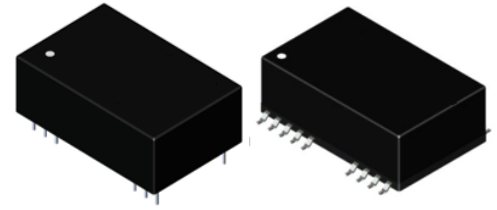


Features

- 2:1 Wide input voltage range
- 5W DIP24 package
- Low ripple and noise
- Continuous short circuit protection
- 2KVDC isolation min.
- Efficiency to 85%

Application

- 2KV~6KV input and output isolation
- Industry control application
- Tele-communication applications
- Battery powered equipment



Selection Guide

Part number	Input voltage	Output voltage	Output current @ full load	Efficiency ⁽¹⁾ (typ.)	Capacitive load ⁽²⁾ (max.)
B5WR-053.3AJ	4.5-9 VDC Nom. 5VDC	3.3 VDC	1000 mA	70%	6800µF
B5WR-0505AJ		5 VDC	1000 mA	76%	6800µF
B5WR-0509AJ		9 VDC	556 mA	76%	6800µF
B5WR-0512AJ		12 VDC	420 mA	76%	6800µF
B5WR-0515AJ		15 VDC	340 mA	77%	6800µF
B5WR-0505DAJ		±5 VDC	±500 mA	76%	±2200µF
B5WR-0509DAJ		±9 VDC	±278 mA	76%	±2200µF
B5WR-0512DAJ		±12 VDC	±210 mA	76%	±2200µF
B5WR-0515DAJ		±15 VDC	±170 mA	77%	±2200µF
B5WR-123.3AJ	9-18 VDC Nom. 12VDC	3.3 VDC	1000 mA	78%	6800µF
B5WR-1205AJ		5 VDC	1000 mA	81%	6800µF
B5WR-1209AJ		9 VDC	556 mA	82%	6800µF
B5WR-1212AJ		12 VDC	420 mA	83%	6800µF
B5WR-1215AJ		15 VDC	340 mA	83%	6800µF
B5WR-1205DAJ		±5 VDC	±500 mA	81%	±2200µF
B5WR-1209DAJ		±9 VDC	±278 mA	83%	±2200µF
B5WR-1212DAJ		±12 VDC	±210 mA	84%	±2200µF
B5WR-1215DAJ		±15 VDC	±170 mA	84%	±2200µF
B5WR-243.3AJ	18-36 VDC Nom. 24VDC	3.3 VDC	1000 mA	78%	6800µF
B5WR-2405AJ		5 VDC	1000 mA	82%	6800µF
B5WR-2409AJ		9 VDC	556 mA	84%	6800µF
B5WR-2412AJ		12 VDC	420 mA	85%	6800µF
B5WR-2415AJ		15 VDC	340 mA	85%	6800µF
B5WR-2405DAJ		±5 VDC	±500 mA	81%	±2200µF
B5WR-2409DAJ		±9 VDC	±278 mA	84%	±2200µF
B5WR-2412DAJ		±12 VDC	±210 mA	84%	±2200µF
B5WR-2415DAJ		±15 VDC	±170 mA	85%	±2200µF
B5WR-483.3AJ	36-72 VDC Nom. 48VDC	3.3 VDC	1000 mA	78%	6800µF
B5WR-4805AJ		5 VDC	1000 mA	82%	6800µF
B5WR-4809AJ		9 VDC	556 mA	84%	6800µF
B5WR-4812AJ		12 VDC	420 mA	85%	6800µF
B5WR-4815AJ		15 VDC	340 mA	85%	6800µF
B5WR-4805DAJ		±5 VDC	±500 mA	81%	±2200µF
B5WR-4809DAJ		±9 VDC	±278 mA	83%	±2200µF
B5WR-4812DAJ		±12 VDC	±210 mA	84%	±2200µF
B5WR-4815DAJ		±15 VDC	±170 mA	85%	±2200µF

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 5 W R - 2 4 0 9 D A H M / S M D / C T R L

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

Specifications

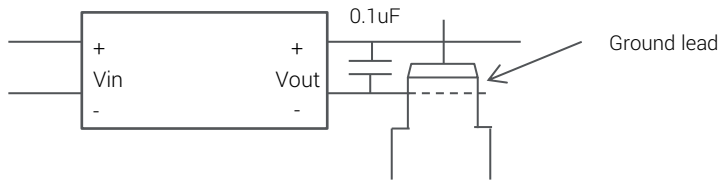
	Parameter	Conditions	Min.	Typ.	Max.	Unit
Input	Input filter					Pi type
	Input voltage range					2:1
Output	Voltage accuracy			±1	±2	%
	Line regulation	LL to HL at full load			±0.3	%
	Load regulation	20%-100% full load			±0.6	%
	Minimum load				10	%
	Ripple & noise	@20MHz BW			50	mVp-p
	Operating frequency	At full load			120	KHz (PFM)
Environment	Operating temperature	With derating	-40		95	°C
	Storage temperature		-55		125	°C
	Relative humidity				95	%RH
	MTBF (MIL-HDBK-217F)	+25°C +75°C	850 206			KHours
Function	Short Circuit Protection	Max Temp.=50°C during short circuit conditions				Continuous, auto restart
	Isolation voltage	1 sec.	2			KVDC
	Isolation capacitance			60		pF
	Isolation resistance		1			GΩ
	Safety					EN60950
Physical	Dimension	(L x W x H)				31.8x20.3x10.2 mm
	Weight					13 g
	Thermal impedance	Natural convection				20°C/W for plastic case 12°C/W for metal case
	Case material					Non-conductive 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, 10V/m				Criteria A
	Fast transient	EN61000-4-4, ±2kV				Criteria A
	Surge	EN61000-4-5, ±2kV				Criteria A
	Conducted immunity	EN61000-4-6, 10Vr.m.s				Criteria A
	PMF	EN61000-4-8, 50Hz 1A/m (r.m.s)				Criteria A

1. EMI suggestion circuit, please check with our sales.
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.

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

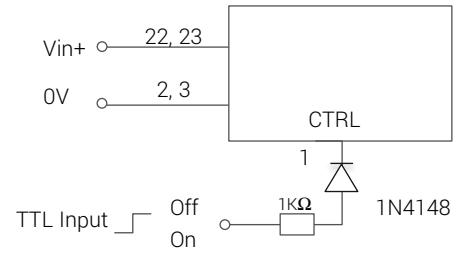
The products were used in Computers, Industrial controls, Medical equipment, Transportation, EV, ECO-power, Aero-space application and communication.

Application Circuit



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

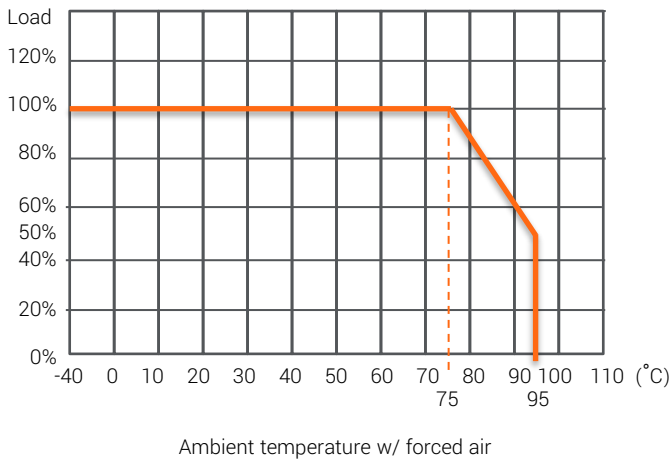
Ctrl Option



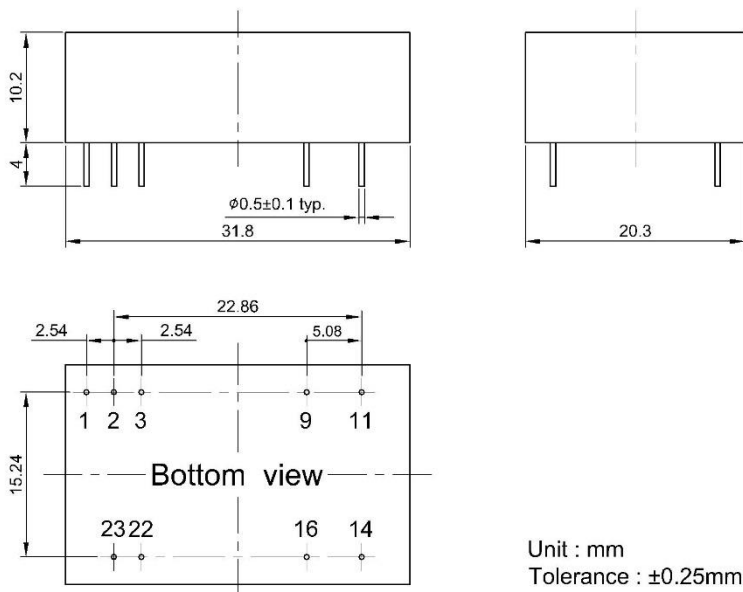
ON = Open or $0V < V_{ctrl} < 1.2V$

OFF = $2.2V < V_{ctrl} < 12V$

Derating Curve



Mechanical Dimension & Pinning



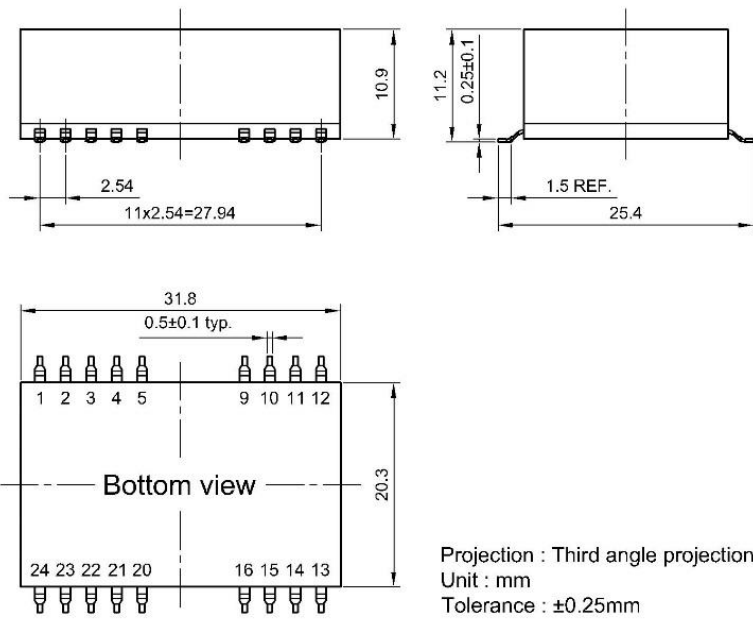
Pin	Single	Dual
1	CTRL(option)	CTRL(option)
2, 3	-Vin	-Vin
9	NC	Com
11	NC	-Vout
14	+Vout	+Vout
16	-Vout	Com
22, 23	+Vin	+Vin

NC= No Connection

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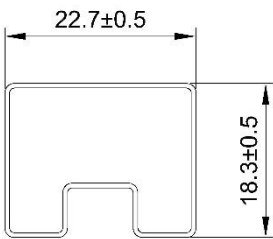
SMD



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