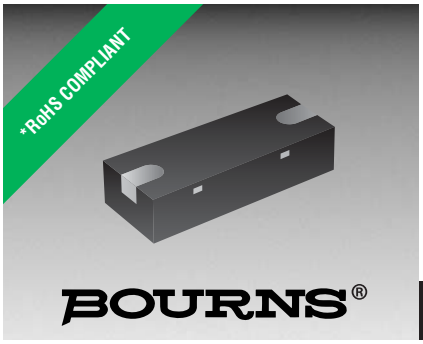


BOURNS®

Features

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

Applications

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

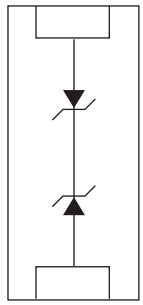
CDDFN2-T4.7C – Surface Mount TVS Diode

General Information

The CDDFN2-T4.7C 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 1.05 mm x 0.65 mm and is available in a DFN-2 package intended to be mounted directly onto an FR4 printed circuit board. The device will fit an 0402 footprint.

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



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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Peak Pulse Power @ 8/20 µs [1]	P_{PK}			75	W
Peak Pulse Current @ 8/20 µs	I_{pp}			5	A
Operating Temperature	T_{OPR}	-40	25	125	°C
Storage Temperature	T_{STG}	-55	25	150	°C

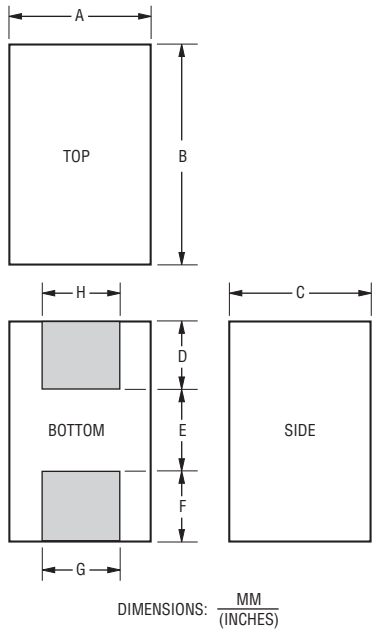
Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Voltage	V_{WM}		5.0		V
Breakdown Voltage @ 1 mA	V_{BR}	5.1	7.0		V
Leaking Current @ 5 V	I_L		0.1	2.0	µA
Capacitance @ 0 V, 1 MHz	C_J		15	20	pF
Clamping Voltage @ Ipp = 5 A 8/20 µs	V_C			15	V
ESD Protection per IEC 61000-4-2 Contact Discharge Air Discharge	 ESD ESD	 8 15			 kV kV
EFT Protection per IEC 61000-4-4 @ 5/50 ns	EFT			40	A
Surge Protection per IEC 61000-4-5 @ 8/20 µs	Surge			5	A

Notes:
1. See Peak Pulse Power vs. Pulse Time.

*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.

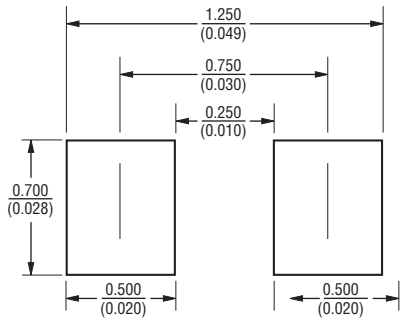
Product Dimensions

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

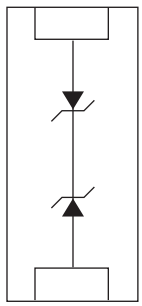


Dimensions	
A	0.55 - 0.65 (0.022 - 0.026)
B	0.95 - 1.05 (0.037 - 0.041)
C	0.45 - 0.55 (0.018 - 0.022)
D	0.30 (0.012)
E	0.432 (0.017)
F	0.30 (0.012)
G	0.50 (0.020)
H	0.50 (0.020)

Recommended PCB Footprint



Block Diagram



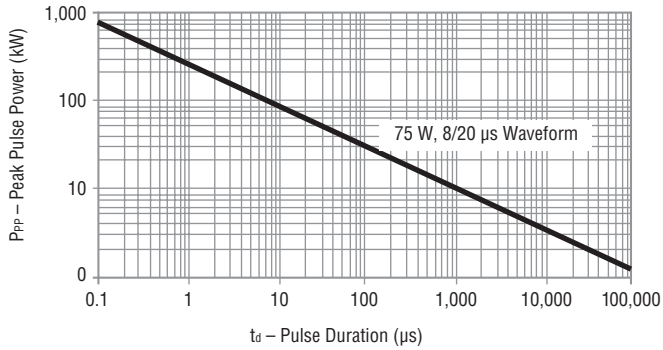
Typical Part Marking

CDDFN2-T4.7C E5

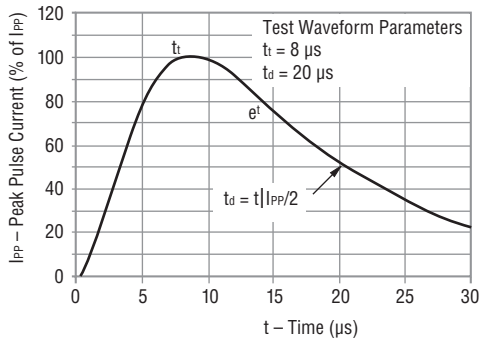
Specifications are subject to change without notice.
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Performance Graphs

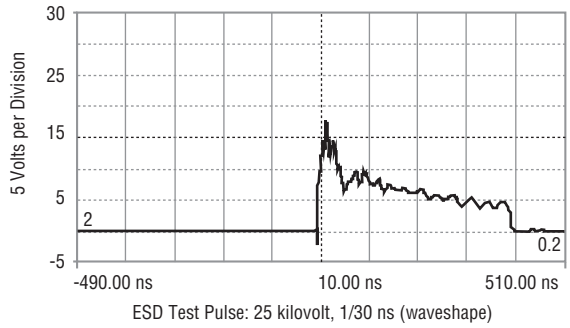
Peak Pulse Power vs Pulse Time



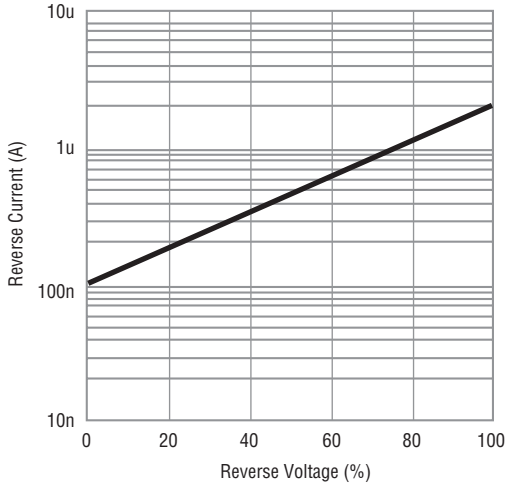
Pulse Wave Form



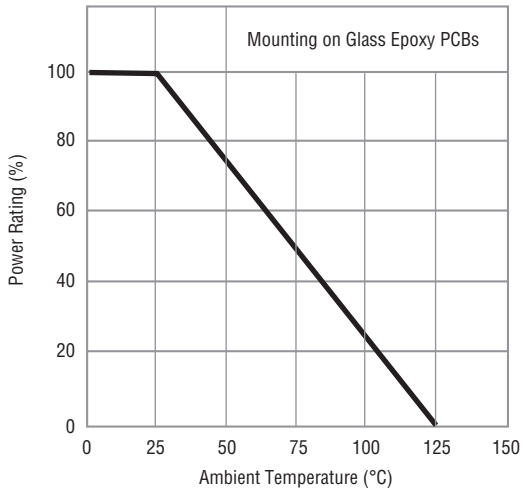
Overshoot & Clamping voltage



Reverse Characteristics



Power Derating Curve



How To Order

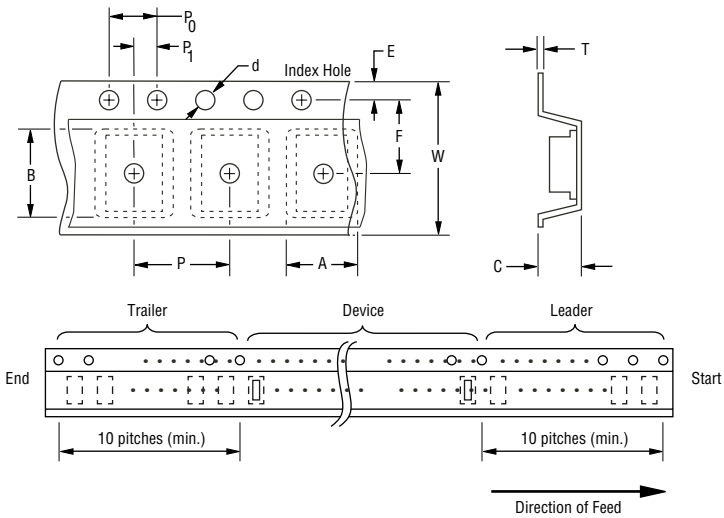
CD DFN2 - T 4.7 C

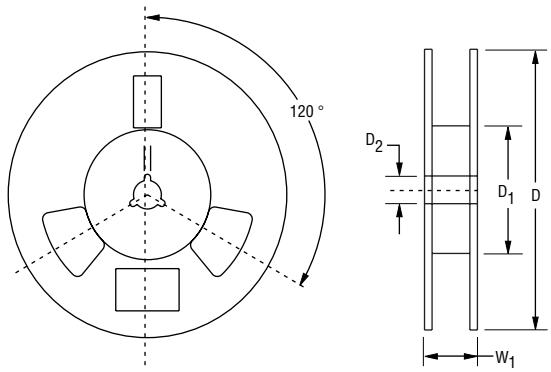
- Common Code: Chip Diode
- Package: • DFN2 = DFN-2 Package
- Model: T = Transient Voltage Suppressor
- Working Peak Reverse Voltage: 4.7 = 4.7 V_{RWM} (Volts)
- Suffix: C = Bidirectional Diode

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

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	0.80 ±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	—	5,000

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