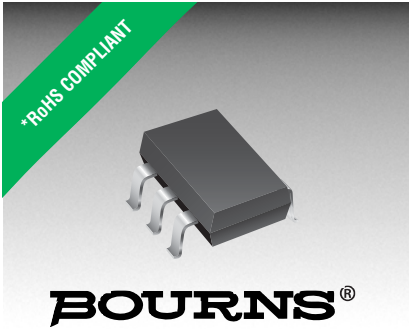




**THE DATASHEET OF
CDSOT563-0502**





Features

- Lead free as standard
- RoHS compliant*
- Low capacitance - 2 pF
- ESD protection >15 kV

Applications

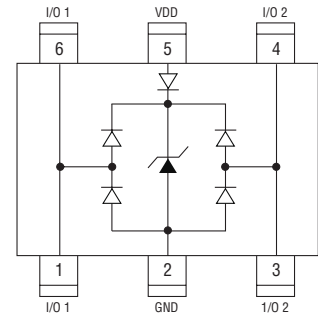
- Personal Digital Assistant (PDAs)
- Mobile phones and accessories
- Portable electronics
- ADSL / VDSL cards

CDSOT563-0502 - Surface Mount TVS Diode Array

General Information

The CDSOT563-0502 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 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_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Peak Pulse Current	I _{PPM}	(t _p = 8/20 μs)			6	A
Storage Temperature	T _{STG}		-55	+25	+150	°C
Operating Temperature	T _{OPR}		-40	+25	+125	°C
Working Peak Voltage	V _{WM}				5	V
Breakdown Voltage	V _{BR}	@ 1 mA, Pin 5 to Pin 2	6		9	V
Leakage Current @ V _{WM}	I _L	V _{pin5} = 5 V, V _{pin2} = 0 V, Pin 5 to Pin 2			5	μA
Channel Leakage Current @ V _{WM}	I _{CH}	V _{pin5} = 5 V, V _{pin2} = 0 V, Any I/O to Pin 2			1	μA
Forward Voltage	V _F	@ I _f = 15 mA		0.8	1	V
Clamping Voltage	V _{clamp_VDD}	I _{PP} = 5 A, t _p = 8/20 μs		9		V
Channel Input Capacitance	C _{IN-1}	V _{pin5} = 5 V, V _{pin2} = 0 V, V _{IN} = 2.5 V, f = 1 MHz		2	2.5	pF
Channel Input Capacitance	C _{IN-2}	V _{pin5} = floated, V _{pin2} = 0 V, V _{IN} = 2.5 V, f = 1 MHz		2.8	3.6	pF
Channel to Channel Input Capacitance	C _{CROSS-1}	V _{pin5} = 5 V, V _{pin2} = 0 V, V _{IN} = 2.5 V, f = 1 MHz		0.4	0.5	pF
Channel to Channel Input Capacitance	C _{CROSS-2}	V _{pin5} = floated, V _{pin2} = 0 V, V _{IN} = 2.5 V, f = 1 MHz		0.55	0.65	pF

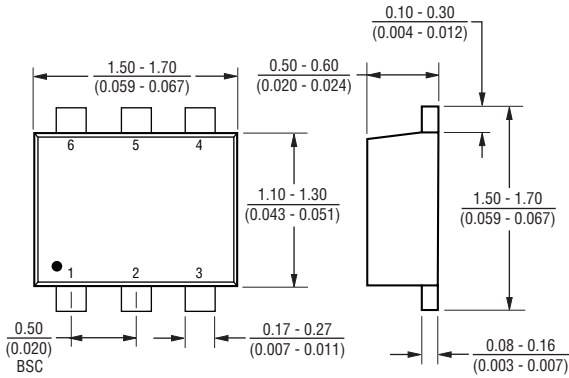
*RoHS Directive 2002/95/EC Jan. 27, 2003 including annex and RoHS Recast 2011/65/EU June 8, 2011. Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications

CDSOT563-0502 - Surface Mount TVS Diode Array



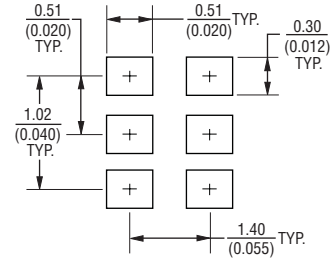
Product Dimensions

This is a molded SOT563 package with lead free 100 % Matte Sn on the lead frame. It weighs approximately 3 mg and has a flammability rating of UL 94V-0.



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

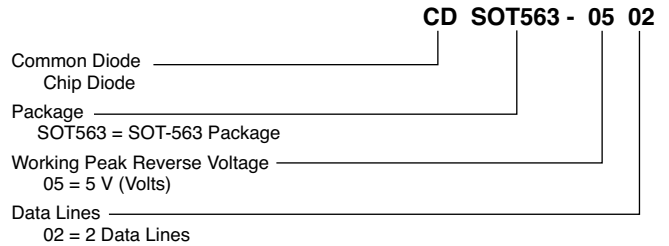
Recommended Footprint



Typical Part Marking

CDSOT563-0502.....52XY
 ("X" = Date Code; "Y" = Package House)

How to Order

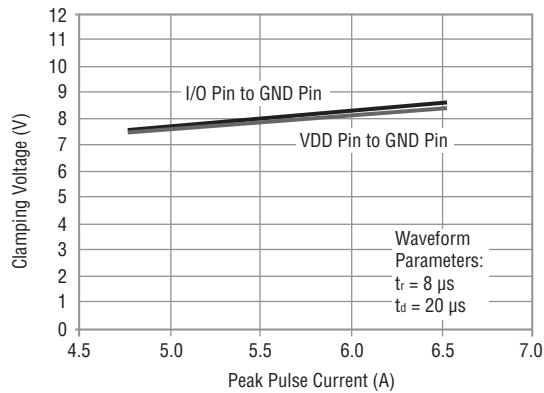


CDSOT563-0502 - Surface Mount TVS Diode Array

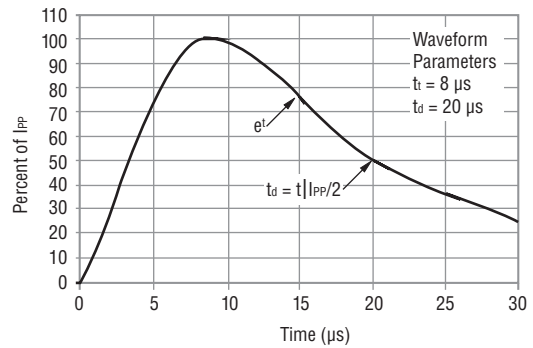


Rating & Characteristic Curves

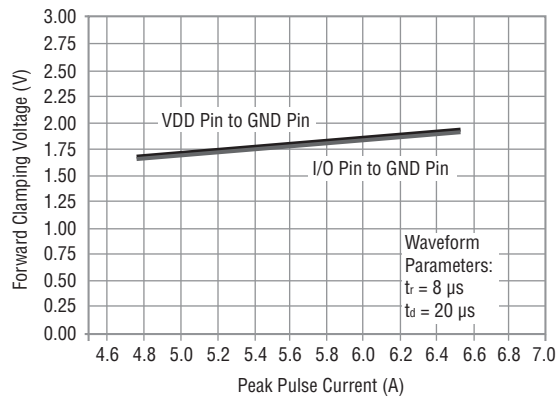
Clamping Voltage vs. Peak Pulse Current



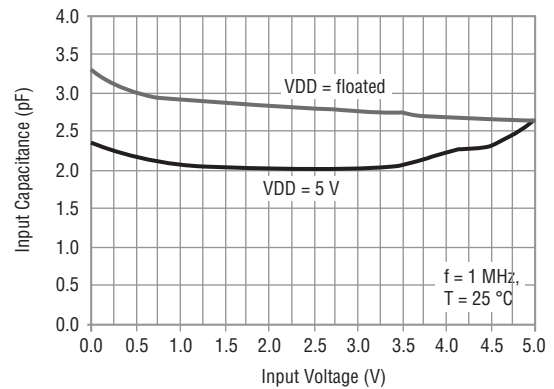
Pulse Waveform



Forward Clamping Voltage vs. Peak Pulse Current



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

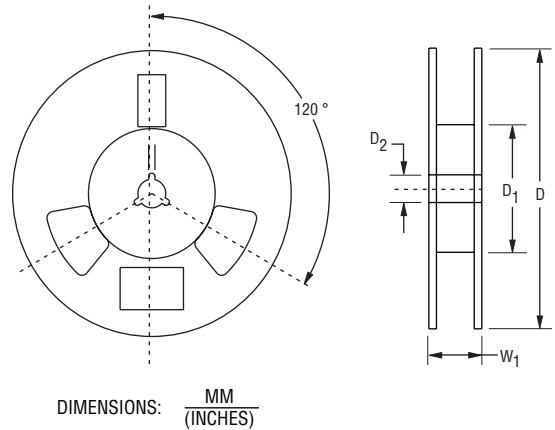
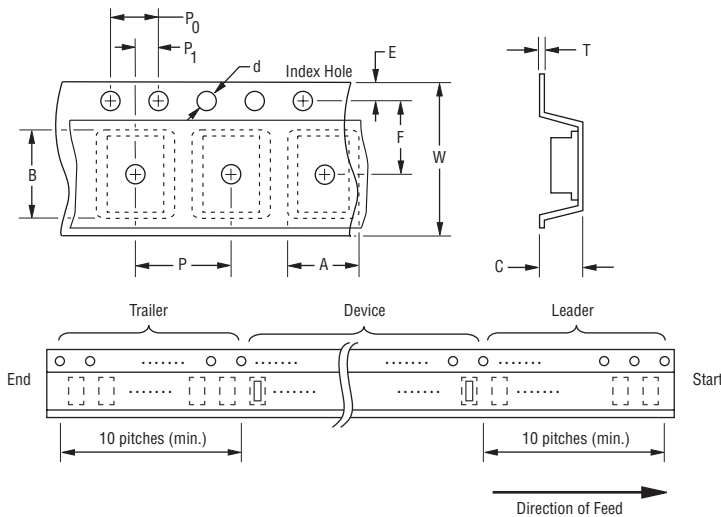


CDSOT563-0502 - Surface Mount TVS Diode Array

BOURNS®

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.

Item	Symbol	SOT563
Carrier Width	A	$\frac{1.78 \pm 0.05}{(0.069 \pm 0.002)}$
Carrier Length	B	$\frac{1.78 \pm 0.05}{(0.069 \pm 0.002)}$
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 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	--	3000

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www.bourns.com

REV. 09/12



Specifications are subject to change without notice.
Customers should verify actual device performance in their specific applications

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

-  [View CDSOT563-0502 on WIN SOURCE](#)
-  [Bourns Inc. Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

-  Global Sourcing Solution
-  Obsolete Management
-  Cost Control Management
-  Shortage Management
-  Alternative Solution
-  Excess Inventory Management