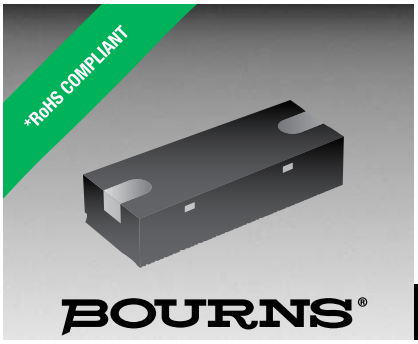


Features

- Bidirectional TVS 5 V
- Low capacitance - 0.5 pF
- ESD protection >15 kV
- Fits 0402 footprint

Applications

- Computers and peripherals
- Communication systems
- Audio & video equipment
- Portable instrumentation

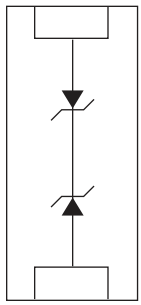
CDDFN2-T5.0LC - Surface Mount TVS Diode

General Information

The Bourns® Model CDDFN2-T5.0LC low capacitance device provides ESD and EFT protection for external ports of electronic devices such as cellular phones, handheld electronics and other portable electronic devices.

The device measures 1.0 mm x 0.60 mm and is available in a DFN-2 package and is intended to be mounted directly onto an FR4 printed circuit board. The device will fit a 0402 footprint.

The device is designed to meet IEC 61000-4-2 (ESD) and IEC 61000-4-4 (EFT) protection requirements.



Additional Information

Click these links for more information:

PRODUCT SELECTOR | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Absolute Maximum Ratings (@ T_A = 25 °C Unless Otherwise Noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Temperature	T_{OPR}	-40	+25	+85	ºC
Storage Temperature	T_{STG}	-55	+25	+150	ºC

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Voltage	V_{WM}			5.0	V
Breakdown Voltage @ 1 mA	V_{BR}	7.0			V
Leakage Current @ 5 V	I_L		0.1	1.0	µA
Capacitance @ 0 V, 1 MHz	C_J		0.50	0.65	pF
Clamping Voltage per IEC 61000-4-2 @ 6 kV Contact Mode	V_C		25		V
ESD Protection per IEC 61000-4-2 Contact Discharge Air Discharge	 ESD ESD	 8 15			 kV kV
EFT Protection per IEC 61000-4-4	EFT			40	A

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www.bourns.com

WARNING Cancer and Reproductive Harm - www.P65Warnings.ca.gov

CDDFN2-T5.0LC - Surface Mount TVS Diode

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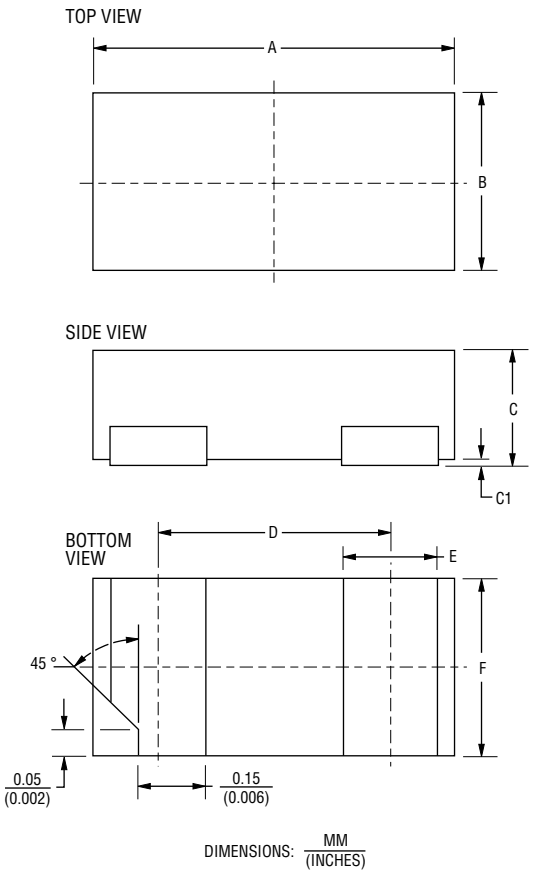
Product Dimensions

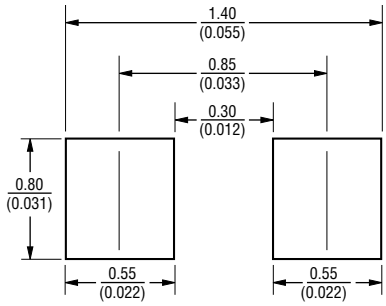
This is a molded DFN-2 package weighing approximately 1.1 mg.



DIMENSIONS: MM / (INCHES)

Symbol	Dimensions		
	Min.	Nom.	Max.
A		1.00 (0.039)	
B		0.60 (0.024)	
C	0.51 (0.020)	0.55 (0.022)	0.60 (0.024)
C1	0.00 (0.000)	0.02 (0.001)	0.05 (0.002)
D		0.65 (0.026)	
E	0.10 (0.004)	0.25 (0.010)	0.35 (0.014)
F	0.45 (0.018)	0.60 (0.024)	0.70 (0.028)

Recommended PCB Footprint



DIMENSIONS: MM / (INCHES)

Typical Part Marking

CDDFN2-T5.0LC L

How to Order

CD DFN2 - T 5.0 LC

Common Diode
Chip Diode

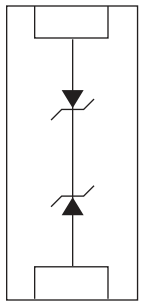
Package
DFN2 = DFN-2 Package

Model
Transient Voltage Suppressor

Working Peak Reverse Voltage
5.0 = 5.0 V_{RWM} (Volts)

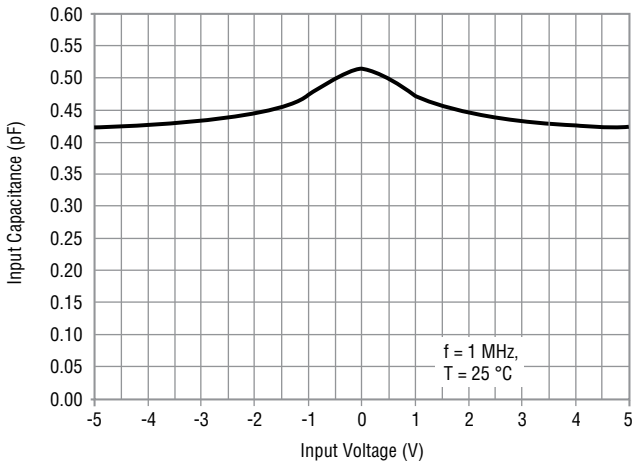
Suffix
LC = Low Capacitance Bidirectional Diode

Block Diagram

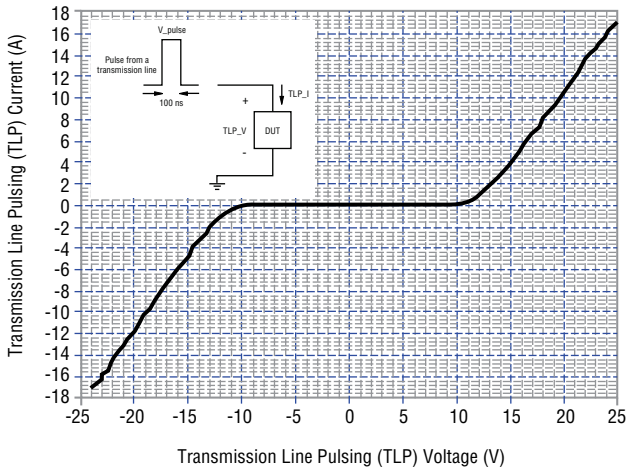


Performance Graphs

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

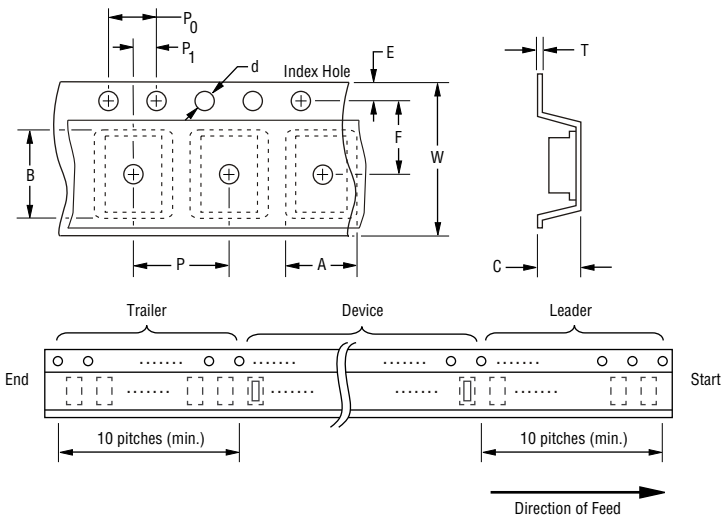


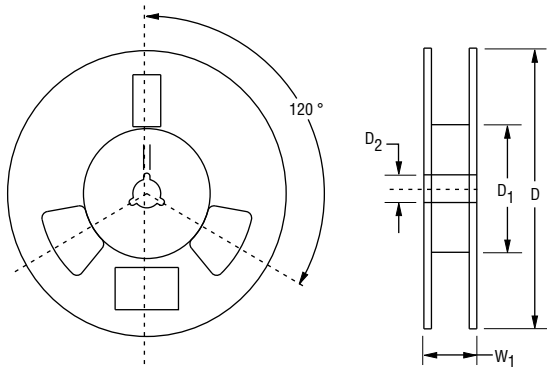
Typical Transmission Line Pulsing (TLP) Measurement



Packaging Information

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





DIMENSIONS: MM / (INCHES)

Item	Symbol	DFN-2
Carrier Width	A	0.7 ± 0.05 (0.028 ± 0.002)
Carrier Length	B	1.15 ± 0.05 (0.045 ± 0.002)
Carrier Depth	C	0.47 ± 0.05 (0.019 ± 0.002)
Sprocket Hole	d	1.55 ± 0.05 (0.061 ± 0.002)
Reel Outside Diameter	D	180.00 ± 2.00 (7.087 ± .079)
Reel Inner Diameter	D_1	60.00 ± 1.00 (2.362 ± 0.039)
Feed Hole Diameter	D_2	13.10 ± 0.20 (0.516 ± 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	2.00 ± 0.10 (0.079 ± 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 ± 0.05 (0.008 ± 0.002)
Tape Width	W	8.00 ± 0.10 (0.315 ± 0.004)
Reel Width	W_1	11.60 ± 1.00 (0.457 ± 0.039)
Quantity per Reel	--	12,000

REV. 09/19

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