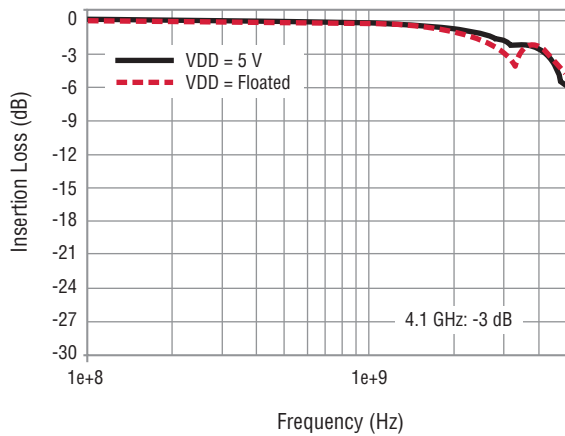


CDDFN10-0506N - TVS/Steering Diode Array

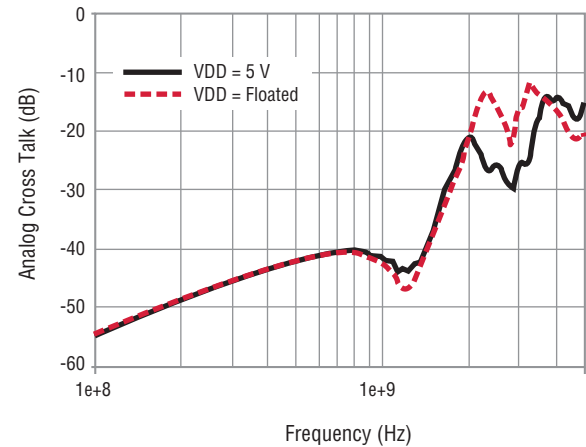
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Performance Curves

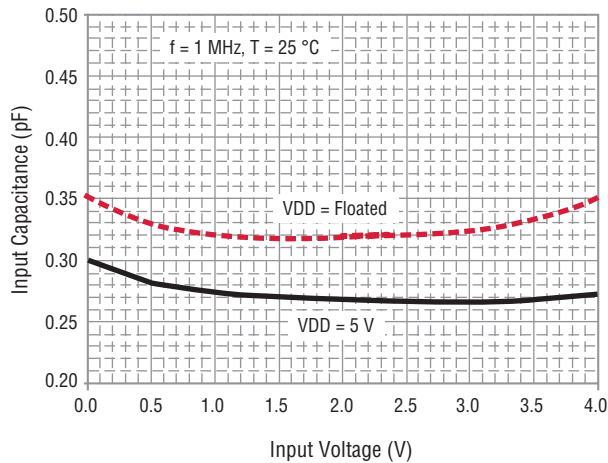
Insertion Loss S21



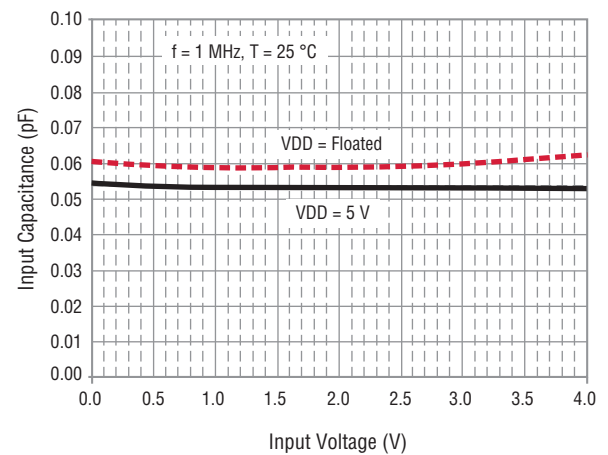
Crosstalk Between I/Os



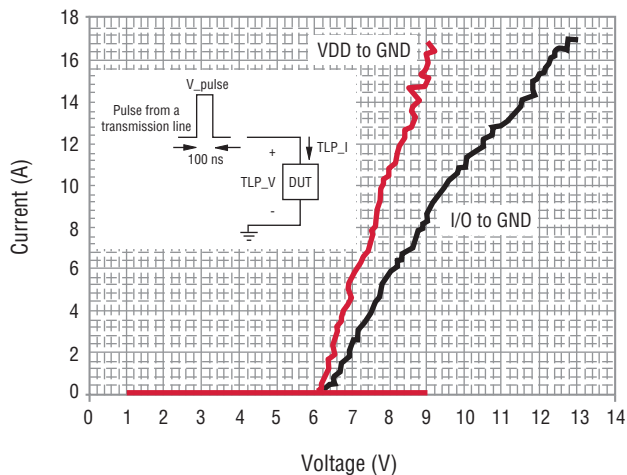
Channel Capacitance versus Voltage



Channel to Channel Capacitance versus Voltage



Typical V/I Characteristic



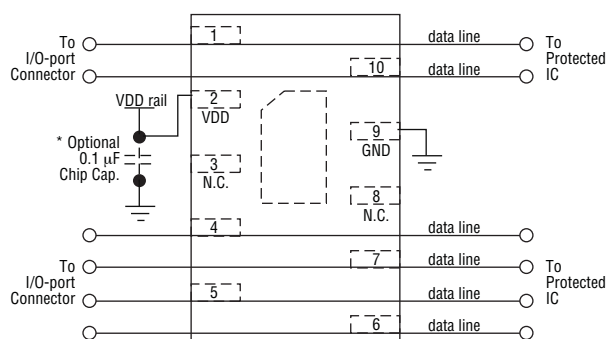
Specifications are subject to change without notice.
Users should verify actual device performance in their specific applications.
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CDDFN10-0506N - TVS/Steering Diode Array

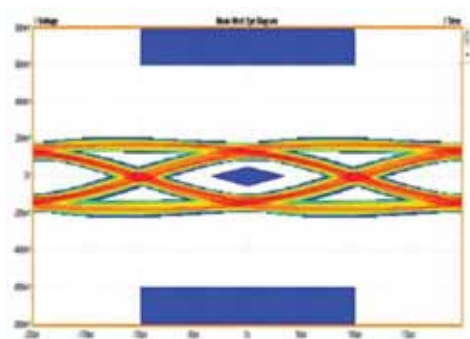
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Reference Application

Bourns® Model CDDFN10-0506N is designed to protect high speed data ports from ESD transients. For high speed ports above 5 Gb/s such as USB 3.0, differential signalling is used where the need to keep impedance constant is a critical requirement. The use of a DFN-10 package using a “feed through” layout provides a minimum impedance change on the high speed data line while the ultra-low capacitance performance of the device limits the signal loss degradation of each channel.



CDDFN10-0506N Layout on USB 3.0 Port



CDDFN10-0506N Using 5 GHz Eye Diagram

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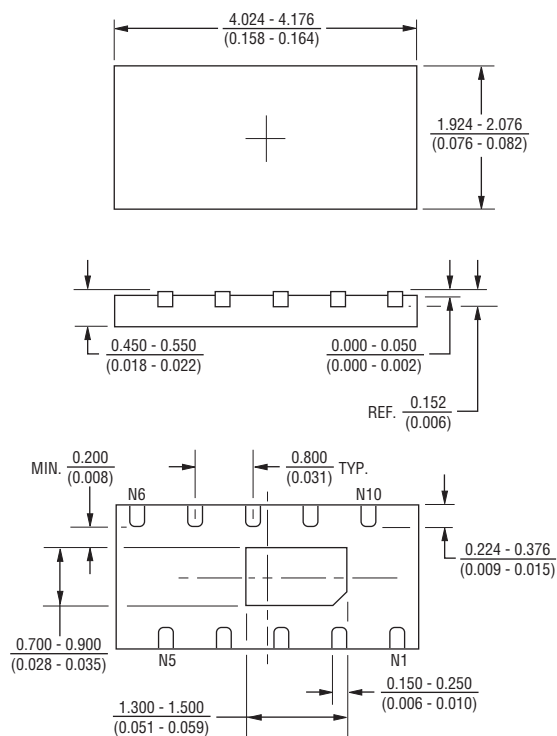
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CDDFN10-0506N - TVS/Steering Diode Array

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Product Dimensions

This is a molded DFN10 package with lead free 100 % Matte Sn on the lead frame. It has a flammability rating of UL 94V-0.

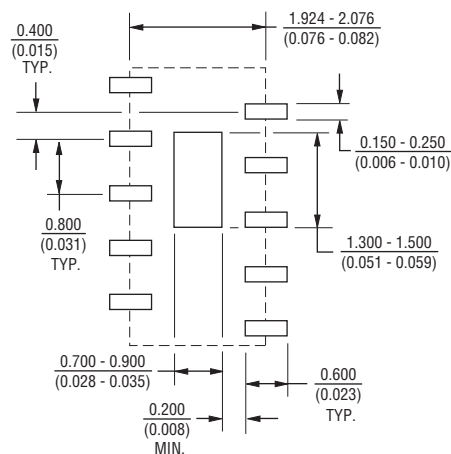


DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Typical Part Marking

CDDFN10-0506N506

Recommended Footprint

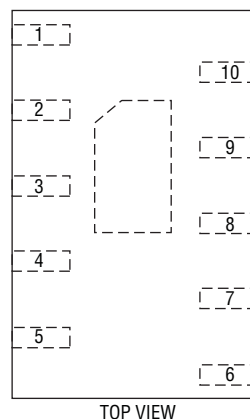


How to Order

CD DFN10 - 05 06 N

Common Diode _____
 Chip Diode _____
 Package _____
 DFN10 = DFN-10 Package
 Working Peak Reverse Voltage _____
 05 = 5.0 V_{RWM} (Volts)
 Number of Lines _____
 06 = 6 Data Lines
 Suffix _____
 N = Low Capacitance

Pin Out



Pin	Function
1	I/O LINE
2	V _{CC} LINE
3	N.C.
4	I/O LINE
5	I/O LINE
6	I/O LINE
7	I/O LINE
8	N.C.
9	Ground
10	I/O LINE
Center Pad	Ground

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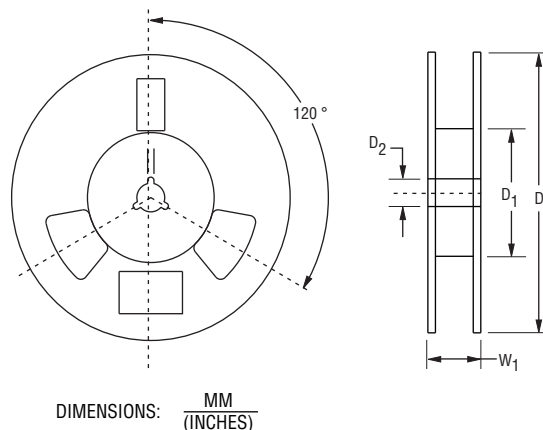
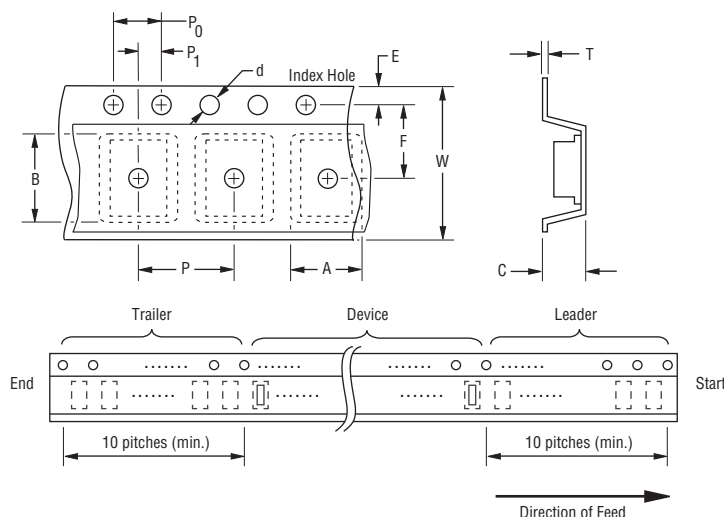
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CDDFN10-0506N - TVS/Steering Diode Array

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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	DFN-10
Carrier Width	A	$\frac{2.21 \pm 0.05}{(0.087 \pm 0.002)}$
Carrier Length	B	$\frac{4.22 + 0.05/-0.04}{(0.166 + 0.002/-0.002)}$
Carrier Depth	C	$\frac{0.81 \pm 0.05}{(0.032 \pm 0.002)}$
Sprocket Hole	d	$\frac{1.50 + 0.1/-0}{(0.059 + 0.004/-0)}$
Reel Outside Diameter	D	$\frac{180 \pm 3}{(7.087 \pm .118)}$
Reel Inner Diameter	D ₁	$\frac{50.0}{(1.969)} \text{ MIN.}$
Feed Hole Diameter	D ₂	$\frac{13.0 + 0.5/-0.2}{(0.512 + 0.020/-0.008)}$
Sprocket Hole Position	E	$\frac{1.75 \pm 0.10}{(0.069 \pm 0.004)}$
Punch Hole Position	F	$\frac{5.50 \pm 0.05}{(0.217 \pm 0.002)}$
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	$\frac{0.6}{(0.024)} \text{ MAX.}$
Tape Width	W	$\frac{12.3}{(0.484)} \text{ MAX.}$
Reel Width	W ₁	$\frac{18.4}{(0.724)} \text{ MAX.}$
Quantity per Reel	--	3000

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