

# CTC COIL TECHNOLOGY CORPORATION

## DC/DC CONVERTER B3WR-xxxxA/DA Series , 3W REGULATION

### Features:

- 2:1 Wide Input Range.
- 3W DIP-24 Package.
- Input  $\pi$  Filter.
- Internal SMD design.
- High Efficiency up to 86%.
- UL94V-0 Package Material.
- Low Ripple and Noise.
- Continuous Short Circuit Protection, Auto-Restarting.
- 2KVdc Isolation min.
- Operating Temperature Range From - 40 ~ +85 .
- Meet CE EN-60950-1 Certified



**Note:** Add “/H” after Order Code for isolation 4KVdc min.

Metal case could be selected with “ M ”after P/N

### Description:

The B3WR-xxxxA/DA series is a wide input voltage range of DC-DC converters offering a single and dual regulated output. 24-pin DIP and high efficiency allows an operating temperature of -40 to +85 except the 4.5 ~ 9V input voltage range.

Selection Guide				
P/N	Input Range	Output Voltage	Output Current	Efficiency Typ.
B3WR-053.3A B3WR-0505A/DA B3WR-0509A/DA B3WR-0512A/DA B3WR-0515A/DA	4.5 ~ 9 VDC	3.3 5 / $\pm 5$ 9 / $\pm 9$ 12 / $\pm 12$ 15 / $\pm 15$	900mA 600mA / $\pm 300$ mA 333mA / $\pm 167$ mA 250mA / $\pm 125$ mA 200mA / $\pm 100$ mA	66% 71% 74% 75% 75%
B3WR-123.3A B3WR-1205A/DA B3WR-1209A/DA B3WR-1212A/DA B3WR-1215A/DA	9 ~ 18VDC	3.3 5 / $\pm 5$ 9 / $\pm 9$ 12 / $\pm 12$ 15 / $\pm 15$	900mA 600mA / $\pm 300$ mA 333mA / $\pm 167$ mA 250mA / $\pm 125$ mA 200mA / $\pm 100$ mA	75% 75% 81% 83% 84%
B3WR-243.3A B3WR-2405A/DA B3WR-2409A/DA B3WR-2412A/DA B3WR-2415A/DA	18 ~ 36VDC	3.3 5 / $\pm 5$ 9 / $\pm 9$ 12 / $\pm 12$ 15 / $\pm 15$	900mA 600mA / $\pm 300$ mA 333mA / $\pm 167$ mA 250mA / $\pm 125$ mA 200mA / $\pm 100$ mA	76% 78% 82% 84% 86%
B3WR-483.3A B3WR-4805A/DA B3WR-4809A/DA B3WR-4812A/DA B3WR-4815A/DA	36 ~ 72VDC	3.3 5 / $\pm 5$ 9 / $\pm 9$ 12 / $\pm 12$ 15 / $\pm 15$	900mA 600mA / $\pm 300$ mA 333mA / $\pm 167$ mA 250mA / $\pm 125$ mA 200mA / $\pm 100$ mA	77% 79% 83% 85% 85%

## Electrical Specifications

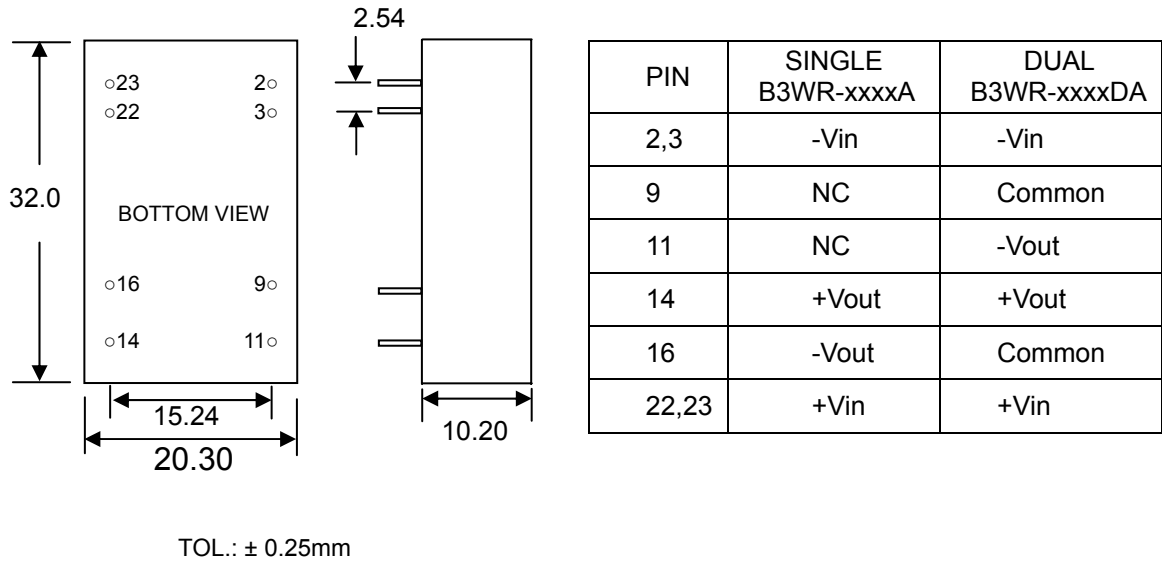
Input Filter	TT type.			
Voltage set accuracy		MIN.	TYP.	MAX.
			±1%	±2%
Line Regulation	Low line to High line @Max. load			0.4%
Load Regulation	20% ~ 100% load			0.6%
Ripple & Noise @ 20MHz BW <small>Note 1</small>				50mVp-p
Operating Temperature	Vin = 5V	-40		+80
	Vin = 12V, 24V, 48V	-40		+85
Storage Temperature		-50		+125
Short-Circuit Protection	Continuous , Auto Restart			
Operating Frequency (Pulse Frequency Modulation,PFM)	Vin = Nominal Input	100KHz		
Isolation Test Voltage	Tested for 1 second Min.	MIN.	TYP.	MAX.
		2000Vdc		
Isolation Capacity			40pF	
Isolation Resistance		1GΩ		
Humidity				95%
MTBF ( MIL-HDBK-217F)			10 <sup>6</sup> hours	
Case Temperature	Vin = Nominal Input @ Ta=25		40	

## Physical Specifications

Case Material	Non conductive Black Plastic
Potting Material	Epoxy( UL94V-0 )
Weight	12.0g

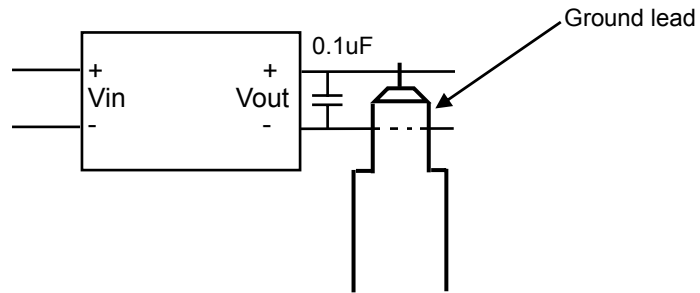
All specifications valid at nominal input voltage, full load @ 25 after warm-up time unless otherwise stated.

## Outline Dimensions



### Note:

- To measure the output ripple & noise with short runs by 0.1uF/ 50V @ 20MHz nominal input and full load. Please see as below :



DEC / 2003 Rev.A