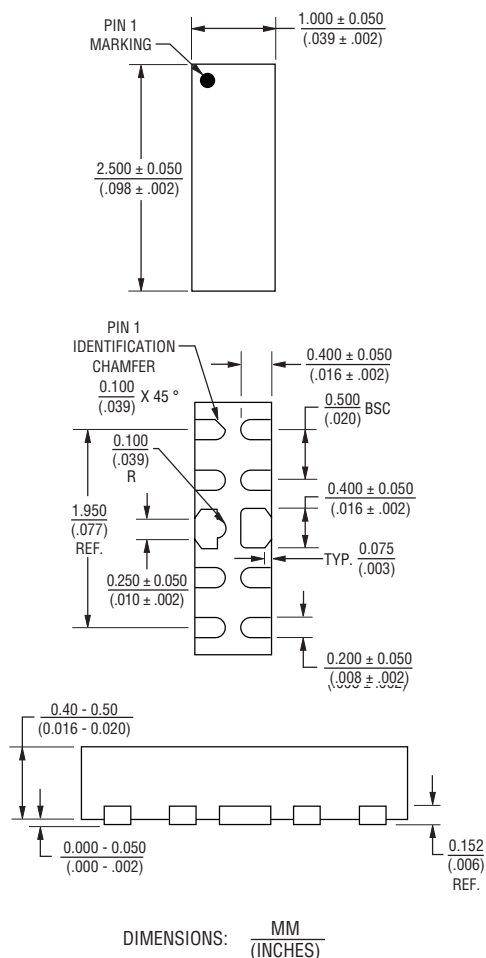


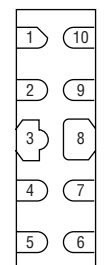
CDDFN10-3324P - Surface Mount TVS Diode Array

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Product Dimensions



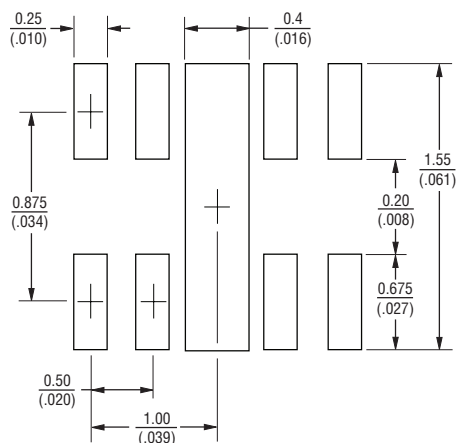
Device Pinout



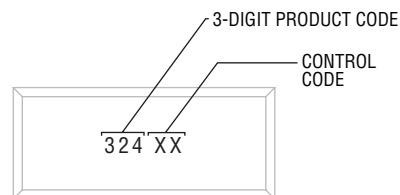
TOP VIEW

Pin	Function
1,2,4,5	Input and Output Lines
6,7,9,10	NC (No Internal Connection) for Feed-Through Layout design
3,8	GND

Recommended Footprint



Typical Part Marking



Environmental Specifications

Moisture Sensitivity Level	3
ESD Classification (HBM)	3B

How to Order

Common Code	CD
Chip Diode	DFN10
Package	33
DFN10 = DFN-10 Package	24
Working Peak Reverse Voltage	P
33 = 3.3 V _{RWM} (Volts)	
Number of Lines	
24 = 2 Ground / 4 Data Lines	
Suffix	
P = Ultra-low Capacitance	

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

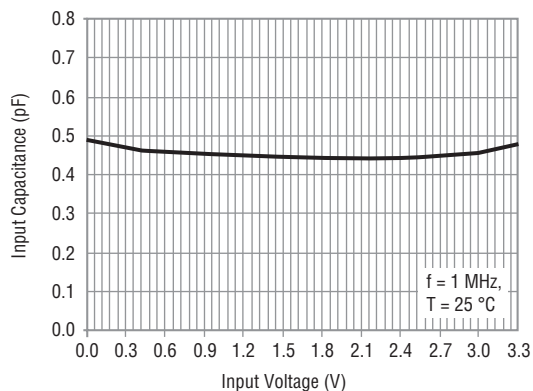
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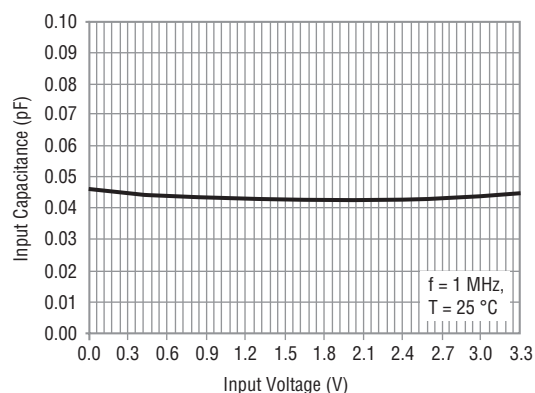
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Rating & Characteristic Curves

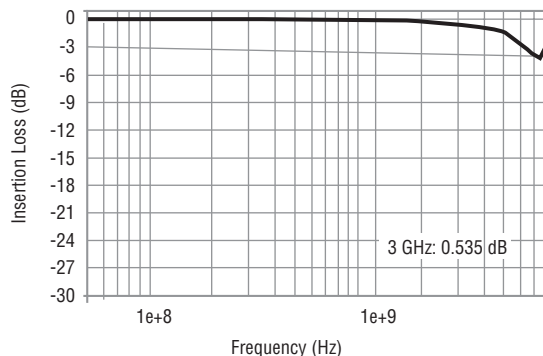
Typical Voltage vs. Capacitance C_{IN}



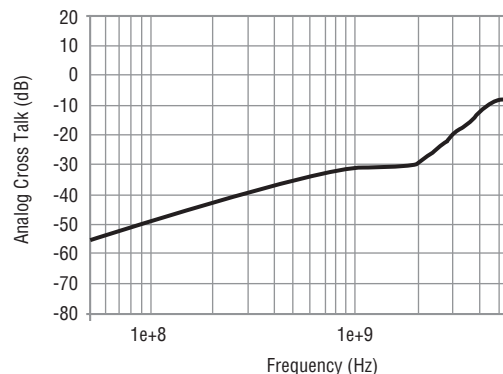
Typical Voltage vs. Capacitance C_{CROSS}



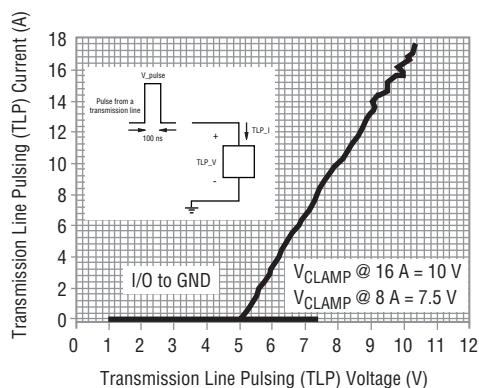
Typical Insertion Loss S21



Typical Analog Cross Talk



Typical Transmission Line Pulsing (TLP)



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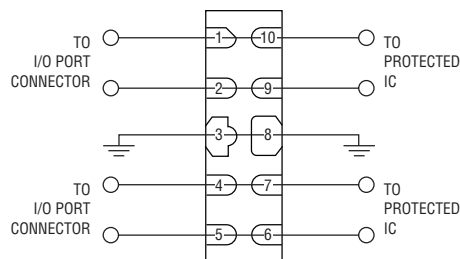
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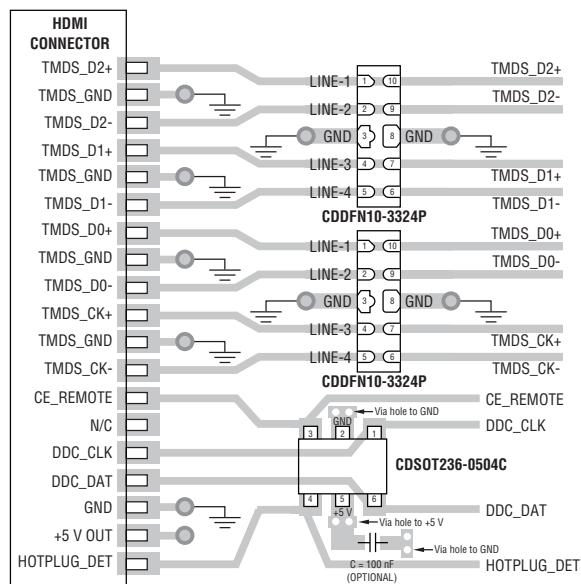
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Reference Application

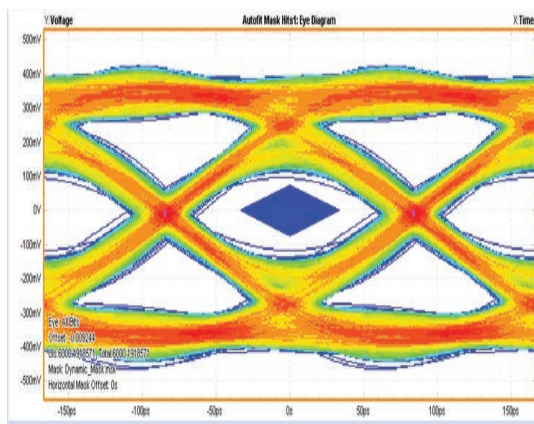
The Bourns® Model CDDFN10-3324P is designed to protect high-speed data ports from ESD transients. For high-speed ports above 5 Gbps such as HDMI 2.0 and USB 3.0, maintaining signal line impedance is a critical requirement. The use of a DFN10 package using a “feed-through” layout provides minimal impedance change on the high-speed data line, while the ultra-low capacitance performance of the device limits signal degradation on each channel.



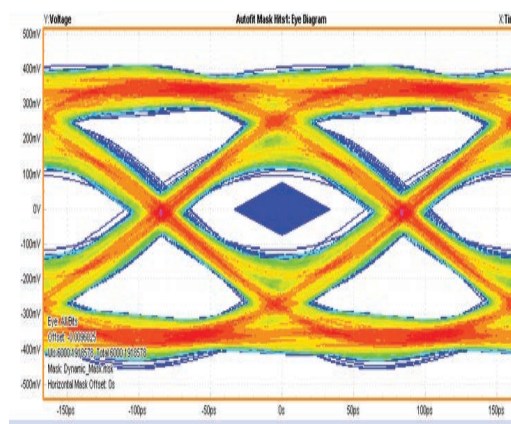
Model CDDFN10-3324P Layout on HDMI Port



Feed-Through Layout - Model CDDFN10-3324P in HDMI Application



HDMI 2.0 Eye Diagram Test Without Model CDDFN10-3324P (PCB Only)



HDMI 2.0 Eye Diagram Test With Model CDDFN10-3324P

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

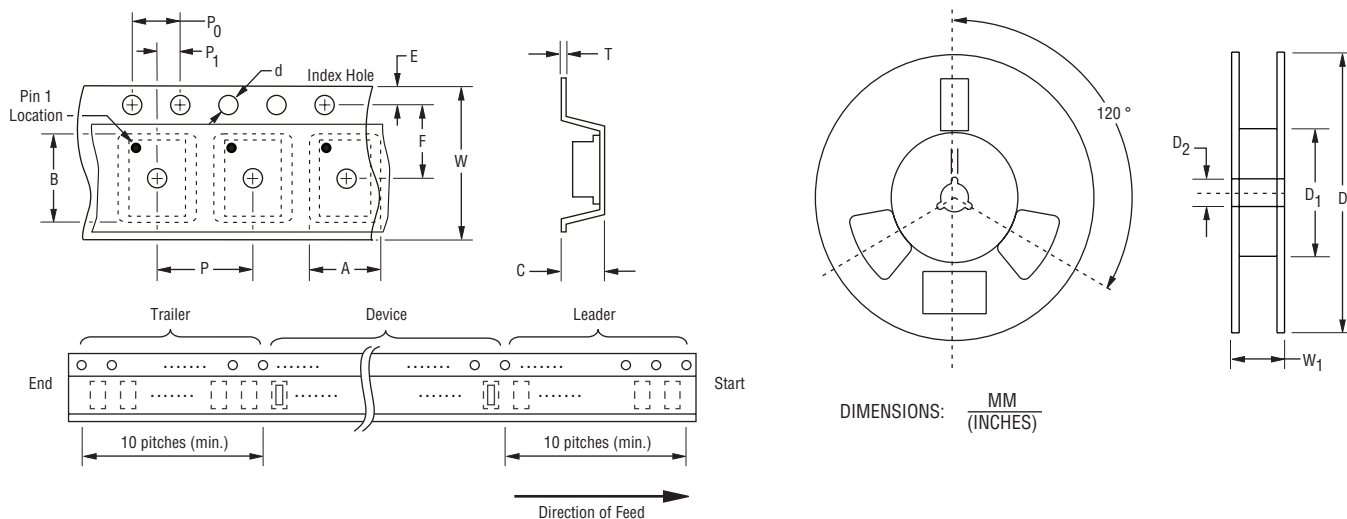
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CDDFN10-3324P - Surface Mount TVS Diode Array

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Packaging Information

The product is packaged in an 8 mm x 4 mm tape and reel format per EIA-481-D standard.



Item	Symbol	DFN-10
Carrier Width	A	$\frac{1.70 \pm 0.08}{(0.067 \pm 0.003)}$
Carrier Length	B	$\frac{2.30 \pm 0.08}{(0.091 \pm 0.003)}$
Carrier Depth	C	$\frac{0.75 \pm 0.05}{(0.030 \pm 0.002)}$
Sprocket Hole	d	$\frac{1.15 \pm 0.10}{(0.045 \pm 0.004)}$
Reel Outside Diameter	D	$\frac{178}{(7.008)}$
Reel Inner Diameter	D ₁	$\frac{54.40 \pm 0.40}{(2.142 \pm 0.016)}$
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	$\frac{0.20 \pm 0.30}{(0.008 \pm 0.012)}$
Tape Width	W	$\frac{8.00 +0.30/-0.10}{(0.315 +0.012/- 0.004)}$
Reel Width	W ₁	$\frac{12.30 \pm 1.00}{(0.484 \pm 0.039)}$
Quantity per Reel	--	3000

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