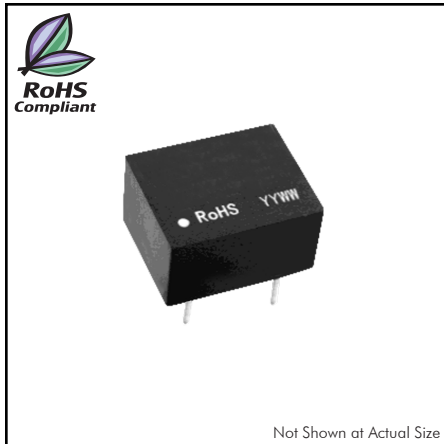


CTDD1210DF-SU3K-1

Series

**Fixed Input, Isolated & Unregulated
1W Single Output**



FEATURES

Applications: CTDD1210DF-SU3K-1 Series is specially designed for applications where a group of polar power supplies are isolated from the input power supply in a distributed power supply system on a circuit board. These products apply to:

- Where the voltage of the input power supply is fixed (voltage variation $\leq \pm 10\%$)
- Where the isolation is necessary between input and output (isolation voltage $\leq 3000\text{VDC}$)
- Where the regulation of the output voltage and the output ripple noise are not demanding such as: purely digital circuits, ordinary low frequency analog circuits, and IGBT power device driving circuits.

Efficiency: To 79%

Isolation: 3KVDC

Miscellaneous: No heatsink required. No external component required. Internal SMD construction. Industry standard pinout.

Additional Information: Additional electrical & physical information available upon request.

Samples available. See website for ordering information.

CHARACTERISTICS

Storage Humidity: 95%

Operating Temperature: -40°C to $+85^{\circ}\text{C}$

Storage Temperature: -55°C to $+125^{\circ}\text{C}$

Temp. rise at full load: 15°C Typ., 30°C Max.

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

Short Circuit Protection: 1 Second Max. (Supply voltage must be discontinued at the end of short circuit duration)

Cooling: Free air convection.

Case Material: Plastic (UL94-V0)

MTBF: $>3,500,000$ hours

Weight: 1.8g Typ.

Miscellaneous: **RoHS Compliant.**

SPECIFICATIONS

Part Number	Vin Nom. (VDC)	Input Range (VDC)	Vout (VDC)	Iout Max. (mA)	Iout Min. (mA)	Effi. Typ. (%)
CTDD1210DF-0305-SU3K-1	3.3	2.97-3.63	5	200	20	71
CTDD1210DF-0503-SU3K-1	5	4.5-5.5	3.3	303	30	71
CTDD1210DF-0505-SU3K-1	5	4.5-5.5	5	200	20	68
CTDD1210DF-0509-SU3K-1	5	4.5-5.5	9	111	12	76
CTDD1210DF-0512-SU3K-1	5	4.5-5.5	12	83	9	75
CTDD1210DF-0515-SU3K-1	5	4.5-5.5	15	67	7	77
CTDD1210DF-1203-SU3K-1	12	10.8-13.2	3.3	303	30	72
CTDD1210DF-1205-SU3K-1	12	10.8-13.2	5	200	20	69
CTDD1210DF-1209-SU3K-1	12	10.8-13.2	9	111	12	75
CTDD1210DF-1212-SU3K-1	12	10.8-13.2	12	83	9	77
CTDD1210DF-1215-SU3K-1	12	10.8-13.2	15	67	7	79

ISOLATION SPECIFICATIONS

Item	Test Condition	Min.	Typ.	Max.	Units
Isolation Voltage	Tested for 1 Min. and 1mA Max.	3000			VDC
Isolation Resistance	Test at 500VDC	1000			MΩ
Isolation Capacitance			60		pF

OUTPUT SPECIFICATIONS

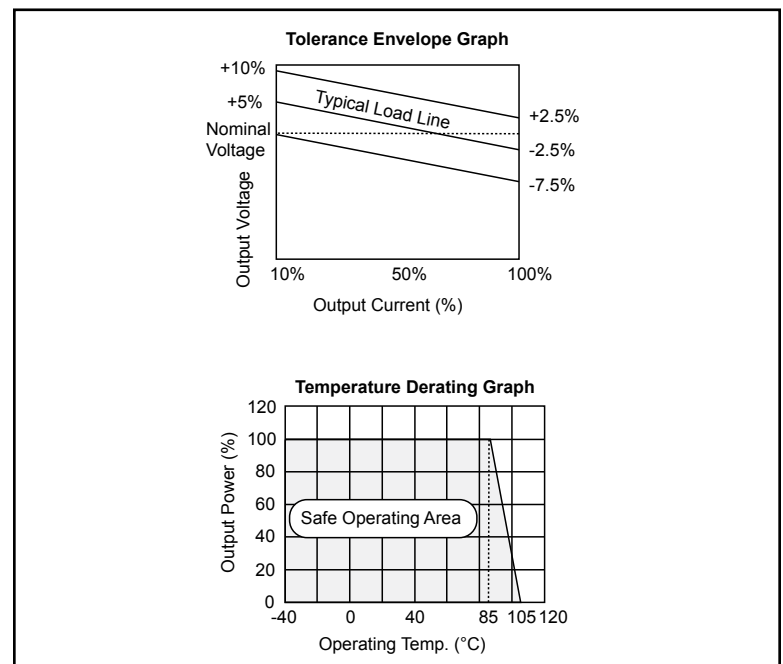
Item	Test Condition	Min.	Typ.	Max.	Units
Output Power		0.1		1	W
Line Regulation	For Vin change of $\pm 1\%$ (3.3V output)			± 1.5	%
Line Regulation	For Vin change of $\pm 1\%$ (Other output)			± 1.2	%
Load Regulation	From 10% to 100% load (3.3V output)		15	20	%
Load Regulation	From 10% to 100% load (5V output)		12.8	15	%
Load Regulation	From 10% to 100% load (9V output)		8.3	15	%
Load Regulation	From 10% to 100% load (12V output)		6.8	15	%
Load Regulation	From 10% to 100% load (15V output)		6.3	15	%
Load Regulation	From 10% to 100% load (24V output)		6.0	15	%
Output Voltage Accuracy	(See Tolerance Envelope Graph)				
Temperature Drift	100% full load			± 0.03	%/°C
Ripple & Noise*	20MHz Bandwidth		100	150	mVp-p
Switching Frequency	Full load, nominal input		100		KHz

*Test ripple and noise by "parallel cable" method.

Note:

1. All specifications measured at $T_a=25^{\circ}\text{C}$, humidity $<75\%$, nominal input voltage and rated output load unless otherwise specified.

TYPICAL CHARACTERISTICS

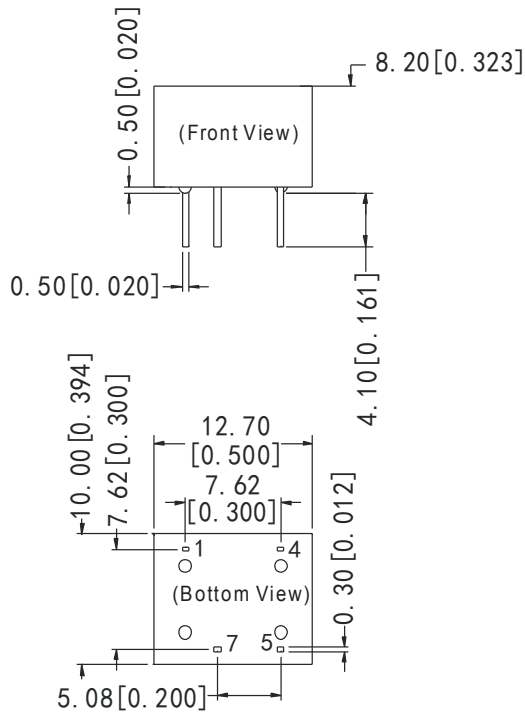


CTDD1210DF-SU3K-1

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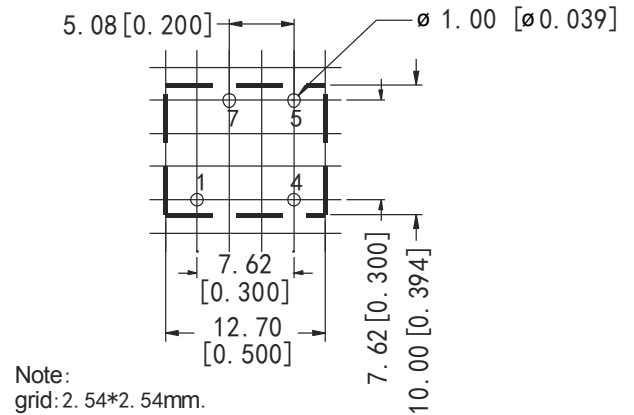
OUTLINE DIMENSIONS & RECOMMENDED FOOTPRINT DETAILS

Physical Dimensions



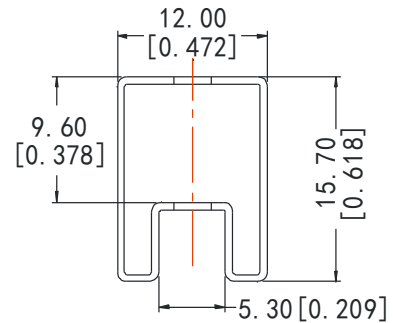
Note:
 Unit:mm[inch]
 Pin section tolerances:±0.10mm[±0.004inch]
 General tolerances:±0.25mm[±0.010inch]

Recommended Footprint



Note:
 grid: 2.54*2.54mm.

Tube Outline Dimensions



Note:
 Unit :mm[inch]
 General tolerances: ±0.50mm[±0.020inch]
 L=530mm[20.866inch] Devices per tube quantity: 40pcs
 L=220mm[8.661inch] Devices per tube quantity: 16pcs

Pin Connections

FOOTPRINT DETAILS	
Pin	Function
1	GND
4	Vin
5	+Vo
7	0V