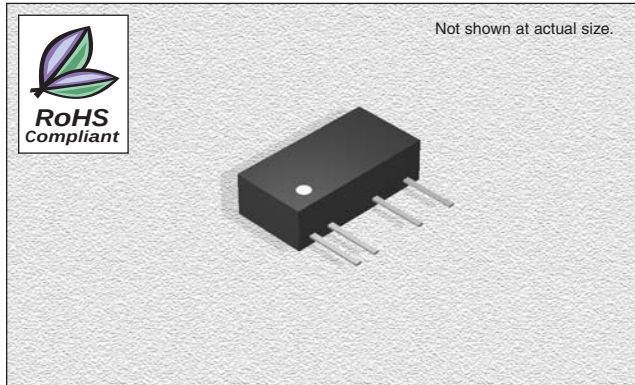


# CTDD1906SF-SU Series

Fixed Input Isolated & Unregulated  
1W Output, Single Output



## FEATURES

**Efficiency:** To 81%

**Temperature Range:** -40°C to 85°C

**Isolation:** 3KVDC

**Package:** UL94-V0

**Miscellaneous:** Single Output Voltage. Fixed Input Voltage. Power Density 0.85W/cm<sup>3</sup>. Unregulated Output Voltage. No heatsink required. No external component required. Industry standard pinout. Fully encapsulated. Small footprint. Custom service available.

**Samples available.**

## CHARACTERISTICS

**Short Circuit Protection:** 1 second

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

**Cooling:** Free air convection

**No-load power consumption:** 10% nominal power (typical)

**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:** >1,000,000 hours

**Miscellaneous:** RoHS Compliant.

## SPECIFICATIONS

| Part Number         | Vin Nom. | Input Range  | Vout   | Iout Max. (mA) | Iout Min. (mA) | Effi(Typ.) |
|---------------------|----------|--------------|--------|----------------|----------------|------------|
| CTDD1906SF-0303SU-1 | 3.3VDC   | 3.0~3.6VDC   | 3.3VDC | 300            | 300            | 72%        |
| CTDD1966SF-0305SU-1 | 3.3VDC   | 3.0~3.6VDC   | 5VDC   | 200            | 20             | 73%        |
| CTDD1906SF-0503SU-1 | 5VDC     | 4.5~5.5VDC   | 3.3VDC | 300            | 300            | 74%        |
| CTDD1906SF-0505SU-1 | 5VDC     | 4.5~5.5VDC   | 5VDC   | 200            | 20             | 78%        |
| CTDD1906SF-0509SU-1 | 5VDC     | 4.5~5.5VDC   | 9VDC   | 111            | 12             | 78%        |
| CTDD1906SF-0512SU-1 | 5VDC     | 4.5~5.5VDC   | 12VDC  | 83             | 9              | 80%        |
| CTDD1906SF-0515SU-1 | 5VDC     | 4.5~5.5VDC   | 15VDC  | 67             | 7              | 81%        |
| CTDD1906SF-1203SU-1 | 12VDC    | 10.8~13.2VDC | 3.3VDC | 300            | 300            | 75%        |
| CTDD1906SF-1205SU-1 | 12VDC    | 10.8~13.2VDC | 5VDC   | 200            | 20             | 79%        |
| CTDD1906SF-1209SU-1 | 12VDC    | 10.8~13.2VDC | 9VDC   | 111            | 12             | 79%        |
| CTDD1906SF-1212SU-1 | 12VDC    | 10.8~13.2VDC | 12VDC  | 83             | 9              | 81%        |
| CTDD1906SF-1215SU-1 | 12VDC    | 10.8~13.2VDC | 15VDC  | 67             | 7              | 81%        |
| CTDD1906SF-1505SU-1 | 15VDC    | 13.5~16.5VDC | 5VDC   | 200            | 20             | 72%        |
| CTDD1906SF-2403SU-1 | 24VDC    | 21.6~26.4VDC | 3.3VDC | 300            | 300            | 76%        |
| CTDD1906SF-2405SU-1 | 24VDC    | 21.6~26.4VDC | 5VDC   | 200            | 20             | 79%        |
| CTDD1906SF-2409SU-1 | 24VDC    | 21.6~26.4VDC | 9VDC   | 111            | 12             | 80%        |
| CTDD1906SF-2412SU-1 | 24VDC    | 21.6~26.4VDC | 12VDC  | 83             | 9              | 80%        |
| CTDD1906SF-2415SU-1 | 24VDC    | 21.6~26.4VDC | 15VDC  | 67             | 7              | 80%        |

## ISOLATION SPECIFICATIONS

| Item                 | Test Condition      | MIN  | TYP | MAX | Units |
|----------------------|---------------------|------|-----|-----|-------|
| Isolation Voltage    | Tested for 1 minute | 3000 |     |     | VDC   |
| Isolation Resistance | Test at 500VDC      | 1000 |     |     | MΩ    |

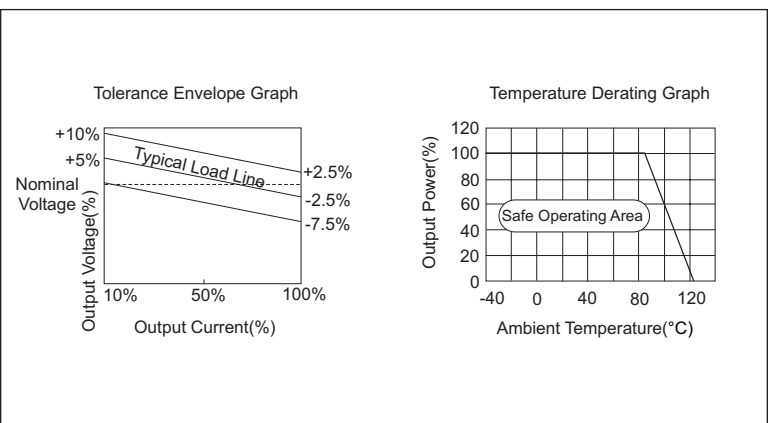
## OUTPUT SPECIFICATIONS

| Item                    | Test Condition               | MIN | TYP | MAX  | Units |
|-------------------------|------------------------------|-----|-----|------|-------|
| Output Power            |                              | 0.1 |     | 1    | 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  |
| Output ripple & noise   | 20Hz-300KHz bandwidth        |     | 50  | 75   | mVp-p |
| Switching frequency     | Full load, nominal input     | 100 | 150 | 200  | KHz   |

Note:

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

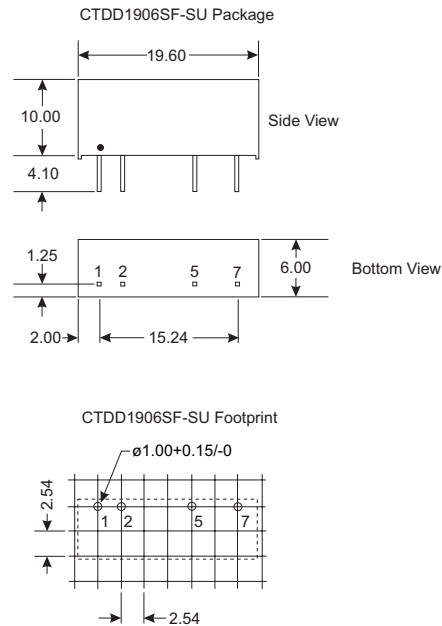
## TYPICAL CHARACTERISTICS



## CTDD1906SF-SU Series

Fixed Input Isolated & Unregulated  
1W Output, Single Output

### OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS



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

### PIN CONNECTIONS

| Pin | Function        |
|-----|-----------------|
| 1   | V <sub>in</sub> |
| 2   | GND             |
| 5   | 0V              |
| 7   | +V <sub>o</sub> |

