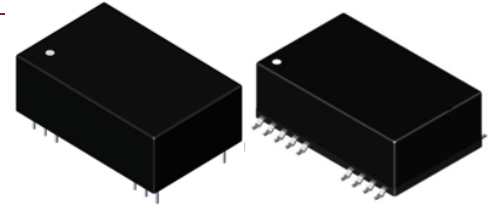


Features

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

Application

- Industrial system
- Communications equipment
- Battery powered equipment



Selection Guide

Part number	Input voltage	Output voltage	Output current @ full load	Efficiency ⁽¹⁾ (typ.)	Capacitive load ⁽²⁾ (max.)
B3WR-053.3AJ	4.5-9 VDC Nom. 5VDC	3.3VDC	900mA	72%	2000 μ F
B3WR-0505AJ		05VDC	600mA	75%	1000 μ F
B3WR-0509AJ		09VDC	333mA	77%	470 μ F
B3WR-0512AJ		12VDC	250mA	78%	220 μ F
B3WR-0515AJ		15VDC	200mA	78%	120 μ F
B3WR-0505DAJ		\pm 05VDC	\pm 300mA	75%	\pm 470 μ F
B3WR-0509DAJ		\pm 09VDC	\pm 167mA	77%	\pm 220 μ F
B3WR-0512DAJ		\pm 12VDC	\pm 125mA	78%	\pm 100 μ F
B3WR-0515DAJ		\pm 15VDC	\pm 100mA	78%	\pm 68 μ F
B3WR-123.3AJ	9-18 VDC Nom. 12VDC	3.3VDC	900mA	77%	2000 μ F
B3WR-1205AJ		05VDC	600mA	79%	1000 μ F
B3WR-1209AJ		09VDC	333mA	82%	470 μ F
B3WR-1212AJ		12VDC	250mA	83%	220 μ F
B3WR-1215AJ		15VDC	200mA	84%	120 μ F
B3WR-1205DAJ		\pm 05VDC	\pm 300mA	80%	\pm 470 μ F
B3WR-1209DAJ		\pm 09VDC	\pm 167mA	81%	\pm 220 μ F
B3WR-1212DAJ		\pm 12VDC	\pm 125mA	83%	\pm 100 μ F
B3WR-1215DAJ		\pm 15VDC	\pm 100mA	84%	\pm 68 μ F
B3WR-243.3AJ	18-36 VDC Nom. 24VDC	3.3VDC	900mA	78%	2000 μ F
B3WR-2405AJ		05VDC	600mA	80%	1000 μ F
B3WR-2409AJ		09VDC	333mA	84%	470 μ F
B3WR-2412AJ		12VDC	250mA	84%	220 μ F
B3WR-2415AJ		15VDC	200mA	85%	120 μ F
B3WR-2405DAJ		\pm 05VDC	\pm 300mA	80%	\pm 470 μ F
B3WR-2409DAJ		\pm 09VDC	\pm 167mA	84%	\pm 220 μ F
B3WR-2412DAJ		\pm 12VDC	\pm 125mA	84%	\pm 100 μ F
B3WR-2415DJ		\pm 15VDC	\pm 100mA	84%	\pm 68 μ F
B3WR-483.3AJ	36-72 VDC Nom. 48VDC	3.3VDC	900mA	78%	2000 μ F
B3WR-4805AJ		05VDC	600mA	81%	1000 μ F
B3WR-4809AJ		09VDC	333mA	82%	470 μ F
B3WR-4812AJ		12VDC	250mA	85%	220 μ F
B3WR-4815AJ		15VDC	200mA	85%	120 μ F
B3WR-4805DAJ		\pm 05VDC	\pm 300mA	80%	\pm 470 μ F
B3WR-4809DAJ		\pm 09VDC	\pm 167mA	84%	\pm 220 μ F
B3WR-4812DAJ		\pm 12VDC	\pm 125mA	85%	\pm 100 μ F
B3WR-4815DAJ		\pm 15VDC	\pm 100mA	85%	\pm 68 μ 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 WR - 24 09 D A J H M / SMD / CTRL

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

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.

Specifications

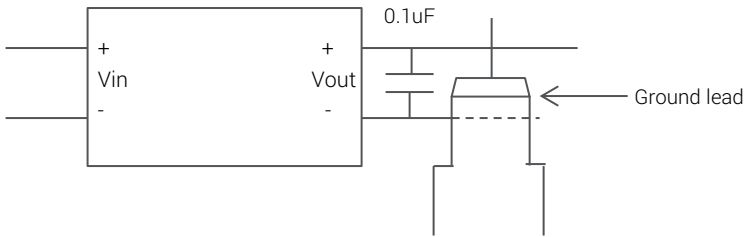
	Parameter	Conditions	Min.	Typ.	Max.	Unit
Input	Input filter			Pi type		
	Voltage range			2:1		
Output	Voltage accuracy			±2		%
	Line regulation	LL to HL at full load			±0.3	%
	Load regulation	20% to 100% load at nominal Vin		±0.6		%
	Minimum load			20% of rated max current		
	Ripple & noise ⁽¹⁾				50	mVp-p
	No load power consumption				300	mW
	Operating frequency	Pulse frequency modulation, PFM			100	KHz
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
	Isolation voltage	1 sec.	2			KVDC
Function	Isolation capacitance			40		pF
	Isolation resistance		1			GΩ
	Short Circuit Protection			Continuous, automatic recovery		
	Safety			EN60950 / EN60601		
	Dimension	(L x W x H)		31.80x20.30x10.20 mm		
Physical	Weight			13		g
	Case material			Non-conductive black plastic		
	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. To measure the output ripple & noise with short runs by 0.1uF/50V @20MHz nominal input and full load.
2. All specifications valid at nominal input voltage, full load and 25°C after warm-up time unless otherwise stated.
3. The product information and specifications are subject to change without prior notice.

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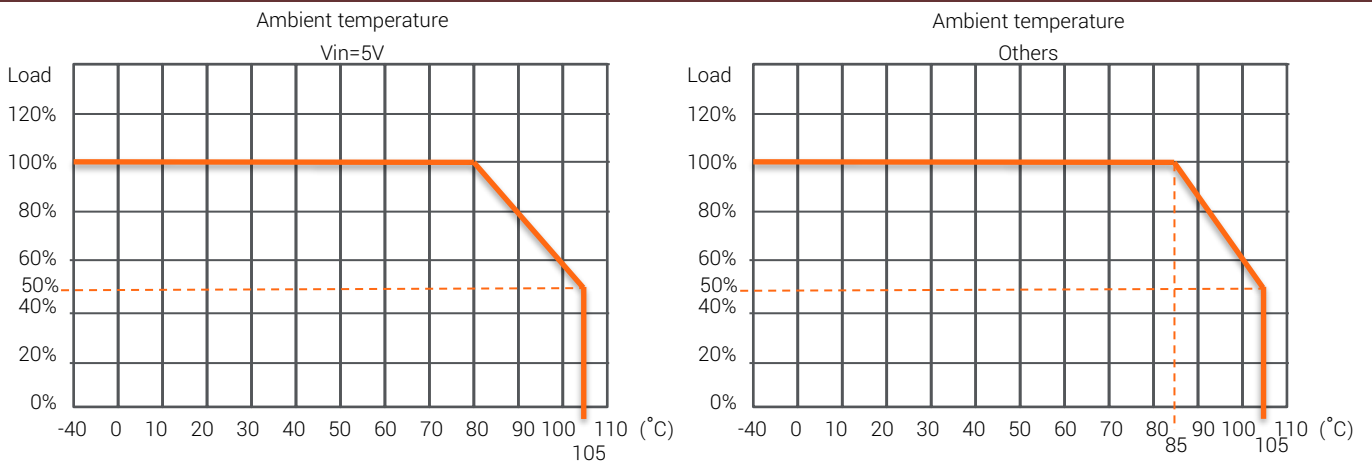
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Application Suggestion



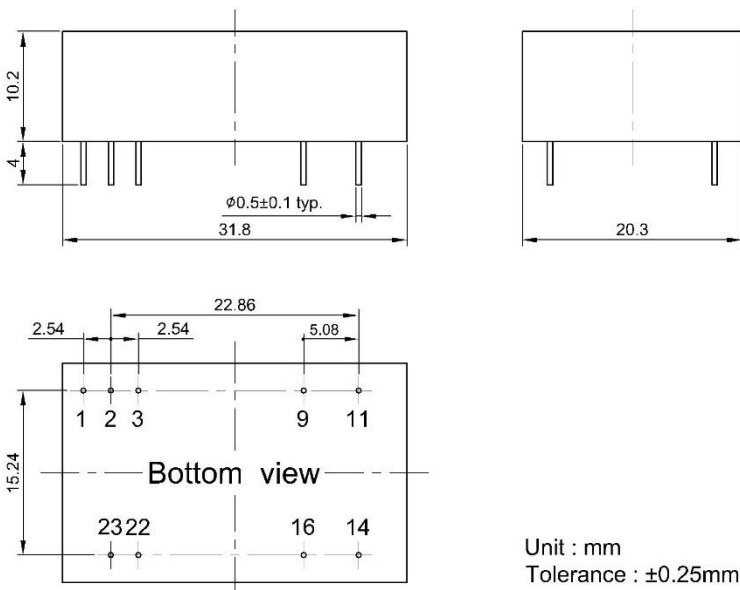
To measure the output ripple & noise with short runs by 0.1uF/50V @20MHz nominal input and full load.

Derating Curve



The derating curve was measured at nominal input voltage.

Mechanical Dimension & Pinning



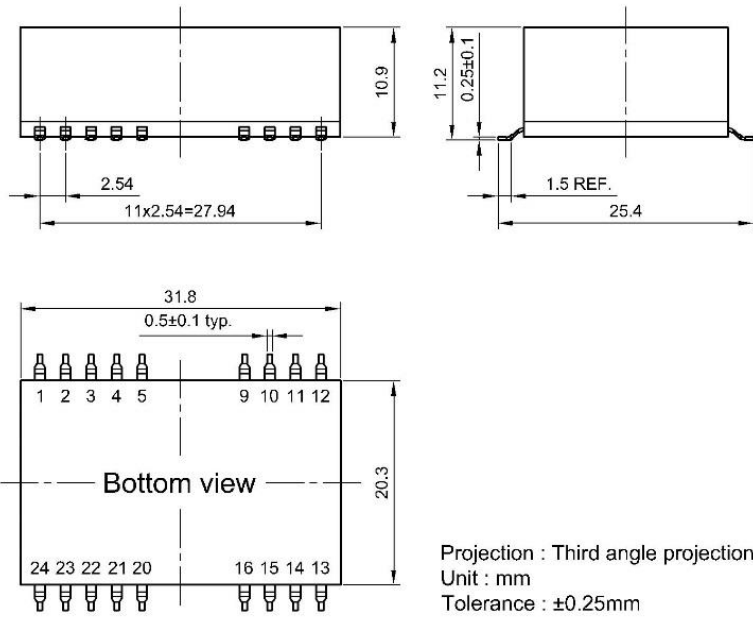
Pin	Single	Dual
1	CTRL(option)	CTRL(option)
2, 3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22, 23	+Vin	+Vin

NC= No Connection

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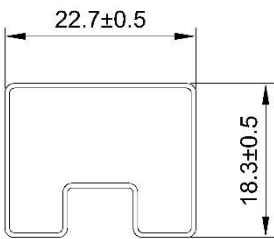
SMD



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

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