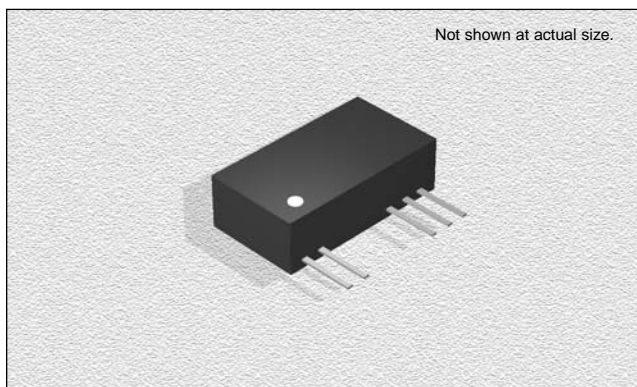


## CTDD2210S-S Series

Wide Input Isolated & Regulated  
2W Output, Single Output



### FEATURES

- Efficiency:** To 83%
- Temperature Range:** -40°C to 85°C
- Isolation:** 1KVDC
- Package:** UL94-V0
- Miscellaneous:** Single Output Voltage. No heatsink required. Industry standard pinout. Pin compatible with MSB series. Wide (2:1) Input Range. Custom service available.
- Samples available.**

### CHARACTERISTICS

- Output Short Circuit Protection:** Continuous
- Temperature Rise at Full Load:** 30°C Typ.
- Cooling:** Free air convection
- No-Load Power Consumption:** 150mW Typ.
- 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

### SPECIFICATIONS

Part Number	Vin Nom.	Input Range	Vout	Iout Max. (mA)	Iout Min. (mA)	Effi(Typ.)
CTDD2210S-0505S-2	5VDC	4.5-9VDC	5VDC	400	40	67%
CTDD2210S-0509S-2	5VDC	4.5-9VDC	9VDC	220	22	69%
CTDD2210S-0512S-2	5VDC	4.5-9VDC	12VDC	165	16	72%
CTDD2210S-0515S-2	5VDC	4.5-9VDC	15VDC	132	13	75%
CTDD2210S-1205S-2	12VDC	9-18VDC	5VDC	400	40	75%
CTDD2210S-1209S-2	12VDC	9-18VDC	9VDC	220	22	75%
CTDD2210S-1212S-2	12VDC	9-18VDC	12VDC	165	16	77%
CTDD2210S-1215S-2	12VDC	9-18VDC	15VDC	132	13	80%
CTDD2210S-1505S-2	15VDC	12-24VDC	5VDC	400	40	75%
CTDD2210S-1509S-2	15VDC	12-24VDC	9VDC	220	22	79%
CTDD2210S-1512S-2	15VDC	12-24VDC	12VDC	164	16	80%
CTDD2210S-1515S-2	15VDC	12-24VDC	15VDC	132	13	81%
CTDD2210S-2405S-2	24VDC	18-36VDC	5VDC	400	40	78%
CTDD2210S-2409S-2	24VDC	18-36VDC	9VDC	220	22	80%
CTDD2210S-2412S-2	24VDC	18-36VDC	12VDC	165	16	83%
CTDD2210S-2415S-2	24VDC	18-36VDC	15VDC	132	13	85%
CTDD2210S-4805S-2	48VDC	36-72VDC	5VDC	400	40	76%
CTDD2210S-4809S-2	48VDC	36-72VDC	9VDC	220	22	81%
CTDD2210S-4812S-2	48VDC	36-72VDC	12VDC	165	16	82%
CTDD2210S-4815S-2	48VDC	36-72VDC	15VDC	132	13	83%

### ISOLATION SPECIFICATIONS

Item	Test Condition	MIN	TYP	MAX	Units
Isolation Voltage	Flash 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
Output Voltage Accuracy	Refer To Recommended Circuit		±1	±3	%
Load regulation	10% to 100% load		±0.1	±0.2	%
Line Regulation	Input Voltage From Low to High		±0.2	±0.5	%
Temperature drift(Vout)	Refer To Recommended Circuit			0.03	%/°C
Ripple	20Hz-300KHz bandwidth		40	60	mVp-p
Noise	DC-20MHz bandwidth		80	150	mVp-p
Switching Frequency	100% Load, Nominal Input Voltage	80		200	kHz
Switching Frequency	10% Load, Nominal Input Voltage	250		600	kHz

Note:

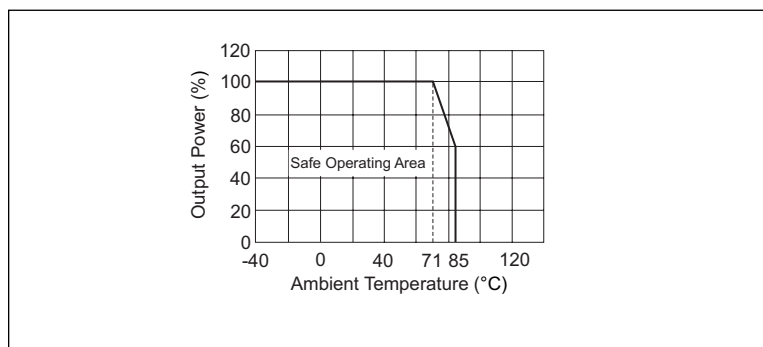
1. All specifications measured at T<sub>A</sub>=25°C, humidity<75%, nominal input voltage and rated output unless otherwise specified.

#### Application Note

#### Recommended Circuit

All the CTDD2210S-S series have been tested according to the following recommended testing circuit before leaving factory. This series should be tested under load. Never to be tested under no load. (See figure 1). 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. (Table 2). If you want to use the products in high EMI, please choose our metal packaged products.

### TYPICAL CHARACTERISTICS



06.29.05

## CTDD2210S-S Series

Wide Input Isolated & Unregulated  
2W Output, Single Output

### OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

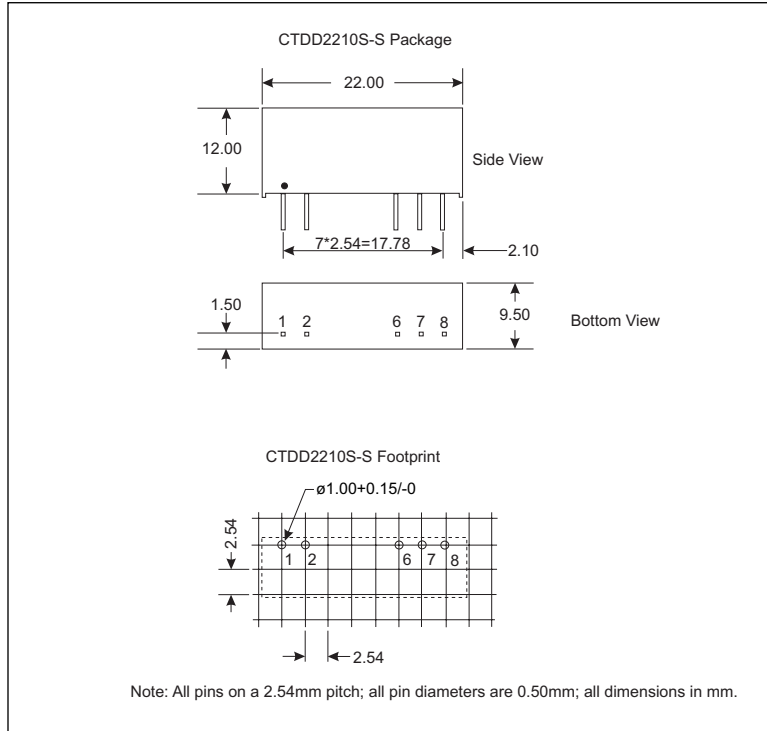
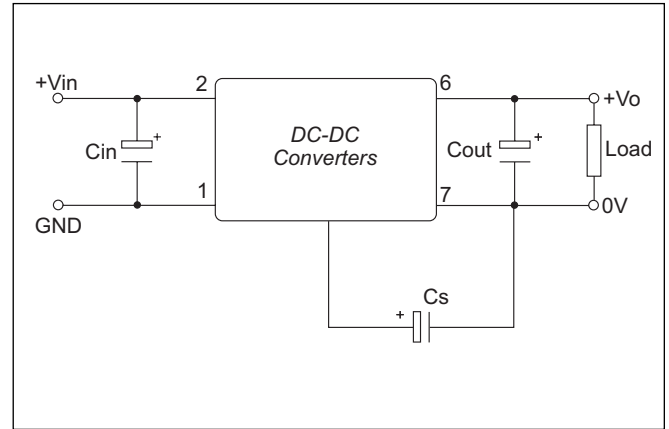


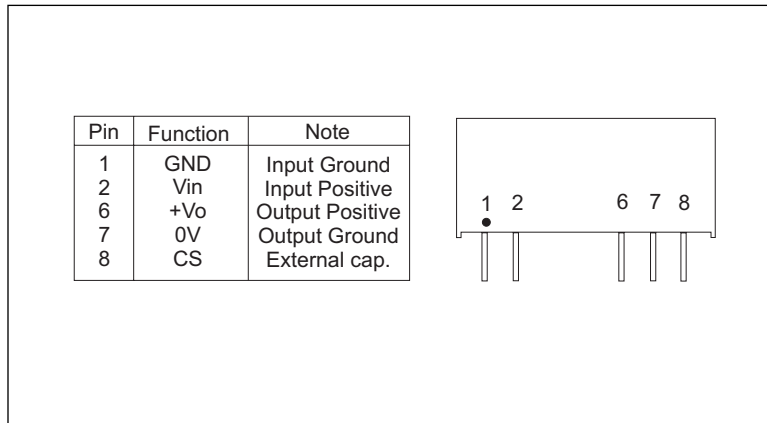
FIGURE 1



CS CAPACITOR TABLE(TABLE 1)

Vout	5V	9V	12V	15V
CS	47uF-100uF		22uF-47uF	

### PIN CONNECTIONS



EXTERNAL CAPACITOR TABLE(TABLE 2)

Vin	Cin	Cout (0+70°C)	Cout (-40+85°C)
5V & 12V	100uF	100uF (electrolytic capacitor)	47uF (tantalum capacitor)
24V & 48V	10uF		