

Features

- Lead free as standard
- RoHS compliant*
- Low capacitance - 9 pF
- ESD protection >40 kV

Applications

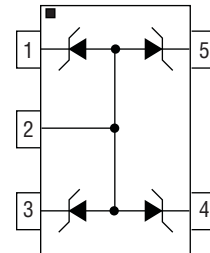
- Personal Digital Assistants (PDAs)
- Mobile phones & accessories
- Portable electronics
- ADSL / VDSL cards

CDSOT953-T05 - Surface Mount TVS Diode

General Information

The CDSOT953-T05 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 SOT953 packaged device will mount directly onto the industry standard SOT953 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	CDSOT953-T05	Unit
Peak Pulse Power (t _p = 8/20 μs) (NOTE 1)	P _{PK}	25	W
Peak Pulse Current (t _p = 8/20 μs)	I _{PPM}	2	A
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
Working Peak Voltage	V _M	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

Notes:

1. See Peak Pulse Power vs. Pulse Time.



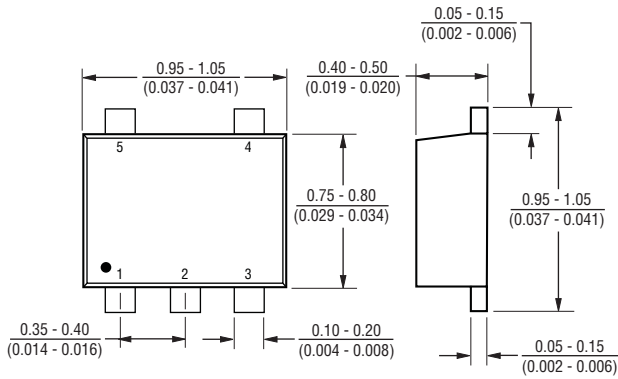
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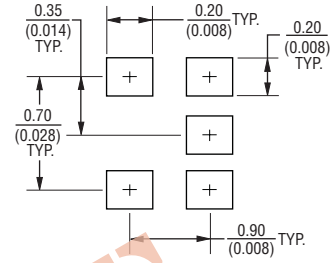
Product Dimensions

This is a molded SOT953 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 = $\frac{\text{MILLIMETERS}}{\text{(INCHES)}}$

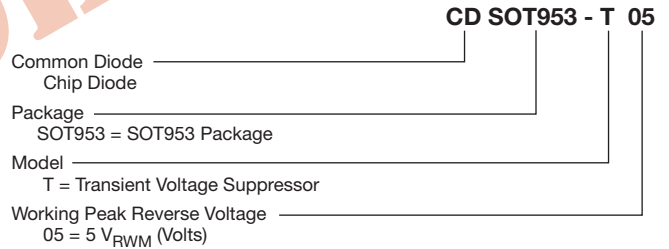
Recommended Footprint



Typical Part Marking

CDSOT953-T05..... 5A

How to Order

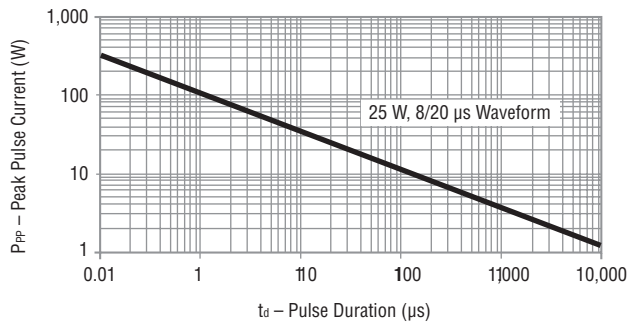


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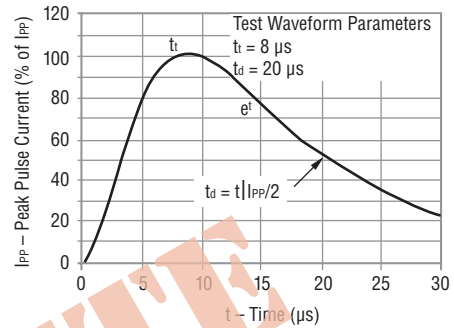
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Rating & Characteristic Curves

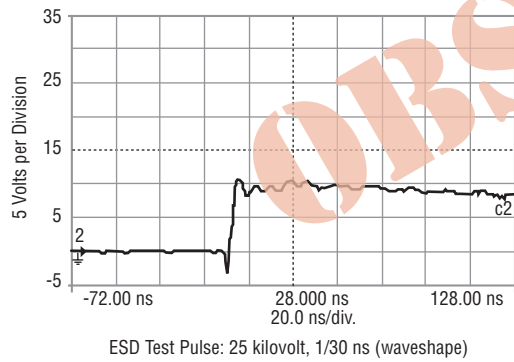
Non-Repetitive Peak Pulse Power vs. Pulse Time



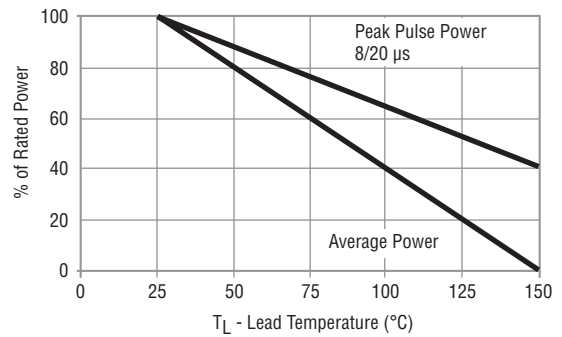
Pulse Waveform



Overshoot & Clamping Voltage



Power Derating Curve

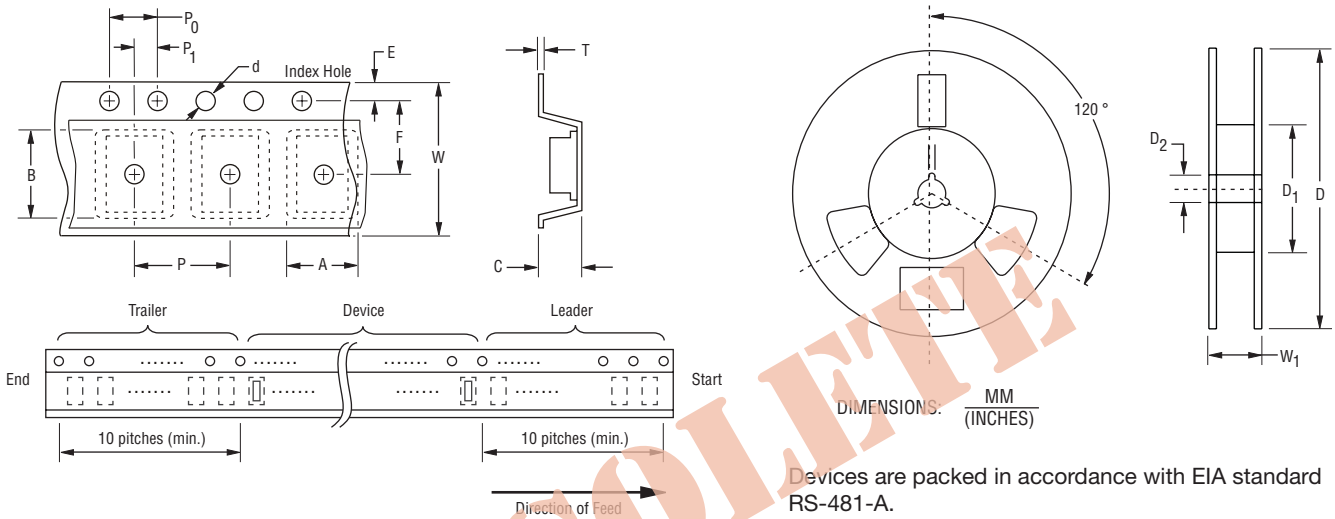


CDSOT953-T05 - Surface Mount TVS Diode

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Packaging Information

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



Item	Symbol	CDSOT953
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	$\frac{8.0 \pm 0.20}{(0.315 \pm 0.008)}$
Reel Width	W ₁	$\frac{14.4}{(0.567)}$ MAX.
Quantity per Reel	--	4000