

Features

- Low leakage current
- RoHS compliant*
- Low capacitance - 9 pF
- ESD protection >40 kV

Applications

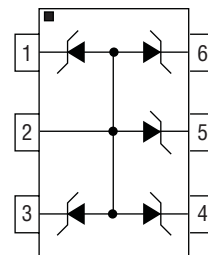
- Computer notebooks
- Cellular phones
- Personal Digital Assistants (PDAs)
- Video equipment

CDSOT963-T05C - Surface Mount TVS Diode

General Information

The CDSOT963-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 and Minimum Breakdown Voltage of 6 V.

The SOT963 packaged device will mount directly onto the industry standard SOT963 footprint. Bourns® Chip Diodes are easy to handle with standard pick and place equipment and their flat configuration minimizes roll away.



Electrical & Thermal Characteristics (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	CDSOT963-T05C	Unit
Peak Pulse Power (t _p = 8/20 μs) (See Fig 1)	P _{PK}	25	W
Storage Temperature	T _{STG}	-55 to +150	°C
Operating Temperature	T _{OPR}	-55 to +150	°C
Minimum Breakdown Voltage @ 1 mA	V _{BR}	6	V
Maximum Working Peak Voltage	V _{WM}	5	V
Maximum Clamping Voltage @ 8/20 μs @ I _{PP}	V _{PP}	12 V @ 2 A	V
Maximum Leakage Current @ V _{WM}	I _L	1	μA
Maximum Forward Voltage @ 10 mA	V _F	1	V
Typical Capacitance @ 0 V, 1 MHz	C _P	9	pF



Asia-Pacific: Tel: +886-2 2562-4117 • Fax: +886-2 2562-4116
 Europe: Tel: +41-41 768 5555 • Fax: +41-41 768 5510
 The Americas: Tel: +1-951 781-5500 • Fax: +1-951 781-5700
www.bourns.com

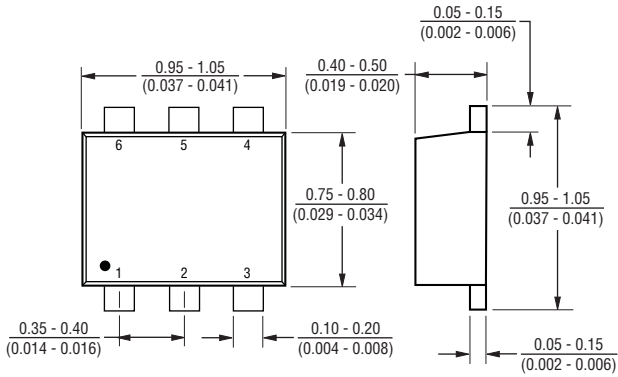
*RoHS Directive 2002/95/EC Jan 27 2003 including Annex.
 Specifications are subject to change without notice.
 Customers should verify actual device performance in their specific applications

CDSOT963-T05C - Surface Mount TVS Diode



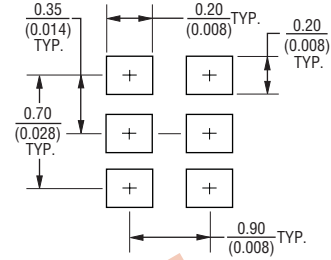
Product Dimensions

This is a molded SOT963 package with lead free Nickel Paladium Gold on the lead frame. It weighs approximately 3 mg and has a flammability rating of UL 94V-0.



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

Recommended Footprint



Typical Part Marking

CDSOT963-T05C 5B

How to Order

CD SOT963 - T 05C

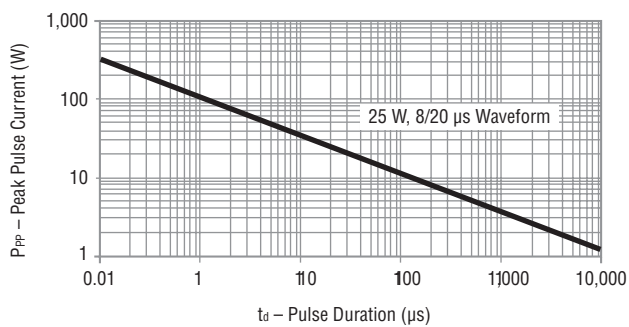
- Common Diode _____
- Chip Diode _____
- Package _____
SOT963 = SOT963 Package
- Model _____
T = Transient Voltage Suppressor
- Working Peak Reverse Voltage _____
05C = 5 V_{RWM} (Volts)

CDSOT963-T05C - Surface Mount TVS Diode

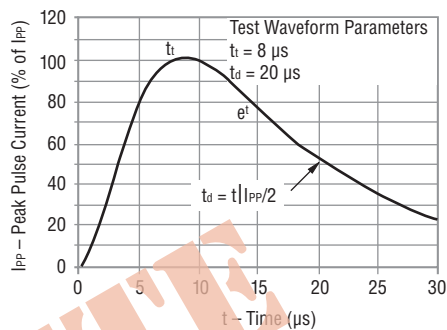
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Rating & Characteristic Curves

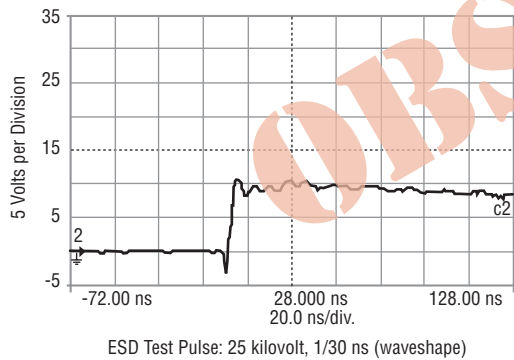
Peak Pulse Power vs. Pulse Time



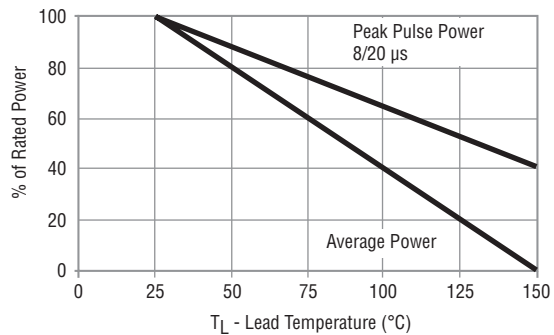
Pulse Waveform



Overshoot & Clamping Voltage



Power Derating Curve

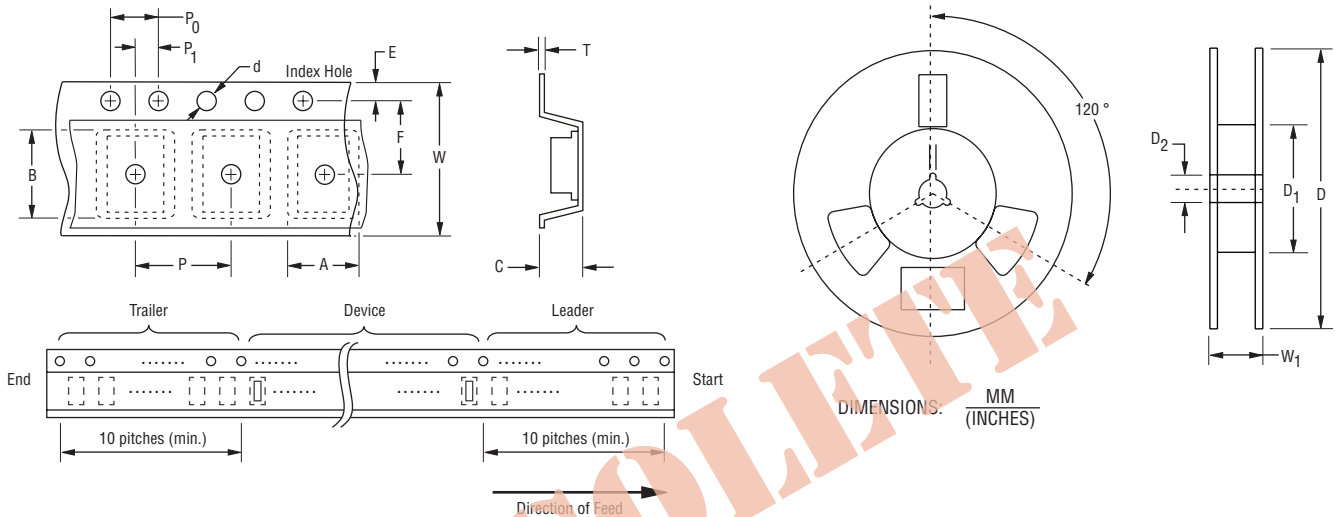


CDSOT963-T05C - Surface Mount TVS Diode

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Packaging Information

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



Item	Symbol	CDSOT963
Carrier Width	A	$\frac{1.17 \pm 0.05}{(0.046 \pm 0.002)}$
Carrier Length	E	$\frac{1.17 \pm 0.05}{(0.046 \pm 0.002)}$
Carrier Depth	C	$\frac{0.66 \pm 0.05}{(0.026 \pm 0.002)}$
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 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	$\frac{4.00 \pm 0.10}{(0.157 \pm 0.004)}$
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	$\frac{14.4}{(0.567)}$ MAX.
Quantity per Reel	--	4000