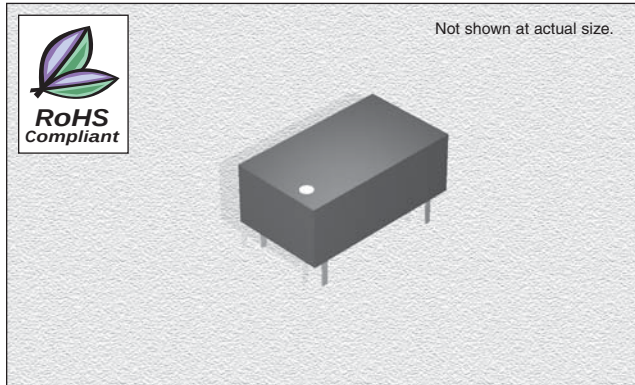


# CTDD2010DF-D1K-2 Series

Fixed Input Isolated & Unregulated  
2W Output, Dual Output



## FEATURES

**Efficiency:** To 87%

**Temperature Range:** -40°C to +85°C

**Isolation:** 1KVDC

**Package:** UL94-V0

**Miscellaneous:** Positive & Negative Voltage Output. No heat sink required. No external components required. Industry standard pinout. DIP package style. Power Density 1.42W/cm<sup>3</sup>. Full 2 watt output power.

**Samples available.**

## CHARACTERISTICS

**Short Circuit Protection:** 1 second

**Temperature Rise at Full Load:** 25°C Max. 15°C Typ.

**Cooling:** Free air convection

**Operating Temperature Range:** -40°C to +85°C

**Storage Temperature Range:** -55°C to +125°C

**Lead Temperature:** 300°C (1.5mm from case for 10 seconds)

**Storage Humidity Range:** ≤ 95%

**Case Material:** Plastic (UL94-V0)

**MTBF:** >3,500,000 hours

**Miscellaneous:** RoHS Compliant.

## SPECIFICATIONS

| Part Number           | Vin Nom. (VDC) | Vin Range (VDC) | Voltage Out (VDC) | Io Max. (mA) | Io Min. (mA) | Effi. Typ. (%) |
|-----------------------|----------------|-----------------|-------------------|--------------|--------------|----------------|
| CTDD2010DF-0505-D1K-2 | 5              | 4.5-5.5         | ±5                | ±200         | ±20          | 82             |
| CTDD2010DF-0509-D1K-2 | 5              | 4.5-5.5         | ±9                | ±111         | ±12          | 83             |
| CTDD2010DF-0512-D1K-2 | 5              | 4.5-5.5         | ±12               | ±83          | ±9           | 85             |
| CTDD2010DF-0515-D1K-2 | 5              | 4.5-5.5         | ±15               | ±67          | ±7           | 85             |
| CTDD2010DF-1205-D1K-2 | 12             | 10.8-13.2       | ±5                | ±200         | ±20          | 83             |
| CTDD2010DF-1209-D1K-2 | 12             | 10.8-13.2       | ±9                | ±111         | ±12          | 84             |
| CTDD2010DF-1212-D1K-2 | 12             | 10.8-13.2       | ±12               | ±83          | ±9           | 86             |
| CTDD2010DF-1215-D1K-2 | 12             | 10.8-13.2       | ±15               | ±67          | ±7           | 86             |
| CTDD2010DF-2405-D1K-2 | 24             | 21.6-26.4       | ±5                | ±200         | ±20          | 84             |
| CTDD2010DF-2409-D1K-2 | 24             | 21.6-26.4       | ±9                | ±111         | ±12          | 85             |
| CTDD2010DF-2412-D1K-2 | 24             | 21.6-26.4       | ±12               | ±83          | ±9           | 87             |
| CTDD2010DF-2415-D1K-2 | 24             | 21.6-26.4       | ±15               | ±67          | ±7           | 87             |

## ISOLATION SPECIFICATIONS

| Item                 | Test Condition      | MIN  | TYP | MAX | Units |
|----------------------|---------------------|------|-----|-----|-------|
| Isolation Voltage    | Tested for 1 minute | 1000 |     |     | VDC   |
| Isolation Resistance | Test at 500VDC      | 1000 |     |     | MΩ    |

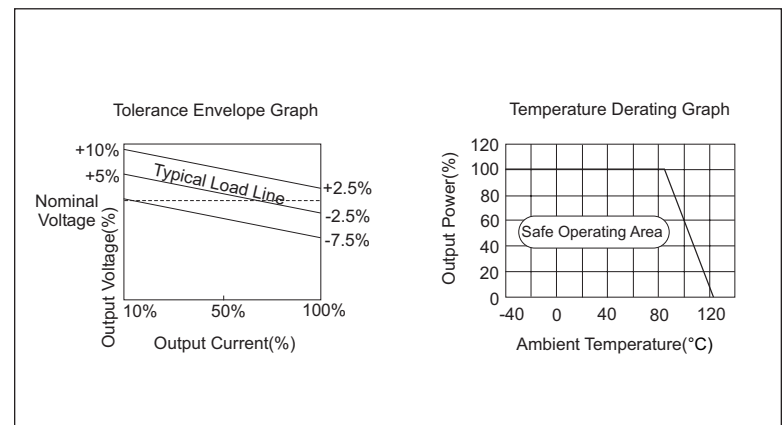
## OUTPUT SPECIFICATIONS

| Item                    | Test Condition               | MIN | TYP | MAX  | Units |
|-------------------------|------------------------------|-----|-----|------|-------|
| 2W Output Power         |                              | 0.2 |     | 2    | W     |
| Line regulation         | For Vin change of 1%         |     |     | 1.2  | %     |
| Load regulation         | 10% to 100% full load        |     | 10  | 15   | %     |
| Output voltage accuracy | See tolerance envelope graph |     |     |      |       |
| Temperature drift       | 100% full load               |     |     | 0.03 | %/°C  |
| 2W Output ripple        | 20MHz Bandwidth              |     | 100 | 150  | mVp-p |
| Switching frequency     | Full load, nominal input     |     | 75  |      | KHz   |

Note:

1. All specifications measured at TA=25°C, humidity<75%, nominal input voltage and rated output unless otherwise specified.

## TYPICAL CHARACTERISTICS

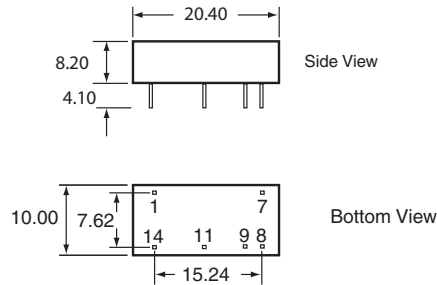


## CTDD2010DF-D1K-2 Series

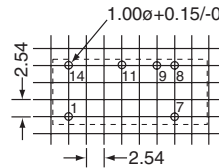
Fixed Input Isolated & Unregulated  
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### OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

CTDD2010DF-D1K-2 Package



CTDD2010DF-D1K-2 Footprint



Note: All Pins on a 2.54m pitch; all pin diameters are 0.50mm; all dimensions in mm.

### PIN CONNECTIONS

| Pin | Function |
|-----|----------|
| 1   | GND      |
| 7   | NC       |
| 8   | 0V       |
| 9   | +Vo      |
| 11  | -Vo      |
| 14  | Vin      |

