FEATURES：

- Wide input range
- Continuous short-circuit protection,self recover
- I/O isolation voltage 1.5KV
- Working temperature：-40℃～+105℃
- No additional components required
- Stable performance and high reliability (MTBF≥2 million hours)
- Industry standard pin-out
- Metal case
- DIP package

Selection Guide

Part No.	INPUT		OUTPUT			Full Load Efficiency (%)/Typ.	Capacitive Load(μF)
	Norminal (Vdc)	Range (Vdc)	Voltage (V1dc)	Current Min(mA)	Current Max(mA)		
WRA0505ZP-3WR2	5	4.5-9	±5	±15	±300	76	2200
WRA0509ZP-3WR2			±9	±8	±166	76	1800
WRA0512ZP-3WR2			±12	±6	±125	78	1800
WRA0515ZP-3WR2			±15	±5	±100	78	1000
WRB0505ZP-3WR2			5	30	600	74	4700
WRB0512ZP-3WR2			12	12	250	77	2700
WRB0515ZP-3WR2			15	10	200	77	2200
WRA1205ZP-3WR2	12	9-18	±5	±15	±300	84	2200
WRA1209ZP-3WR2			±9	±8	±166	84	2000
WRA1212ZP-3WR2			±12	±6	±125	84	1800
WRA1215ZP-3WR2			±15	±5	±100	85	1000
WRB1203ZP-3WR2			3.3	46	909	74	4700
WRB1205ZP-3WR2			5	30	600	81	4700
WRB1212ZP-3WR2			12	12	250	83	2700
WRB1215ZP-3WR2			15	10	200	82	2200
WRB1224ZP-3WR2			24	6	125	83	1800
WRA2405ZP-3WR2	24	18-36	±5	±15	±300	82	2200
WRA2412ZP-3WR2			±12	±6	±125	84	1800
WRA2415ZP-3WR2			±15	±5	±100	84	1000
WRB2403ZP-3WR2			3.3	46	909	78	4700
WRB2405ZP-3WR2			5	30	600	81	4700
WRB2409ZP-3WR2			9	16	333	81	2700
WRB2412ZP-3WR2			12	12	250	86	2700
WRB2415ZP-3WR2			15	10	200	86	2000
WRB2424ZP-3WR2			24	6	125	85	1800
WRA4805ZP-3WR2	48	36-72	±5	±15	±300	82	2200
WRA4812ZP-3WR2			±12	±6	±125	84	1800
WRA4815ZP-3WR2			±15	±5	±100	85	1000

WRA4824ZP-3WR2			±24	±3	±63	84	680
WRB4803ZP-3WR2			3.3	46	909	76	4700
WRB4805ZP-3WR2			5	30	600	82	4700
WRB4812ZP-3WR2			12	12	250	86	2700
WRB4815ZP-3WR2			15	10	200	86	2000
WRB4824ZP-3WR2			24	6	125	84	1000

customized accepted,pls contact sales for details

Input Specifications

Input Filter	Capacitive Filter	
Ctrl	NONE	
	NONE	
Hot Plug	Unavailable	

Output Specifications

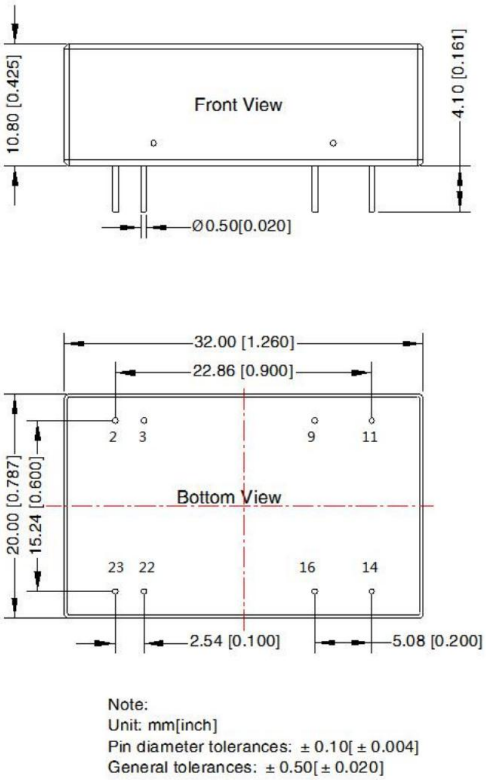
Item	Typ	Max	Test Conditions	
Voltage Accuracy	±1%	±3%	5%-100% load	
No-load Output Voltage Accuracy	±1.5%	±5%	Input voltage range	
Balance Of Output Voltage	±0.5%	±1%	Dual output, balanced load	
Line Regulation	±0.2%	±0.5%	Input voltage variation from low to high at full load	
Load Regulation	±0.2%	±0.5%	5%-100% load	
Ripple&Noise	100mVp-p	120mVp-p	24Vout	20MHz Bandwidth, full load
	50	80	Others	

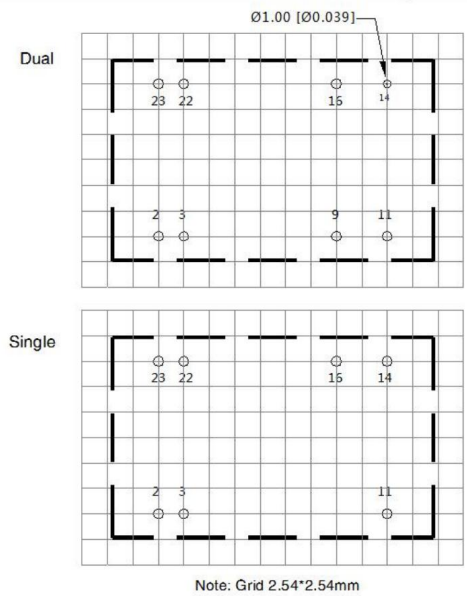
Gerneral Specifications

Switching Frequency	200KHz(Typ)	100% full load, nominal input voltage
Short-Circuit Protection	Continuous, self-recovery	
Case Temperature Rise	25℃（Typ）	
Temperature Coefficient	0.03%/℃	100% full load
Pin Soldering Resistance Temperature	300℃	Soldering spot is 1.5mm away from case for 10 seconds
Isolation（Input-Output）	1.5KVDC	Input-output electric strength test for 1 minute with a leakage current
Insulation Resistance（Input-Output）	1000MΩ	Input-output resistance 500Vdc
Operating Temperature	-40～+105℃	
Storage Temperature	-55～+125℃	
Storage Humidity	<95%	Non-condensing
Cooling Method	Free air convection	
Case Material	Aluminum alloy	
Weight	14g（Typ）	

**Unless specified, otherwise all other parameters are tested under the following conditions: nominal input voltage, pure resistive load, 25℃ room temperature environment.

Dimensions and Recommended Layout

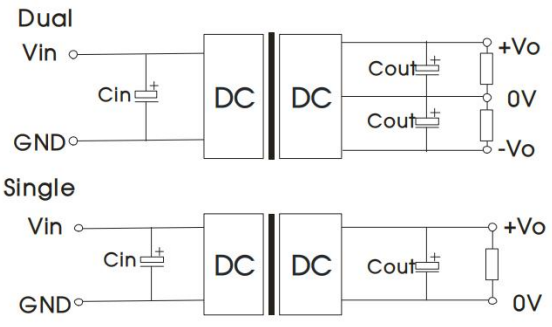




Pins

Pin	Single	Dual	
2,3	GND	GND	
9	No Pin	0V	
11	NC	-Vo	
14	+Vo	+Vo	
16	0V	0V	
22,23	Vin	Vin	

Recommended Circuit



Vin(VDC)	Cin	Cout
5	100μF/16V	Vo(3/±3/5/±5/9/±9):10μF/16V Vo(12/±12/15/±15V):10μF/25V Vo(24/±24V):10μF/50V
12	100μF/25V	
24	10μF/50V ~47μF/50V	
48	10μF/100V ~47μF/100V	

Noted

1. Input current: Ensure that the output current of the power supply meets the instantaneous starting current of the power module (that is, twice the average input current of the power module).

2. Output load requirements: Avoid no-load use. When the actual power consumption of the load is less than 10% of the rated output power of the module or no load occurs, connect an external resistance to the output end (the sum of the external resistance and the load power is

greater than or equal to 10% of the rated load) or select a module with a smaller rated power.

3. The external capacitance of the output end should not be too large; otherwise, the module may be overcurrent or poorly started. For details, see the external capacitance recommendation table.

4. External LC filter circuit can be connected for occasions with high ripple noise requirements.