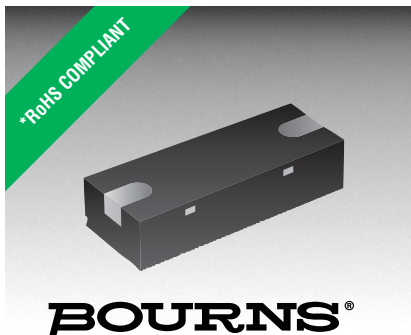




Features

- Bidirectional TVS 3.3 V
- Low capacitance - 23 pF
- ESD protection >25 kV
- Fits 0402 footprint



Model CDDFN2-T3.3C is obsolete.

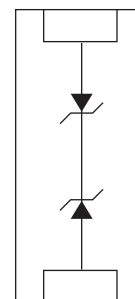
CDDFN2-T3.3C - Surface Mount TVS Diode

General Information

The CDDFN2-T3.3C device provides ESD, EFT and Surge 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 x 0.55 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), IEC 61000-4-4 (EFT) and IEC61000-4-5 (Surge) protection requirements.



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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Operating Supply Voltage	V _{DC}	-3.8		3.8	V
Peak Pulse Current @ 8/20 μs	I _{pp}			5	A
Operating Temperature	T _{OPR}	-55	+25	+125	°C
Storage Temperature	T _{STG}	-55	+25	+150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Voltage	V _{WM}		3.0	3.3	V
Breakdown Voltage @ 1 mA	V _{BR}	4		6.5	V
Leakage Current @ 5 V	I _L		0.05	0.5	μA
Capacitance @ 0 V, 1 MHz	C _J		23	28	pF
Clamping Voltage @ I _P = 1 A, 8/20 μs	V _C		4.5	5.5	V
Clamping Voltage @ I _{PP} = 5 A, 8/20 μs	V _C		6	7	V
ESD Protection per IEC 61000-4-2					
Contact Discharge	ESD	8		30	kV
Air Discharge	ESD	15		30	kV
EFT Protection per IEC 61000-4-4 @ 5/50 nS	EFT			80	A
Surge Protection per IEC 61000-4-5 @ 8/20 μs	Surge			5	A

*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.

Applications

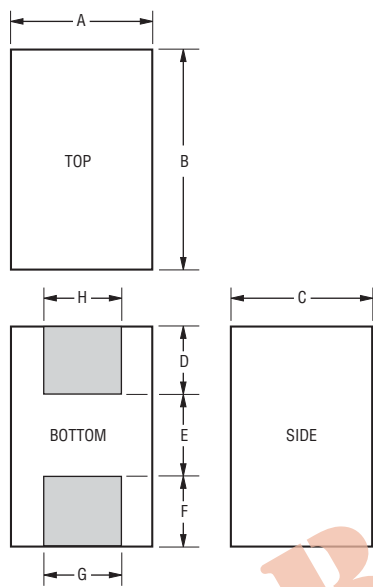
- Computers and peripherals
- Communication systems
- Audio & video equipment
- Portable instrumentation

CDDFN2-T3.3C - Surface Mount TVS Diode

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Product Dimensions

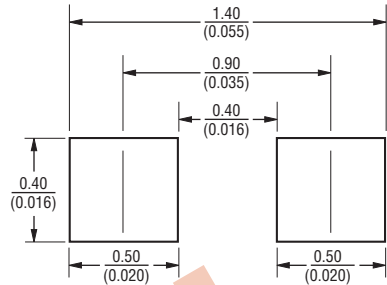
This is a Molded DFN-2 package with lead free 100 % Sn plating on the terminations. It weighs approximately 30 mg.



Dimensions	
A	0.55-0.65 (0.022-0.026)
B	0.95-1.05 (0.037-.041)
C	0.45-0.55 (0.018-.022)
D	0.275-0.325 (0.011-0.013)
E	0.432 (0.017)
F	0.275-0.325 (0.011-0.013)
G	0.275-0.325 (0.011-0.013)
H	0.275-0.325 (0.011-0.013)

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

Recommended PCB Footprint



Typical Part Marking

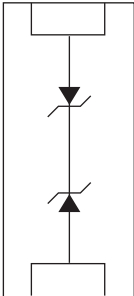
CDDFN2-T3.3C FX

How to Order

CD DFN2 - T 3.3 C

Common Diode
Chip Diode
Package
DFN2 = DFN-2 Package
Model
Transient Voltage Suppressor
Working Peak Reverse Voltage
3.3 = 3.3 V_{RWM} (Volts)
Suffix
C = Bidirectional Diode

Block Diagram



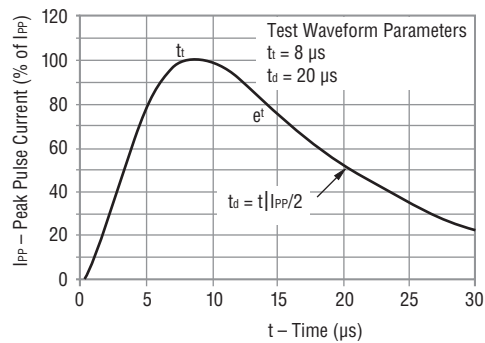
Specifications are subject to change without notice.
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CDDFN2-T3.3C - Surface Mount TVS Diode

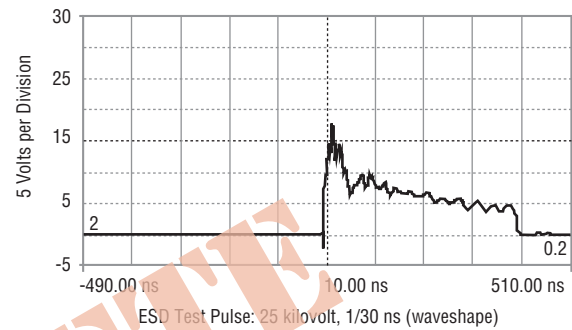
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Performance Graphs

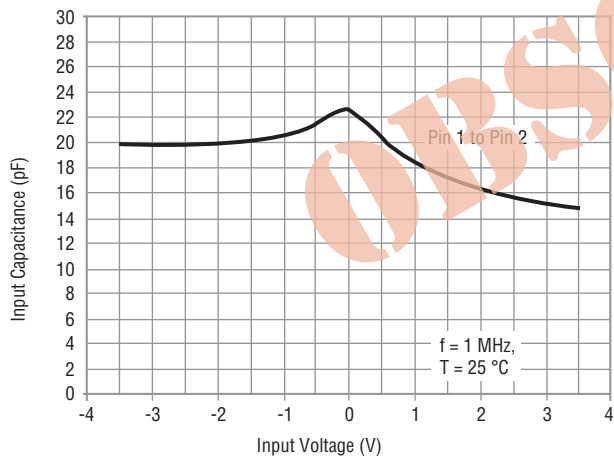
Pulse Waveform



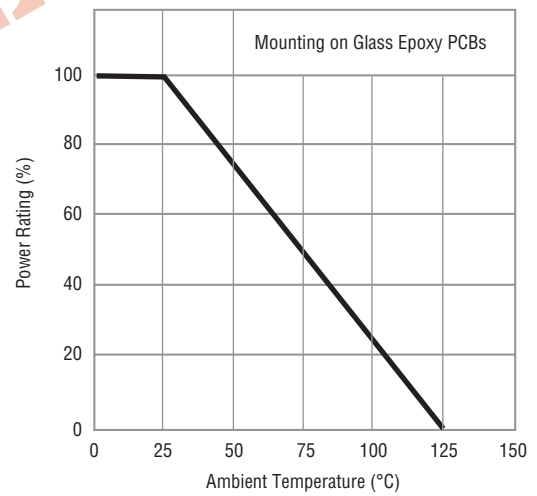
Overshoot & Clamping Voltage



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



Power Derating Curve

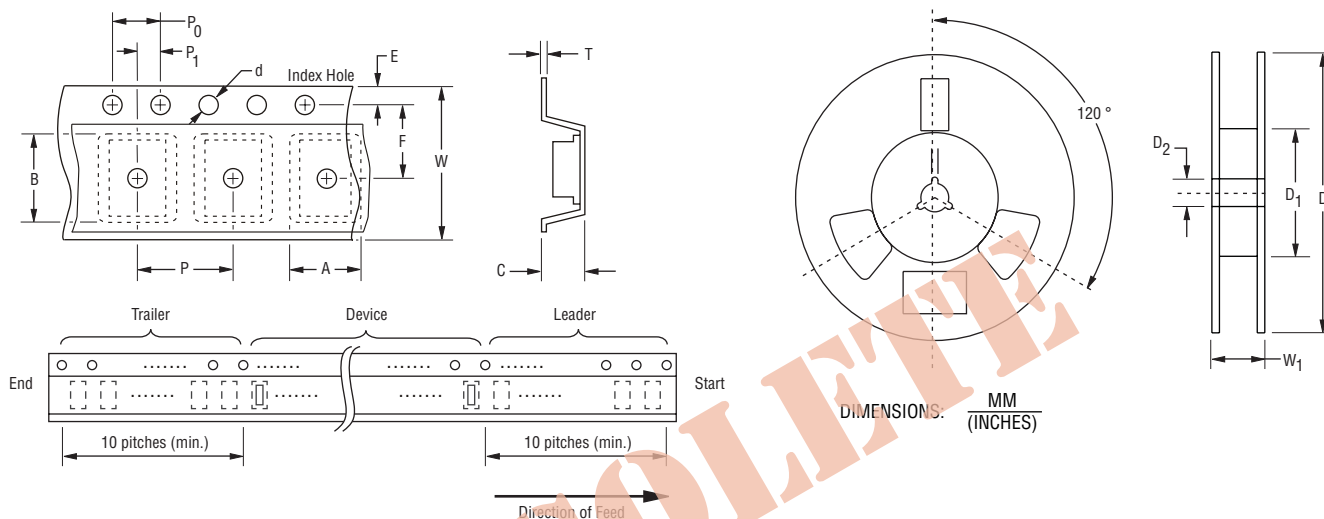


CDDFN2-T3.3C - Surface Mount TVS Diode

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Packaging Information

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



Item	Symbol	DFN-2
Carrier Width	A	0.50 ± 0.10 (0.031 ± 0.004)
Carrier Length	B	1.20 ± 0.10 (0.047 ± 0.004)
Carrier Depth	C	0.70 ± 0.10 (0.027 ± 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	--	5000

REV. 10/10

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