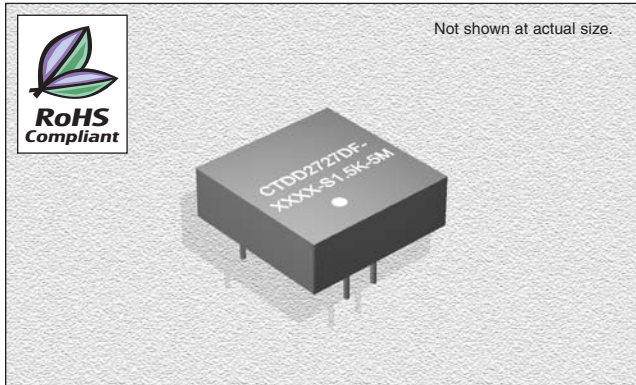


## CTDD2727DF-S1.5K-5M

### Series

Wide Input Isolated & Regulated  
5W Output, Single Output



### FEATURES

- Efficiency:** To 85%
- Temperature Range:** -40°C to +85°C
- Isolation:** 1.5KVDC
- Miscellaneous:** Wide (2:1) Input Range. Metal Shielding Package. Short circuit protection. No heat sink required. Industry Standard Pinout. Single Output
- Samples available.**

### CHARACTERISTICS

- Output Short Circuit Protection:** Continuous
- Temperature Rise at Full Load:** 30°C (Typ.)
- Cooling:** Free air convection
- No Load, Power Consumption:** 300mW (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:** Metal
- MTBF:** >1,000,000 hours
- Miscellaneous:** RoHS Compliant.

### SPECIFICATIONS

Part Number	Vin Nom. (VDC)	Input Range (VDC)	Vin Max.* (VDC)	Vout (VDC)	Iout Max. (mA)	Iout Min.** (mA)	Effi. Typ. (%)
CTDD2727DF-1205-S1.5K-5M	12	9-18	20	5	1000	100	74
CTDD2727DF-1209-S1.5K-5M	12	9-18	20	9	556	56	75
CTDD2727DF-1212-S1.5K-5M	12	9-18	20	12	420	42	77
CTDD2727DF-1215-S1.5K-5M	12	9-18	20	15	333	34	80
CTDD2727DF-1224-S1.5K-5M	12	9-18	20	24	208	21	82
CTDD2727DF-2405-S1.5K-5M	24	18-36	40	5	1000	100	77
CTDD2727DF-2409-S1.5K-5M	24	18-36	40	9	556	56	80
CTDD2727DF-2412-S1.5K-5M	24	18-36	40	12	420	42	81
CTDD2727DF-2415-S1.5K-5M	24	18-36	40	15	333	34	84
CTDD2727DF-2424-S1.5K-5M	24	18-36	40	24	208	21	85
CTDD2727DF-4805-S1.5K-5M	48	36-72	80	5	1000	100	79
CTDD2727DF-4809-S1.5K-5M	48	36-72	80	9	556	56	82
CTDD2727DF-4812-S1.5K-5M	48	36-72	80	12	420	42	85
CTDD2727DF-4815-S1.5K-5M	48	36-72	80	15	333	34	85
CTDD2727DF-4824-S1.5K-5M	48	36-72	80	24	208	21	86

\*If Input voltage above specified may cause permanent damage to the device  
\*\*The load should not be less than 10%, otherwise ripple will increase dramatically

### ISOLATION SPECIFICATIONS

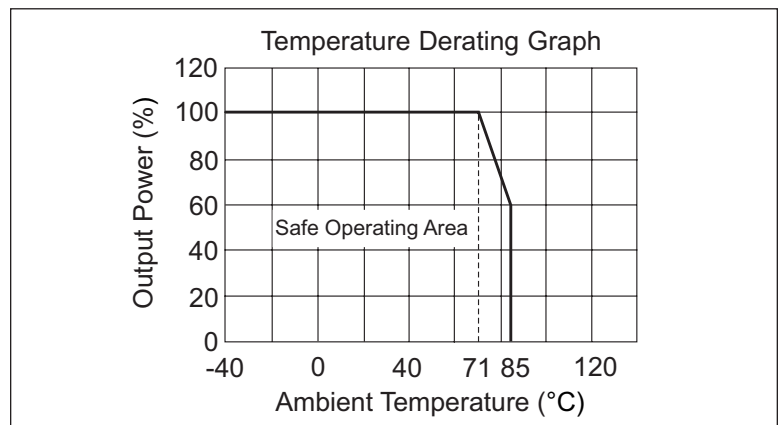
Item	Test Condition	MIN	TYP	MAX	Units
Isolation Voltage	Flash tested for 1 minute	1500			VDC
Isolation Resistance	Test at 500VDC	1000			MΩ

### OUTPUT SPECIFICATIONS

Item	Test Condition	MIN	TYP	MAX	Units
5W Output Power		0.5		5	W
Positive voltage accuracy	Refer to Recommended Circuit		±1	±3	%
Load regulation	From 10% to 100% load		±0.5	±1	%
Line regulation	Input Voltage from low to high		±0.2	±0.5	%
Temperature drift (Vout)	Refer to Temp. Derating Graph			0.03	%/°C
Ripple	20Hz to 300KHz Bandwidth		30	50	mVp-p
Noise	DC-20MHz Bandwidth		80	150	mVp-p
Switching frequency	100% load, nominal input voltage		300		KHz

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

### TYPICAL CHARACTERISTICS



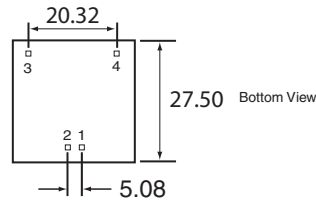
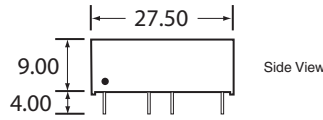
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## CTDD2727DF-S1.5K-5M Series

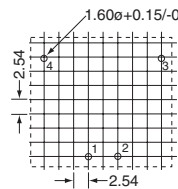
Wide Input Isolated & Regulated  
5W Output, Single Output

### OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

CTDD2727DF-S1.5K-5M Package



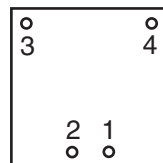
CTDD2727DF-S1.5K-5M Footprint



Note: All Pins on a 2.54mm pitch; all pin diameters are 0.80mm; (Tolerance: +25) all dimensions in mm.

### PIN CONNECTIONS

Pin	Function
1	GND
2	Vin
3	+Vo
4	OV



Bottom View

### RECOMMENDED CIRCUIT

All the CTDD2727DF-S1.5K-5M Series have been tested according to the following recommended testing circuit before leaving factory. This series should be tested under load. Never be tested under no load (See figure 1 & 2). If you want to further decrease the input/output ripple, you can increase capacitance properly or choose capacitors with low ESR. However, the capacitance should not be too high (See table 1). If you want to use the products in high EMI, please choose our metal packaged products.

External Capacitor Table (table 1)

Vin	C <sub>in</sub>	C <sub>out</sub> (-40+85°C)
12V & 24V & 48V	100μF	100μF/1A (electrolytic capacitor)

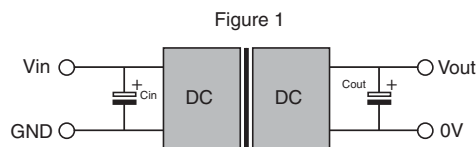
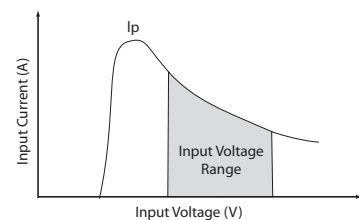


Figure 2



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