

# CTC COIL TECHNOLOGY CORPORATION

## DC/DC CONVERTER B3WR4 Series , 3W REGULATION

### Features:

- 4 : 1 Ultra Wide Input Range.
- 3W DIP-24 Package.
- Full SMD-Design.
- High Efficiency up to 85%.
- UL94V-0 Package Material.
- Low Ripple and Noise.
- Continuous Short Circuit Protection, Auto-Restarting.
- 1KVdc Isolation.
- Input  $\pi$  Filter.
- Operating Temperature Range From - 40 to +85 .
- Case Temperature 38 @ Ta = 25
- Meet CE EN-60950-1 Certified



**Note :** Metal case could be selected with “ M “after P/N

### Description:

The B3WR4 series is a very 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 . The applications include industrial system, communications equipment, battery powered equipments etc....

Selection Guide				
P/N	Input Range	Output Voltage	Output Current	Efficiency Typ.
B3WR4-243.3	9 ~ 36VDC	3.3	850mA	77%
B3WR4-2405/D		5 / $\pm 5$	600mA/ $\pm 300$ mA	79%
B3WR4-2409/D		9 / $\pm 9$	333mA/ $\pm 167$ mA	81%
B3WR4-2412/D		12 / $\pm 12$	250mA/ $\pm 125$ mA	83%
B3WR4-2415/D		15 / $\pm 15$	200mA/ $\pm 100$ mA	84%
B3WR4-483.3	18 ~72VDC	3.3	900mA	78%
B3WR4-4805/D		5 / $\pm 5$	600mA/ $\pm 300$ mA	80%
B3WR4-4809/D		9 / $\pm 9$	333mA/ $\pm 167$ mA	82%
B3WR4-4812/D		12 / $\pm 12$	250mA/ $\pm 125$ mA	84%
B3WR4-4815/D		15 / $\pm 15$	200mA/ $\pm 100$ mA	85%

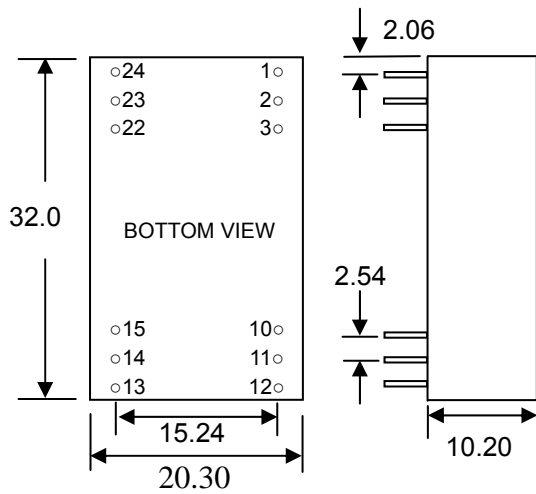
Electrical Specifications				
Input Filter	π type.			
Voltage set accuracy		MIN.	TYP.	MAX.
			±1%	±2%
Line Regulation	Low line to High line @Max. load			0.3%
Load Regulation	20% ~ 100% load			0.6%
Ripple & Noise @ 20MHz BW <small>Note 1</small>				50mVp-p
Operating Temperature		-40		+85
Storage Temperature		-50		+125
Short-Circuit Protection	Continuous , Auto-Restarting			
Operating Frequency (Pulse Frequency Modulation,PFM)	Vin = Nominal Input	160KHz		
Isolation Test Voltage	Tested for 1 second Min.	MIN.	TYP.	MAX.
		1000Vdc		
Isolation Capacity			50pF	
Isolation Resistance		1GΩ		
Humidity				95%
MTBF ( MIL-HDBK-217F)			10 <sup>6</sup> hours	
Case Temperature	Vin = Nominal Input @ Ta=25		38	

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

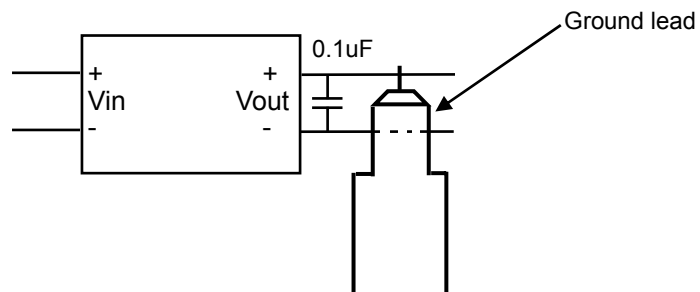


PIN	Single B3WR4-xxxx	Dual B3WR4-xxxxD
1,24	+Vin	+Vin
2,23	No PIN	-Vout
3,22	No PIN	Common
10,15	-Vout	Common
11,14	+Vout	+Vout
12,13	-Vin	-Vin

TOL.: ± 0.25mm

### Note:

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



JAN / 2004 Rev.0