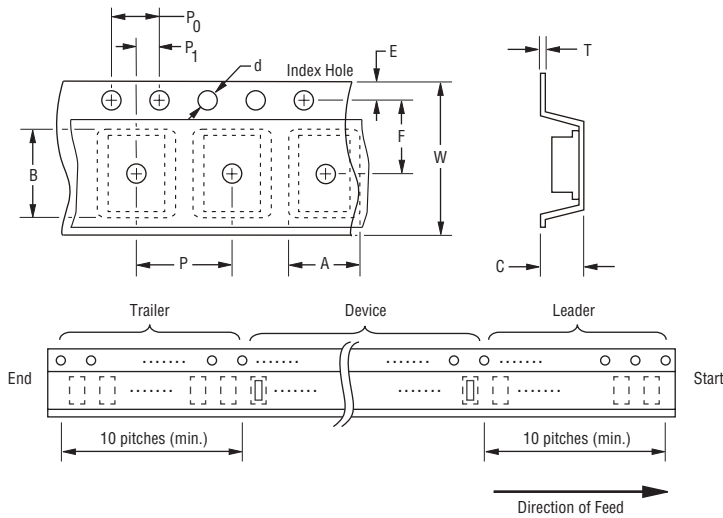


# CDSOT563-T05C – SMT TVS Diode Array

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## Packaging Information

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



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

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

| Item                   | Symbol         | SOT-563                                    |
|------------------------|----------------|--|
| Carrier Width          | A              | $\frac{1.78 \pm 0.005}{(0.069 \pm 0.002)}$ |
| Carrier Length         | B              | $\frac{1.78 \pm 0.005}{(0.069 \pm 0.002)}$ |
| Carrier Depth          | C              | $\frac{0.69 \pm 0.05}{(0.027 \pm 0.002)}$  |
| 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 <sub>1</sub> | $\frac{50.0}{(1.969)}$ MIN.                |
| Feed Hole Diameter     | D <sub>2</sub> | $\frac{13.0 \pm 0.20}{(0.512 \pm 0.008)}$  |
| 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 <sub>0</sub> | $\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$  |
| Embossment Center      | P <sub>1</sub> | $\frac{2.00 \pm 0.05}{(0.079 \pm 0.002)}$  |
| 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 <sub>1</sub> | $\frac{14.4}{(0.567)}$ MAX.                |
| Quantity per Reel      | --             | 3000                                       |

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Customers should verify actual device performance in their specific applications.

REV. 06/11