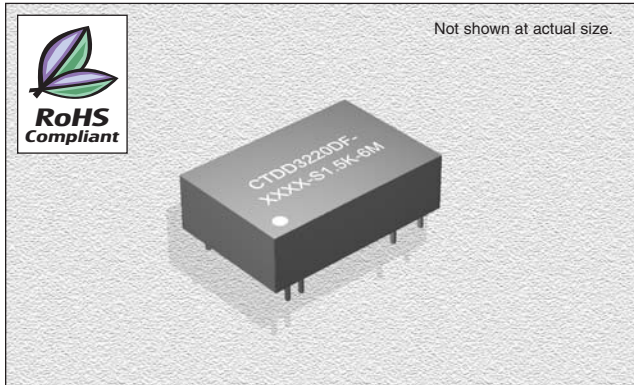


## CTDD3220DF-S1.5K-6M

### Series

Wide Input Isolated & Regulated  
6W Output, Single Output



### FEATURES

- Efficiency:** To 85%
- Temperature Range:** -40°C to +85°C
- Isolation:** 1.5KVDC
- Miscellaneous:** Wide (4:1) Input Range. Single Output. No heat sink required. Metal Shielding Package. 24PIN Industry standard pinout. Continuous Short-Circuit Protection.
- Samples available.**

### CHARACTERISTICS

- Output Short Circuit Protection:** Continuous
- Temperature Rise at Full Load:** 40°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:** 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. (%)
CTDD3220DF-2405-S1.5K-6M	24	9-36	40	5	1200	120	76
CTDD3220DF-2409-S1.5K-6M	24	9-36	40	9	667	67	80
CTDD3220DF-2412-S1.5K-6M	24	9-36	40	12	500	50	78
CTDD3220DF-2415-S1.5K-6M	24	9-36	40	15	400	40	82
CTDD3220DF-2424-S1.5K-6M	24	9-36	40	24	250	25	85
CTDD3220DF-4805-S1.5K-6M	48	18-72	80	5	1200	120	78
CTDD3220DF-4809-S1.5K-6M	48	18-72	80	9	667	67	81
CTDD3220DF-4812-S1.5K-6M	48	18-72	80	12	500	50	81
CTDD3220DF-4815-S1.5K-6M	48	18-72	80	15	400	40	84
CTDD3220DF-4824-S1.5K-6M	48	18-72	80	24	250	25	85

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

### ISOLATION SPECIFICATIONS

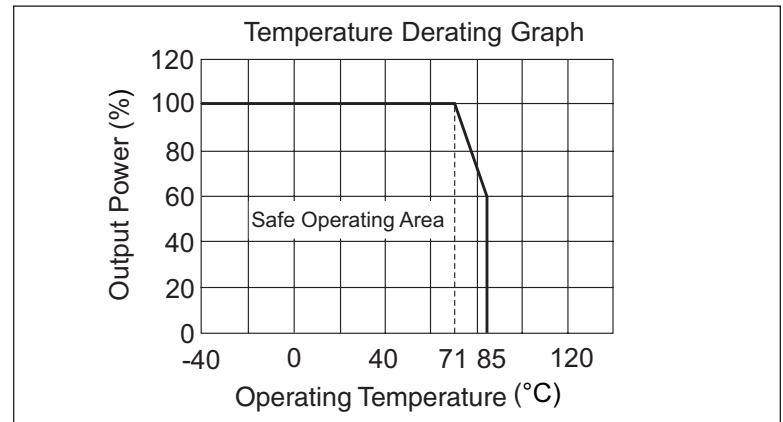
Item	Test Condition	MIN	TYP	MAX	Units
Isolation Voltage	Flash tested for 1 minute	1500			VDC
Isolation Resistance	Test at 500VDC	1000			MΩ

### OUTPUT SPECIFICATIONS

Item	Test Condition	MIN	TYP	MAX	Units
6W Output Power				6	W
Output 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		0.02		%/°C
Ripple	20Hz to 300KHz Bandwidth		30	50	mVp-p
Noise	DC-20MHz Bandwidth		100	300	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

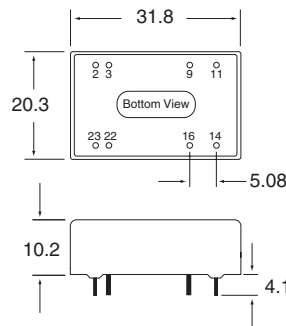


## CTDD3220DF-S1.5K-6M Series

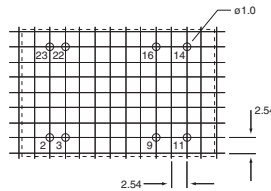
Wide Input Isolated & Regulated  
6W Output, Single Output

### OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

CTDD3220DF-S1.5K-6M Package



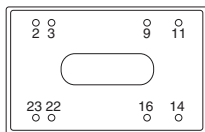
CTDD3220DF-S1.5K-6M Footprint



Note: All Pins on a 2.54mm pitch; All Pin diameters are 0.50mm (Tolerance: ±0.25); All dimensions in mm.

### PIN CONNECTIONS

Bottom View



Pin	Function
2, 3	GND
9	No Pin
11	NC
14	+Vo
16	0V
22, 23	Vin

### RECOMMENDED CIRCUIT

All the CTDD3220DF-S1.5K-6M 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)

External Capacitor Table (table 1)

Vin	Cin	Vout	Cout
12V	100µF	5V	100µF each 1A Current
24V	100µF	12V	
48V	100µF	15V	
		24V	

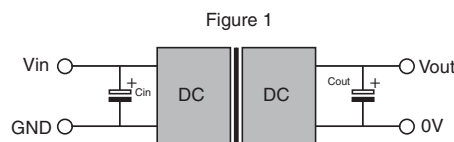
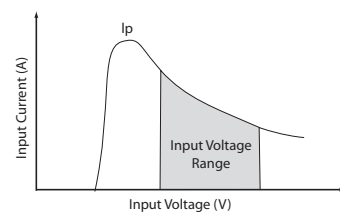


Figure 2



01.10.07