

CTC COIL TECHNOLOGY CORPORATION

DC/DC CONVERTER A2.2WR Series , 2.2W REGULATION

Features:

- Low Profile Case , 24-Pin DIP Package Style.
- UL94V-0 Package Material.
- 2:1 Wide Input Range.
- 2.2W Max. Output Regulation.
- No External output Capacitor needed.
- Low Ripple and Noise.
- Continuous Short Circuit Protection, Auto-Restarting.
- Internal SMD Construction.
- Typical efficiency up to 85%.
- 1KVdc Isolation.
- Operating Temperature Range From - 40 to 85 .



Description:

The A2.2WR series is a range of low profile DC-DC converters offering a single regulated output over a 2: 1 input voltage range. No external output capacitor needed. Offer 2.2W output power up to 85 without heat-sink.

Selection Guide				
Order Code	Input Range	Output Voltage	Output Current	Efficiency Typ.
A2.2WR-053.3	4.5 ~ 9 VDC	3.3	500mA	68%
A2.2WR-0505		5	440mA	72%
A2.2WR-0509		9	244mA	75%
A2.2WR-0512		12	183mA	78%
A2.2WR-0515		15	146mA	79%
A2.2WR-123.3	9 ~ 18VDC	3.3	500mA	74%
A2.2WR-1205		5	440mA	77%
A2.2WR-1209		9	244mA	79%
A2.2WR-1212		12	183mA	83%
A2.2WR-1215		15	146mA	83%
A2.2WR-243.3	18 ~ 36VDC	3.3	500mA	77%
A2.2WR-2405		5	440mA	79%
A2.2WR-2409		9	244mA	81%
A2.2WR-2412		12	183mA	83%
A2.2WR-2415		15	146mA	85%
A2.2WR-483.3	36 ~72VDC	3.3	500mA	78%
A2.2WR-4805		5	440mA	80%
A2.2WR-4809		9	244mA	81%
A2.2WR-4812		12	183mA	83%
A2.2WR-4815		15	146mA	84%

Electrical Specifications				
Input Filter	Capacitor type.			
Voltage set accuracy		MIN.	TYP.	MAX.
			±1%	±2%
Line Regulation	Low line to High line @Max. load		0.05%	0.2%
Load Regulation	10% ~ 100% load		0.1%	0.4%
Ripple & Noise @ 20MHz BW	At nominal input and full load			50mVp-p
Operating Temperature		-40		+85
Storage Temperature		-50		+125
Short-Circuit Protection	Continuous			
Operating Frequency	100KHz , PFM Pulse Frequency Modulation			
Isolation Test Voltage	Tested for 1 second Min.	MIN.	TYP.	MAX.
		1000 Vdc		
Isolation Capacity			46pF	
Isolation Resistance		1GΩ		
Humidity				95%
MTBF (MIL-HDBK-217F)			10 ⁶ hours	

Physical Specifications	
Case Material	Non conductive Black Plastic
Potting Material	Epoxy(UL94V-0)
Weight	6.8g

All specifications valid at nominal input voltage, full load @ 25 after warm-up time unless otherwise stated.

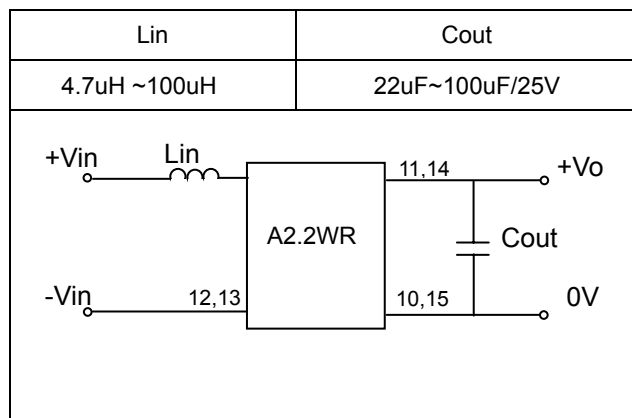
Recommended Circuit

Although these converters could work without external capacitor, it is recommended that with external output capacitor C_{out} which could reduce output ripple & noise under 30mVp-p.

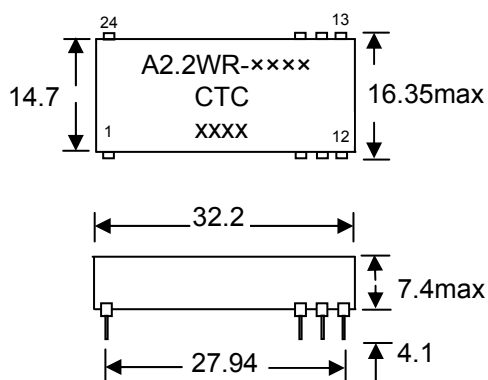
The followings are the recommended circuit and values.

Recommended Circuit for Reduced Ripple

Use the low ESR C_{out} capacitors and inductor L_{in} to reduce output ripple and input inrush current.



Mechanical Dimensions



PIN	CONNECTION
1,24	+Vin
10,15	-Vout
11,14	+Vout
12,13	-Vin

TOL.: $\pm 0.25\text{mm}$