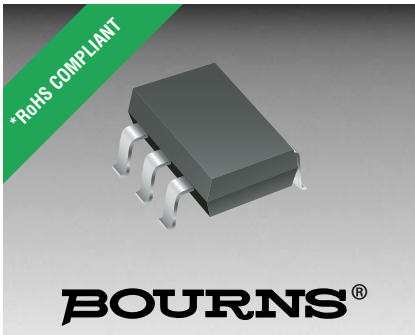




Features

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

Applications

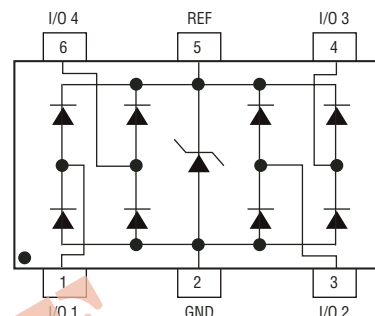
- Personal Digital Assistants (PDAs)
- Mobile phones & accessories
- Memory card protection
- SIM card port protection
- Portable electronics
- Ethernet

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 (@ $T_A = 25^\circ\text{C}$ Unless Otherwise Noted)

Parameter	Symbol	Value	Unit
Peak Pulse Power ($t_p = 8/20 \mu\text{s}$) ¹	P_{PK}	200	W
Peak Pulse Current ($t_p = 8/20 \mu\text{s}$)	I_{PPM}	6	A
Storage Temperature	T_{STG}	-55 to +150	$^\circ\text{C}$
Operating Temperature	T_{OPR}	-55 to +150	$^\circ\text{C}$

Note:

1. See Peak Pulse Power vs. Pulse Time.

Thermal Characteristics (@ $T_A = 25^\circ\text{C}$ 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 @ $I_P = 1 \text{ A}$	V_C	15	V
Maximum Clamping Voltage @ $I_P = 5 \text{ A}$	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.

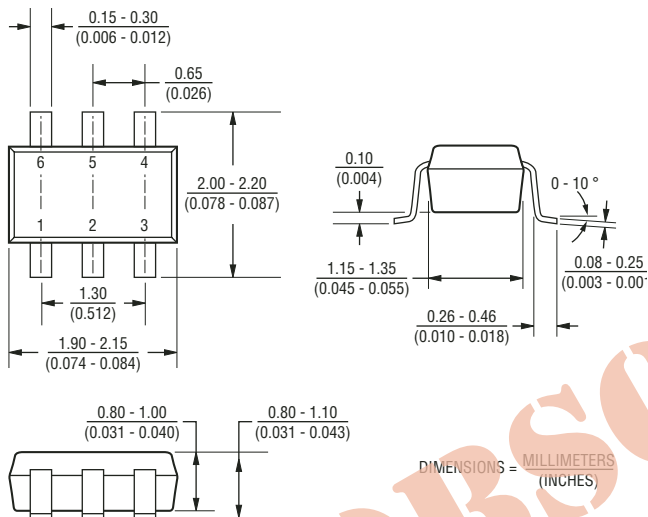
Customers should verify actual device performance in their specific applications.

CDSC706-0504F – Surface Mount TVS Diode Array

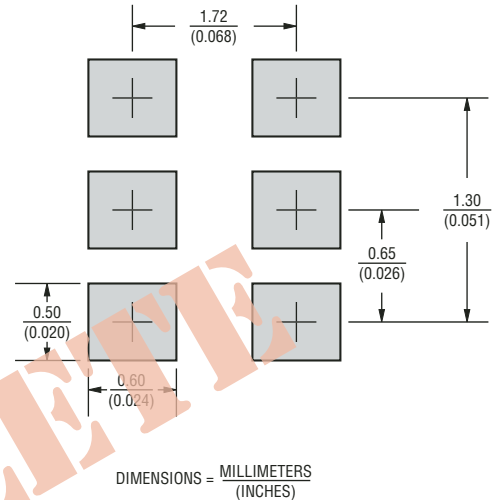
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Product Dimensions

This is a molded JEDEC SC70-6L package with Nickel Palladium-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

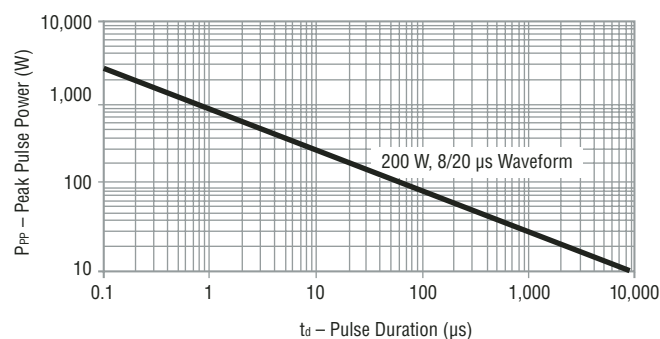
Common Code **CD**
 CD = Chip Diode
 Package **SC706**
 SC706 = SC70-6L Package
 Working Peak Reverse Voltage **05**
 05 = 5 V_{RWM} (Volts)
 Number of Lines **04**
 04 = 4 Data Lines
 Suffix **F**
 F = Plastic Package

CDSC706-0504F – Surface Mount TVS Diode Array

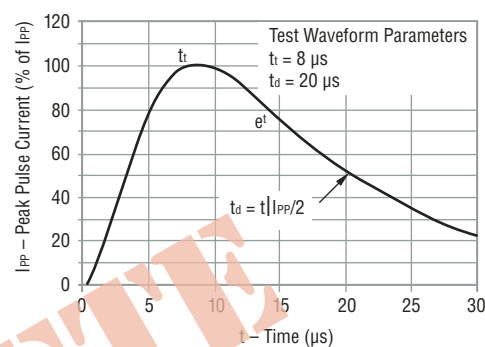
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Performance Graphs

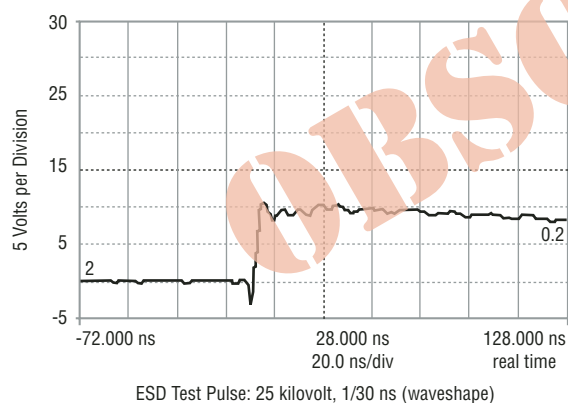
Peak Pulse Power vs Pulse Time



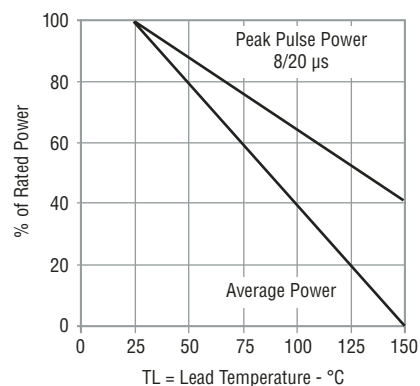
Pulse Waveform



Overshoot & Clamping Voltage



Power Derating Curve

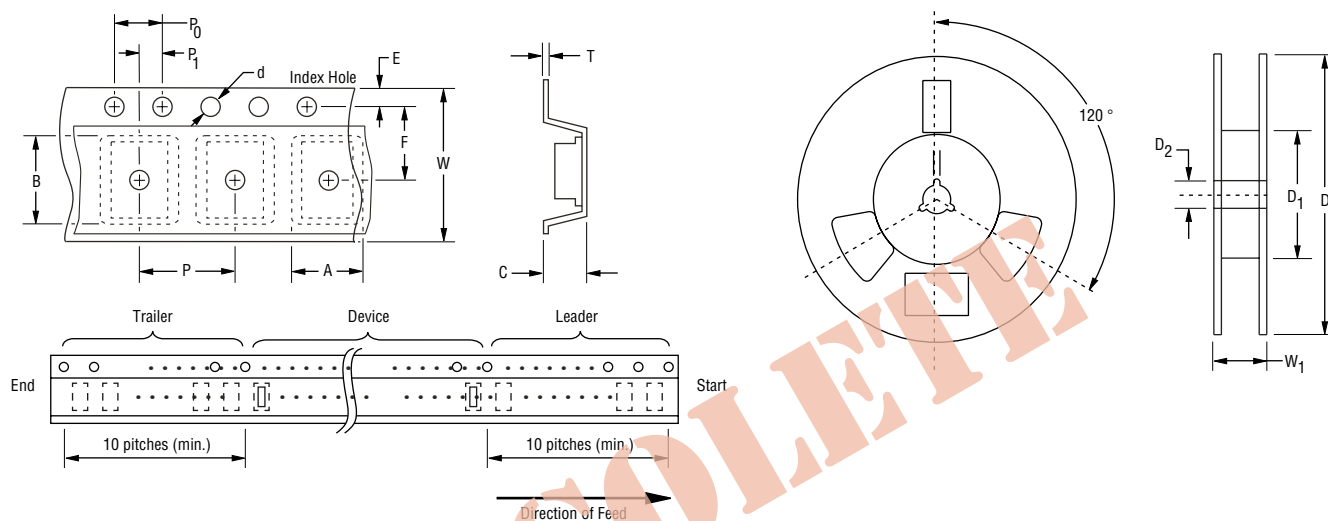


CDSC706-0504F – Surface Mount TVS Diode Array

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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	2.25 ± 0.10 (0.088 - 0.004)
Carrier Length	B	2.34 ± 0.10 (0.092 - 0.004)
Carrier Depth	C	1.22 ± 0.10 (0.048 - 0.004)
Sprocket Hole	d	1.55 ± 0.05 (0.061 - 0.002)
Reel Outside Diameter	D	178 (7.008)
Reel Inner Diameter	D ₁	50.0 (1.969) Min.
Feed Hole Diameter	D ₂	13.0 ± 0.20 (0.512 - 0.008)
Sprocket Hole Position	E	1.75 ± 0.10 (0.069 - 0.004)
Punch Hole Position	F	3.50 ± 0.05 (0.138 - 0.002)
Punch Hole Pitch	P	4.00 ± 0.10 (0.157 - 0.004)
Sprocket Hole Pitch	P ₀	4.00 ± 0.10 (0.157 - 0.004)
Embossment Center	P ₁	2.00 ± 0.05 (0.079 - 0.002)
Overall Tape Thickness	T	0.20 ± 0.10 (0.008 - 0.004)
Tape Width	W	8.00 ± 0.20 (0.315 - 0.008)
Reel Width	W ₁	14.4 (0.567) Max.
Quantity per Reel	—	3,000



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