



**THE DATASHEET OF
CDDFN2-T4.7C**





Features

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



This series is currently available but not recommended for new designs.

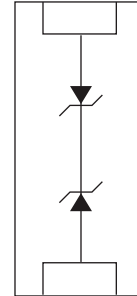
CDDFN2-T4.7C – Surface Mount TVS Diode

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 @ I _{pp} = 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:

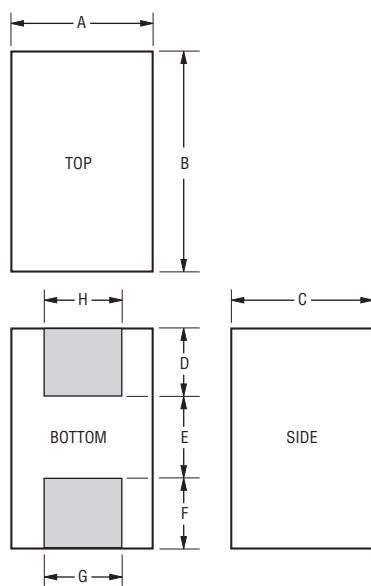
1. See Peak Pulse Power vs. Pulse Time.

CDDFN2-T4.7C – Surface Mount TVS Diode



Product Dimensions

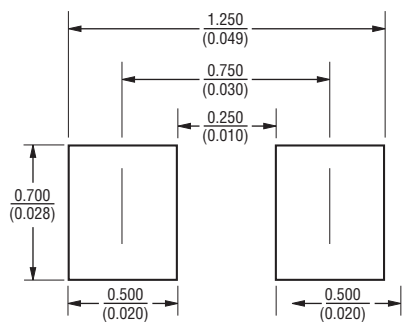
This is a Molded DFN-2 package with lead free 100 % Sn plating on the terminations. It weighs approximately 30 mg.



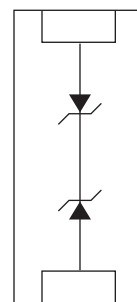
DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

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

Recommended PCB Footprint



Block Diagram



Typical Part Marking

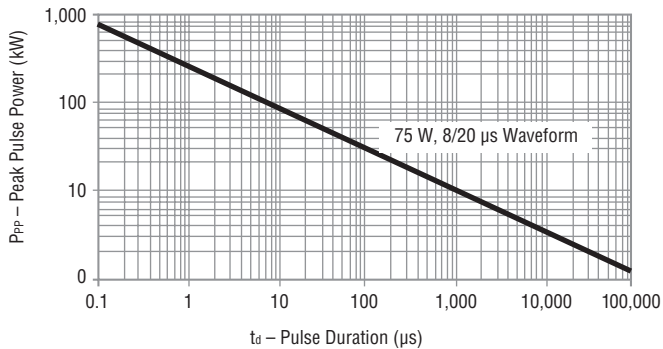
CDDFN2-T4.7CE5

CDDFN2-T4.7C – Surface Mount TVS Diode

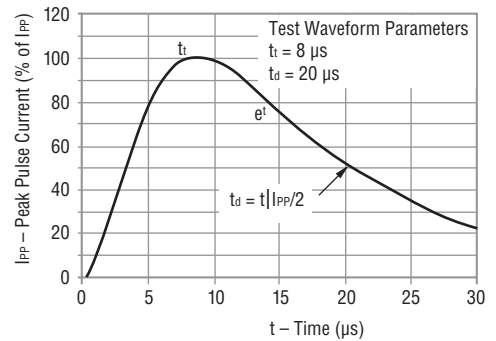


Performance Graphs

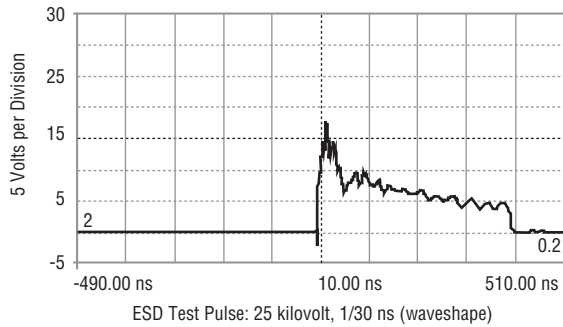
Peak Pulse Power vs Pulse Time



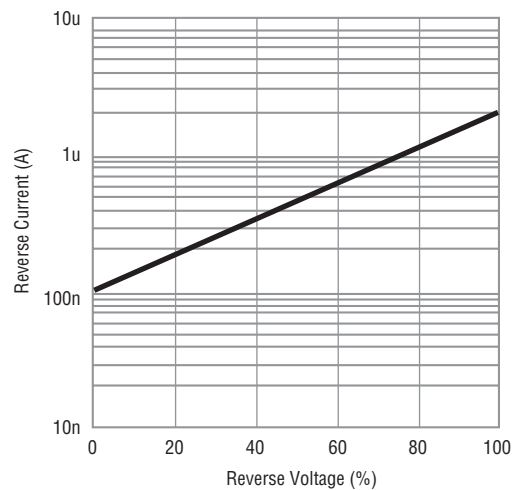
Pulse Wave Form



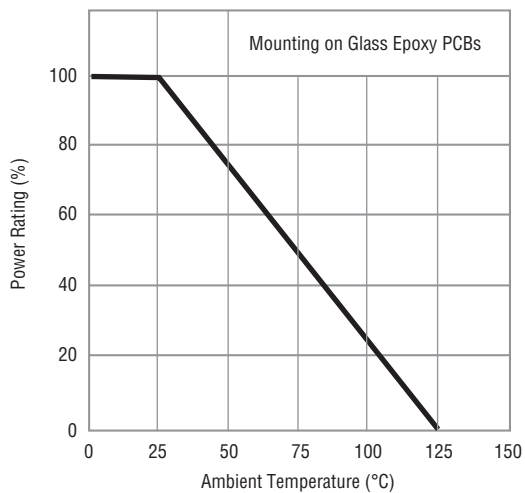
Overshoot & Clamping voltage



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

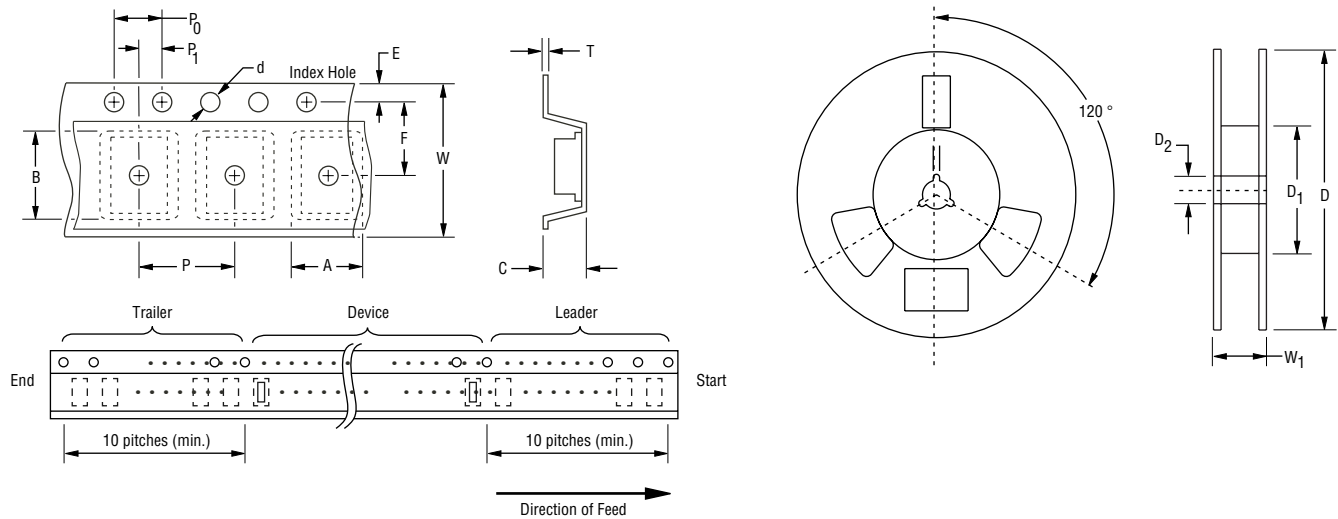
Specifications are subject to change without notice. Customers should verify actual device performance in their specific applications.

CDDFN2-T4.7C – Surface Mount TVS Diode

BOURNS®

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 | $\frac{0.80 \pm 0.10}{(0.031 - 0.004)}$ |
| Carrier Length | B | $\frac{1.20 \pm 0.10}{(0.047 - 0.004)}$ |
| Carrier Depth | C | $\frac{0.70 \pm 0.10}{(0.027 - 0.004)}$ |
| Sprocket Hole | d | $\frac{1.55 \pm 0.05}{(0.061 - 0.002)}$ |
| Reel Outside Diameter | D | $\frac{178}{(7.008)}$ |
| Reel Inner Diameter | D ₁ | $\frac{50.0}{(1.969)}$ Min. |
| Feed Hole Diameter | D ₂ | $\frac{13.0 \pm 0.20}{(0.512 - 0.008)}$ |
| Sprocket Hole Position | E | $\frac{1.75 \pm 0.10}{(0.069 - 0.004)}$ |
| Punch Hole Position | F | $\frac{3.50 \pm 0.05}{(0.138 - 0.002)}$ |
| Punch Hole Pitch | P | $\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$ |
| Sprocket Hole Pitch | P ₀ | $\frac{4.00 \pm 0.10}{(0.157 - 0.004)}$ |
| Embossment Center | P ₁ | $\frac{2.00 \pm 0.05}{(0.079 - 0.002)}$ |
| Overall Tape Thickness | T | $\frac{0.20 \pm 0.10}{(0.008 - 0.004)}$ |
| Tape Width | W | $\frac{8.00 \pm 0.20}{(0.315 - 0.008)}$ |
| Reel Width | W ₁ | $\frac{14.4}{(0.567)}$ Max. |
| Quantity per Reel | — | 5,000 |

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

REV. 12/15

Looking for pricing, stock, or lifecycle information?

Click below to explore more details on WIN SOURCE:

- ⊖ [View CDDFN2-T4.7C on WIN SOURCE](#)
- ⊖ [Bourns Inc. Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management