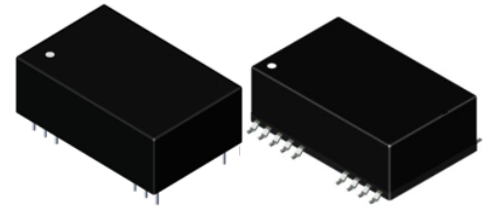


### Features

- 4:1 wide input voltage range
- 3W DIP24 package
- Low ripple and noise
- Lead free design, RoHS compliant
- Continuous short circuit protection
- 1KVD/2KVDC Isolation min.
- Input  $\pi$  filter

### Application

- Input voltage range from 9V to 72V
- 1KV~6KV input and output isolation
- Regulated and low ripple noise is required
- Industry control application
- Tele-communication application
- Medical requirement application



### Selection Guide

Part number	Input voltage	Output voltage	Output current @ full load	Efficiency <sup>(1)</sup> (typ.)	Capacitive load <sup>(2)</sup> (max.)
B3WR4-243.3AJ	9-36 VDC Nom. 24VDC	3.3 VDC	900 mA	79%	2000 $\mu$ F
B3WR4-2405AJ		5 VDC	600 mA	82%	1000 $\mu$ F
B3WR4-2409AJ		9 VDC	333 mA	84%	470 $\mu$ F
B3WR4-2412AJ		12 VDC	250 mA	84%	220 $\mu$ F
B3WR4-2415AJ		15 VDC	200 mA	85%	120 $\mu$ F
B3WR4-2405DAJ		$\pm$ 5 VDC	$\pm$ 300 mA	81%	$\pm$ 470 $\mu$ F
B3WR4-2409DAJ		$\pm$ 9 VDC	$\pm$ 167 mA	83%	$\pm$ 220 $\mu$ F
B3WR4-2412DAJ		$\pm$ 12 VDC	$\pm$ 125 mA	84%	$\pm$ 100 $\mu$ F
B3WR4-2415DAJ		$\pm$ 15 VDC	$\pm$ 100 mA	85%	$\pm$ 68 $\mu$ F
B3WR4-483.3AJ	18-72 VDC Nom. 48VDC	3.3 VDC	900 mA	78%	2000 $\mu$ F
B3WR4-4805AJ		5 VDC	600 mA	79%	1000 $\mu$ F
B3WR4-4809AJ		9 VDC	333 mA	83%	470 $\mu$ F
B3WR4-4812AJ		12 VDC	250 mA	84%	220 $\mu$ F
B3WR4-4815AJ		15 VDC	200 mA	85%	120 $\mu$ F
B3WR4-4805DAJ		$\pm$ 5 VDC	$\pm$ 300 mA	80%	$\pm$ 470 $\mu$ F
B3WR4-4809DAJ		$\pm$ 9 VDC	$\pm$ 167 mA	82%	$\pm$ 220 $\mu$ F
B3WR4-4812DAJ		$\pm$ 12 VDC	$\pm$ 125 mA	84%	$\pm$ 100 $\mu$ F
B3WR4-4815DAJ		$\pm$ 15 VDC	$\pm$ 100 mA	84%	$\pm$ 68 $\mu$ F

1. The efficiency is test by nominal input and max. full load at 25°C.
2. The capacitive load is test by minimum input and constant resistive load.

### Part Number

□: Plastic case  
M: Metal case

**B 3 WR4 - 24 09 D AJ H M / SMD / CTRL**

Model No. Power Wide range (4:1) Input voltage Output voltage □: Single output D: Dual output □: 2KVDC isolation H: 4KVDC isolation H6: 6KVDC isolation □: DIP SMD: SMD type □: no control pin

## Specifications

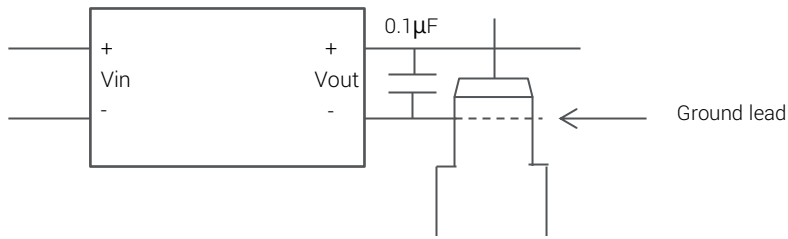
	Parameter	Conditions	Min.	Typ.	Max.	Unit
Input	Input filter			Pi type		
	Voltage range			4:1		
Output	Voltage accuracy			±2		%
	Line regulation	LL to HL at full load			±0.4	%
	Load regulation	For output current change from 20% to 100%			±0.6	%
	Minimum load		0			%
	Ripple & noise	0.1μF capacitor on output, 20MHz BW			50	mVp-p
	No load power consumption				300	mW
	Operating frequency	At full load		120		180
Environment	Operating temperature	free air convection	-40		105	°C
	Storage temperature		-55		125	°C
	Relative humidity				95	%RH
	MTBF (MIL-HDBK-217F)	+25°C	1043			KHours
Function	Isolation voltage	1 Sec.	2			KVDC
	Isolation capacitance		40		80	pF
	Isolation resistance		1			GΩ
	Short Circuit Protection			Continuous, auto restart		
	Safety			EN60950 / EN60601		
Physical	Dimension	(L x W x H)		31.80 x 20.30 x 10.20 mm		
	Weight			13		g
	Thermal impedance	Natural convection		20°C/W for plastic case 12°C/W for metal case		
	Case material			Non-conductive black plastic or metal		
	Potting material			Epoxy (UL94V-0)		
EMC	EMI	EN55022		Class A/ Class B		
	ESD	EN61000-4-2, Air±8kV; Contact±6kV		Criteria A		
	Radiated immunity	EN61000-4-3, 10 V/m		Criteria A		
	Fast transient	EN61000-4-4, ± 2kV		Criteria A		
	Surge	EN61000-4-5, ± 2kV		Criteria A		
	Conducted immunity	EN61000-4-6, 10 Vr.m.s		Criteria A		
	PMF	EN61000-4-8, 50Hz 1A/m (r.m.s)		Criteria A		

1. All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
2. The product information and specifications are subject to change without prior notice.

CTC is the professional and one among world's leading manufacturers of DC-DC/ AC-DC converters.

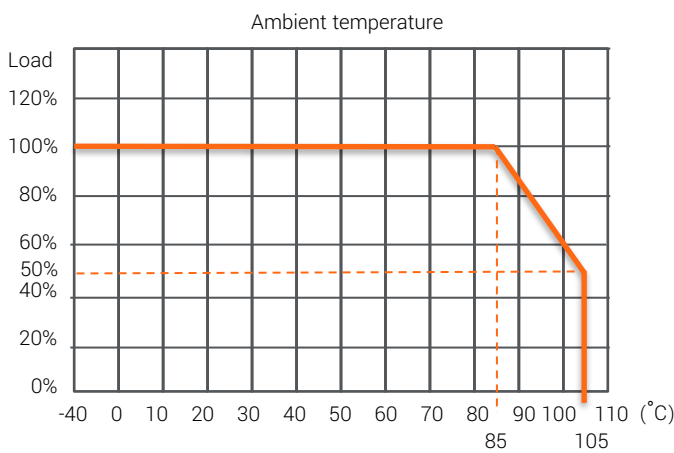
The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

## Application Suggestion



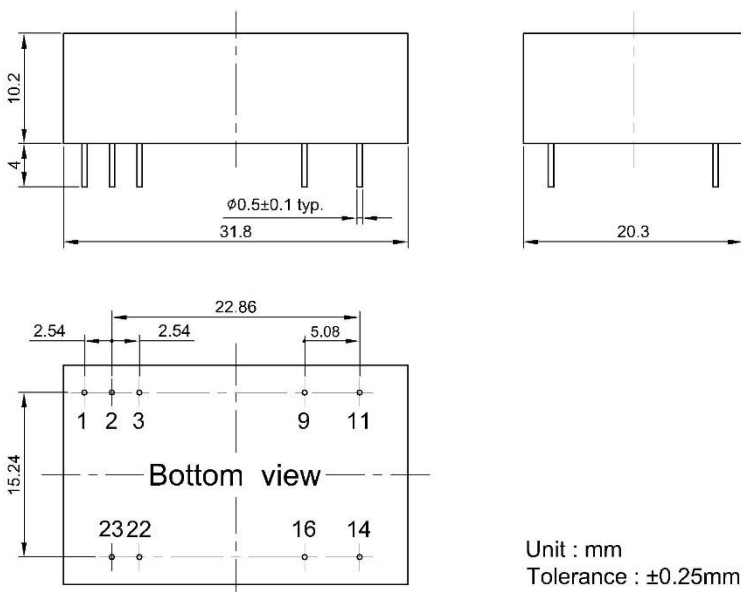
\*To measure the output ripple & noise with short runs by 0.1µF/50V @20MHz nominal input and full load.

## Derating curve



\*The derating curve was measured at nominal input voltage.

## Mechanical Dimension & Pinning



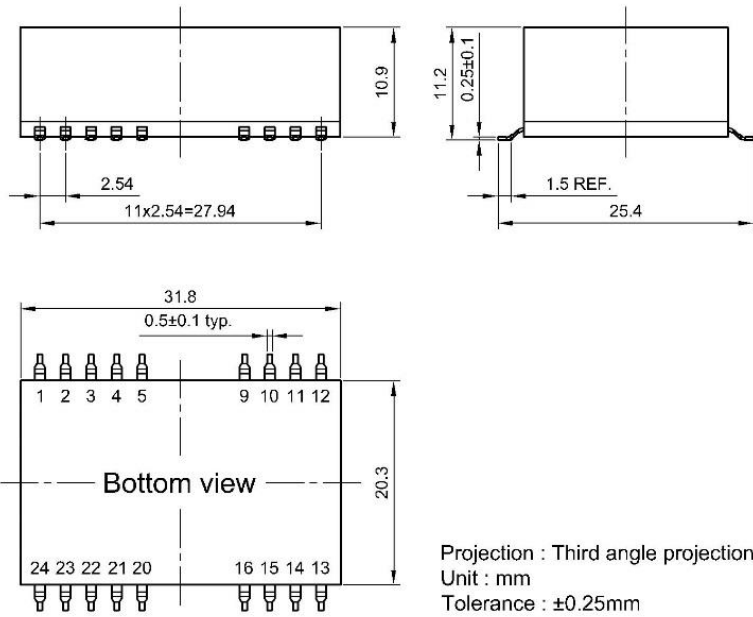
Pin	Single	Dual
1	CTRL(option)	CTRL(option)
2, 3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22, 23	+Vin	+Vin

NC= No Connection

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The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

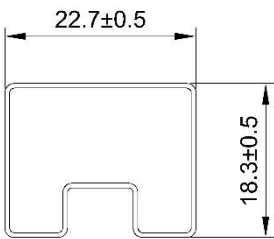
SMD



Pin	Single	Dual
1	CTRL(option)	CTRL(option)
2, 3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22, 23	+Vin	+Vin

NC= No Connection

## Package



UNIT:mm  
 1 Tube = 15 pcs  
 Length:520±2mm