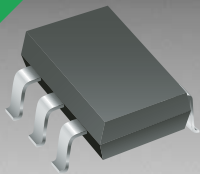


*RoHS COMPLIANT



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Features

- RoHS Compliant*
- Low capacitance - 1.9 pF
- ESD protection >40k V
- Surge protection

Applications

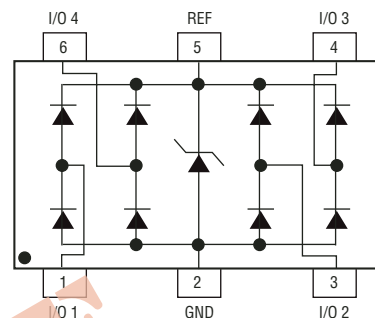
- Personal Digital Assistants (PDAs)
- Mobile phones & accessories
- Memory card protection
- SIM card port protection
- Portable electronics
- Ethernet

CDSC706-0504F – Surface Mount TVS Diode Array

General Information

The CDSC706-0504F device provides ESD, EFT and Surge protection for high speed data ports meeting IEC 61000-4-2 (ESD), IEC 61000-4-4 (EFT) and IEC 61000-4-5 (Surge) requirements. The Transient Voltage Suppressor array, protecting up to 4 data lines, offers a Working Peak Reverse Voltage of 5 V and Minimum Breakdown Voltage of 6 V.

The SC70-6L packaged device will mount directly onto the industry standard SC70-6 footprint. Bourns® Chip Diodes conform to JEDEC standards, are easy to handle with standard pick and place equipment and the flat configuration minimizes roll away.



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

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu s$) ¹	P _{PK}	200	W
Peak Pulse Current ($t_p = 8/20 \mu s$)	I _{PPM}	6	A
Storage Temperature	T _{STG}	-55 to +150	°C
Operating Temperature	T _{OPR}	-55 to +150	°C

Note:

1. See Peak Pulse Power vs. Pulse Time.

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

Parameter	Symbol	Value	Unit
Minimum Breakdown Voltage @ 1 mA	V _{BR}	6	V
Maximum Working Peak Voltage	V _{WM}	5	V
Maximum Leakage Current @ V _{WM}	I _D	3	μA
Maximum Clamping Voltage @ I _P = 1 A	V _C	15	V
Maximum Clamping Voltage @ I _P = 5 A	V _C	25	V
Typical Junction Capacitance @ 0 V 1 MHz	C _D	1.9	pF
Maximum Junction Capacitance @ 0 V 1 MHz	C _D	3	pF

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

Specifications are subject to change without notice.

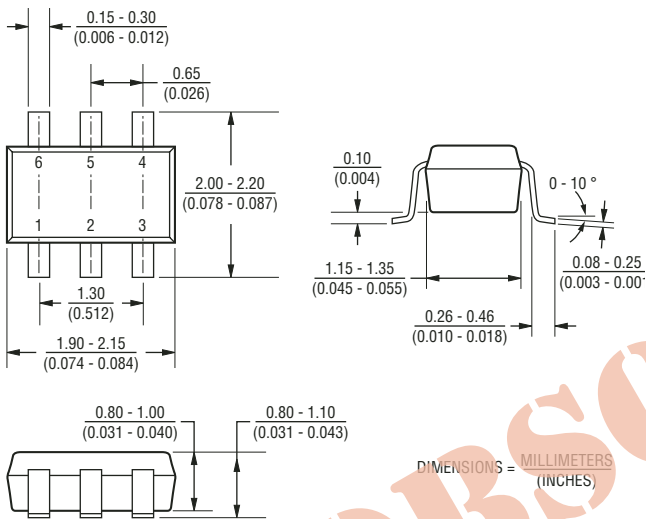
Customers should verify actual device performance in their specific applications.

CDSC706-0504F – Surface Mount TVS Diode Array

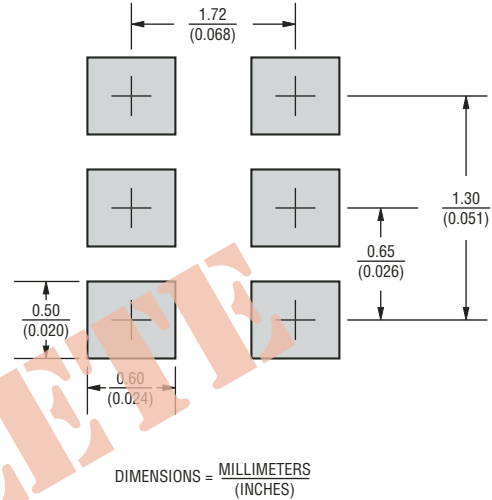
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Product Dimensions

This is a molded JEDEC SC70-6L package with Nickel Paladium-Gold (Ni/Pd/Au) on the lead frame. It weighs approximately 7 mg and has a flammability rating of UL 94V-0.



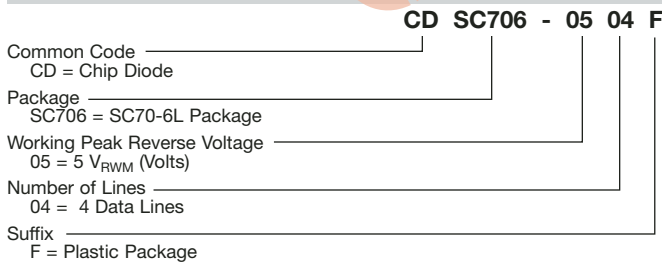
Recommended Footprint



Typical Part Marking

CDSC706-0504F A5

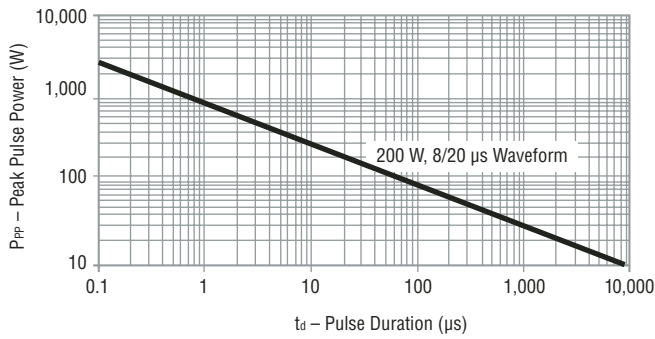
How To Order



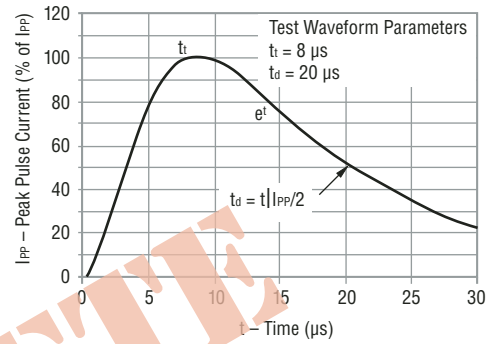
Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

Performance Graphs

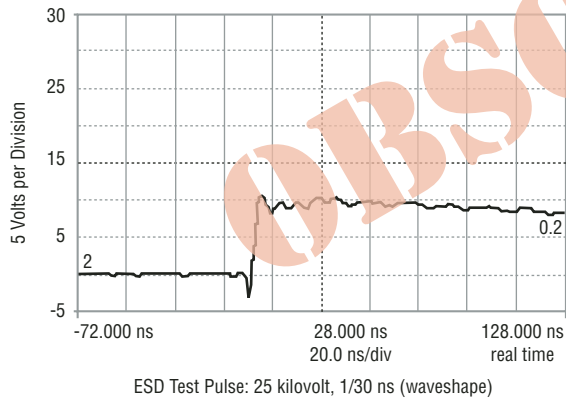
Peak Pulse Power vs Pulse Time



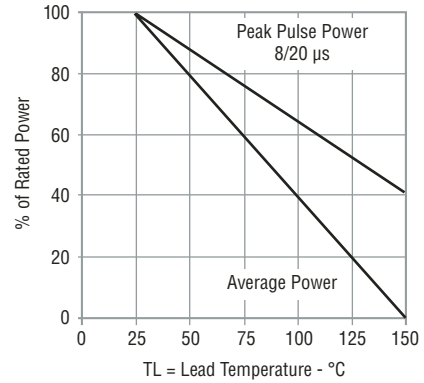
Pulse Waveform



Overshoot & Clamping Voltage



Power Derating Curve

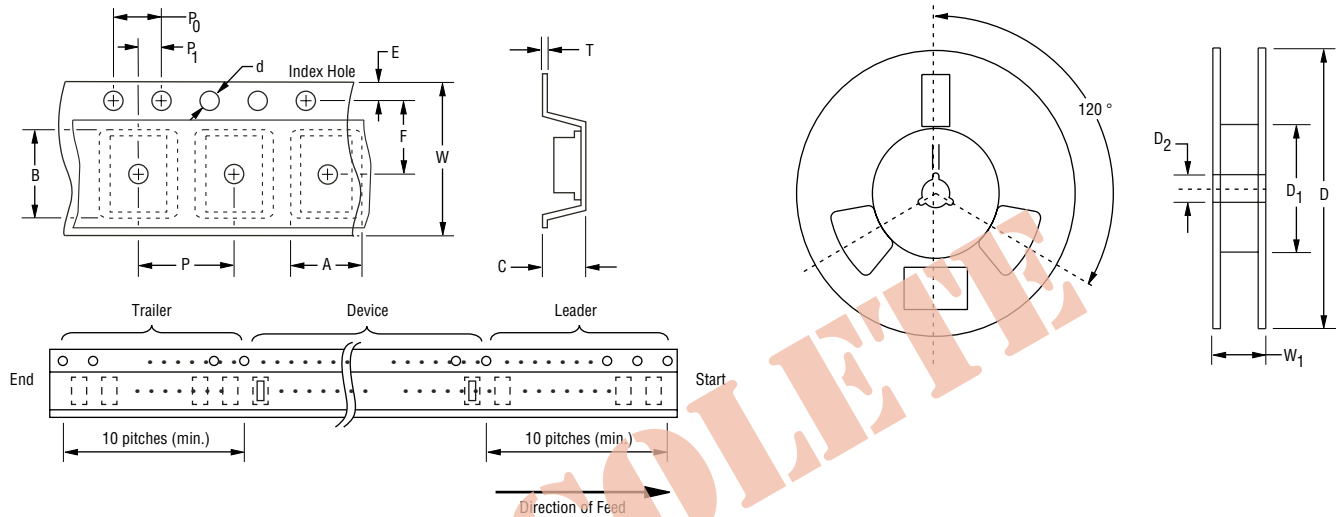


CDSC706-0504F – Surface Mount TVS Diode Array

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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	SC70-6L
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	$\frac{50.0}{(1.969)} \text{ Min.}$
Feed Hole Diameter	D ₂	$\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$
Punch Hole Position	F	$\frac{3.50 \pm 0.05}{(0.138 - 0.002)}$
Punch Hole Pitch	P	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Sprocket Hole Pitch	P ₀	$\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$
Embossment Center	P ₁	$\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$
Overall Tape Thickness	T	$\frac{0.20 \pm 0.10}{(0.008 - 0.004)}$
Tape Width	W	$\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$
Reel Width	W ₁	$\frac{14.4}{(0.567)} \text{ Max.}$
Quantity per Reel	—	3,000



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07/07

Specifications are subject to change without notice.
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