

WRAXXXD-1W

1KV ISOLATED, 1W REGULATED DUAL OUTPUT, DIP 24 PACKAGE, MTBF>1M HOURS

Available Inputs:
12, 24 and 48 VDC Wide Input 2:1

Available Outputs:
(+/-)3.3, 12, 15 and 18 VDC
Other specifications please enquire Sunyuan Technology.



Electrical Specifications
(Typical at +25°C, nominal input voltage, rated output current unless otherwise specified)

Input Specifications	
Voltage range	9 - 18 VDC (12 VDC), 18 - 36 VDC (24 VDC) 36 - 72 VDC (48 VDC)
Filter	Pi Network
Isolation Specifications	
Rated voltage	1000 VDC
Leakage current	1 mA
Resistance	10 ⁹ Ohm
Capacitance	60 pF type.
Output Specifications	
Voltage accuracy	+/- 1 % type +/-2% max.
Ripple and noise (at 20 MHz BW)	60 mV p-p, max.
Short circuit protection	Continuous, restart automatic
Line voltage regulation	+/- 0.5 % max.
Load voltage regulation	+/- 0.5 % max.
Temperature coefficient	+/- 0.02 % / °C
General Specifications	
Efficiency	70 % to 85 %
Switching frequency	250 KHz, typ.
Environmental Specifications	
Operating temperature (ambient)	-40°C to +85°C
Storage temperature	-55 °C to + 125 °C
Derating	See graph
Humidity	Up to 90 %, non condensing
Cooling	Free air convection
Physical Characteristics	
Dimensions DIP	31,75 x 20,32 x 10,16 mm 1,25 x 0,80 x 0,40 inches
Weight	14,5 g
Case material	Non conductive black plastic

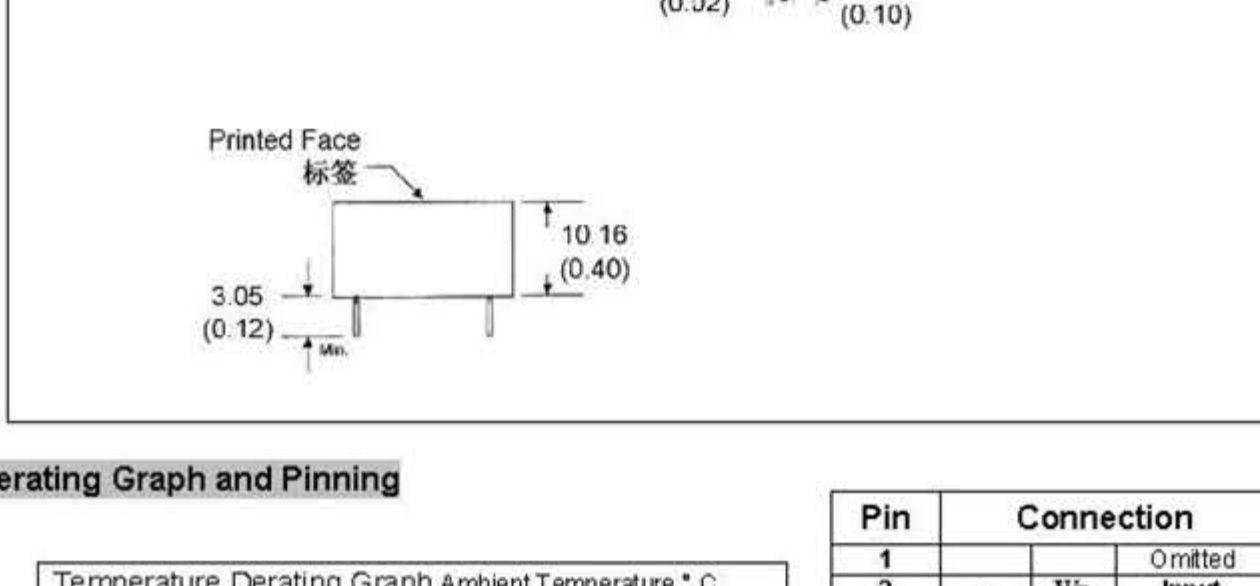
Examples of Part Numbers

SUNYUAN PARTNO	INPUT VOLTAGE (VDC)	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (max. mA)	EFFICIENCY FULL LOAD (% TYPE.)
WRA1205D-1W	9-18	12	135	+/-5	+/-100	76
WRA1212D-1W	9-18	12	116	+/-12	+/-43	82
WRA2405D-1W	18-36	12	63	+/-5	+/-100	79
WRA2412D-1W	18-36	15	62	+/-12	+/-47	79
WRA2415D-1W	18-36	16	55	+/-15	+/-32	80
WRA4805D-1W	36-72	12	29	+/-5	+/-100	75
WRA4812D-1W	36-72	12	28	+/-12	+/-43	79

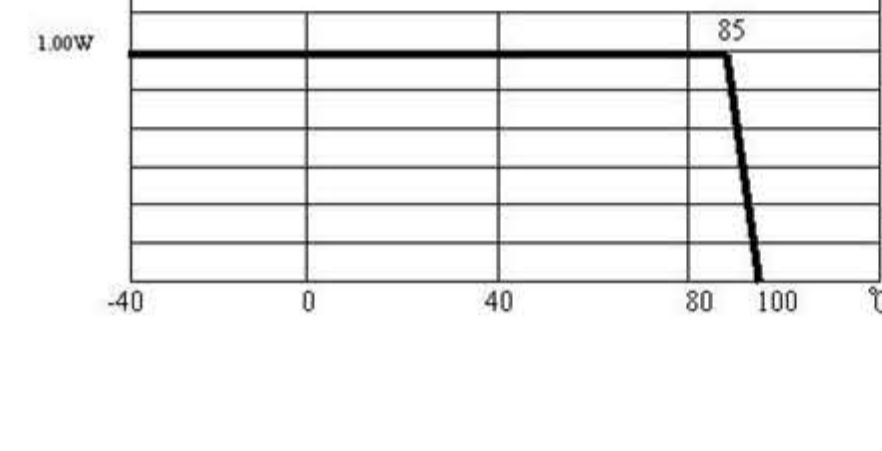
WRAXXXD-1W

1KV ISOLATED, 1W REGULATED DUAL OUTPUT, DIP 24 PACKAGE, MTBF>1M HOURS

Dimensions



Derating Graph and Pinning



Pin	Connection
1	Omitted
2	-
3	Vin Input
4	Vin Input
4-8	Omitted
9	0V Common
10	Omitted
11	Vout Output
12	Omitted
13	Omitted
14	+ Vout Output
15	Omitted
16	0V Common
17-21	Omitted
22	+ Vin Input
23	+ Vin Input
24	Omitted

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WRAXXXD-3W

1KV ISOLATED, 3 W REGULATED DUAL OUTPUT, DIP 24 PACKAGE, MTBF>1M HOURS

Available Inputs:
24 and 48 VDC Wide Input 2:1

Available Outputs:
(+/-)3.3, 12, 15 and 18 VDC
Other specifications please enquire Sunyuan Technology.



Electrical Specifications
(Typical at +25°C, nominal input voltage, rated output current unless otherwise specified)

Input Specifications	
oltage range	9 - 36 VDC (24 VDC), 18 - 72 VDC (48 VDC)
Filter	Pi Network
Isolation Specifications	
Rated voltage	1000 VDC
Leakage current	1 mA
Resistance	10 ⁹ Ohm
Capacitance	80pF type.
Output Specifications	
Voltage accuracy	+/- 1 % type +/-2% max.
Ripple and noise (at 20 MHz BW)	60 mV p-p, max.
Short circuit protection	Continuous, restart automatic
Line voltage regulation	+/- 0.5 % max.
Load voltage regulation	+/- 0.5 % max.
Temperature coefficient	+/- 0.02 % / °C
General Specifications	
Efficiency	70 % to 85 %
Switching frequency	250 KHz, typ.
Environmental Specifications	
Operating temperature (ambient)	-40°C to +85°C
Storage temperature	-55 °C to + 125 °C
Derating	See graph
Humidity	Up to 90 %, non condensing
Cooling	Free air convection
Physical Characteristics	
Dimensions DIP	31,75 x 20,32 x 10,16 mm 1,25 x 0,80 x 0,40 inches
Weight	14,5 g
Case material	Non conductive black plastic

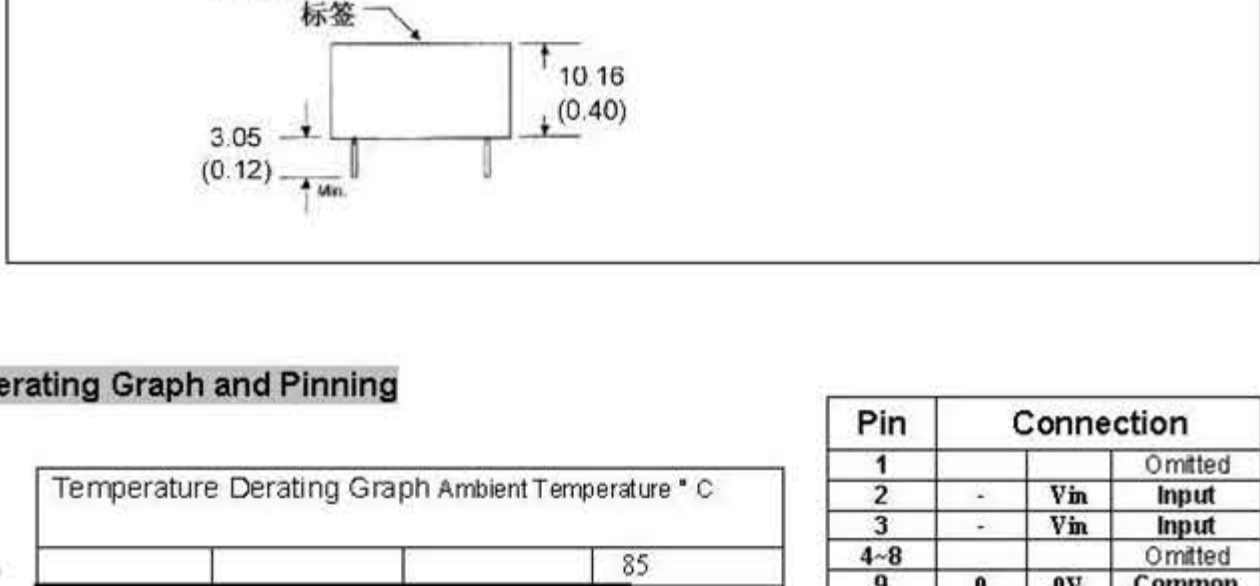
Examples of Part Numbers

SUNYUAN PARTNO	INPUT VOLTAGE (VDC)	INPUT CURRENT NO LOAD	INPUT CURRENT FULL LOAD	OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT (max. mA)	EFFICIENCY FULL LOAD (% TYPE.)
WRA1205D-3W	9-18	23	225	+/-5	+/-300	74
WRA1212D-3W	9-18	25	213	+/-12	+/-125	79
WRA2405D-3W	18-36	23	113	+/-5	+/-300	80
WRA2412D-3W	18-36	21	105	+/-12	+/-125	77
WRA2415D-3W	18-36	21	104	+/-15	+/-100	79
WRA4805D-3W	36-72	17	56	+/-5	+/-300	75
WRA4812D-3W	36-72	17	53	+/-12	+/-125	79

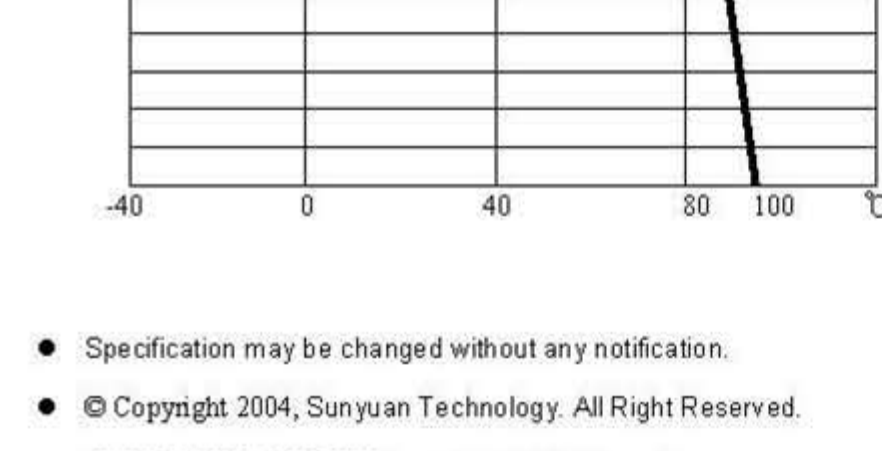
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1KV ISOLATED, 3 W REGULATED DUAL OUTPUT, DIP 24 PACKAGE, MTBF>1M HOURS

Dimensions



Derating Graph and Pinning



Pin	Connection
1	Omitted
2	-
3	Vin Input
4	Vin Input
4-8	Omitted
9	0V Common
10	Omitted
11	Vout Output
12	Omitted
13	Omitted
14	+ Vout Output
15	Omitted
16	0V Common
17-21	Omitted
22	+ Vin Input
23	+ Vin Input
24	Omitted

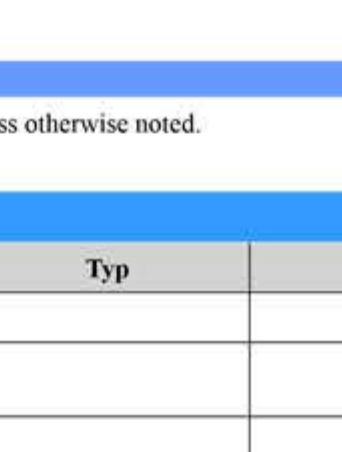
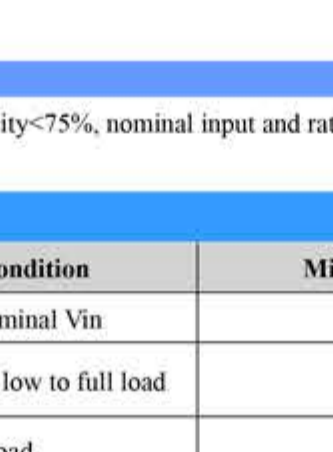
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YUAN SHENZHEN SUNYUAN TECHNOLOGY CO., LTD.

YUAN WRBXXXD-2-6W SERIES DC-DC CONVERTER

- RATED 2-6W OUTPUT
- HIGH POWER DENSITY
- 24PIN DIP PACKAGE
- SINGLE OUTPUT
- D-DIP 24 PACKAGE
- INDUSTRIAL STANDARD PIN-OUT
- NO HEAT SINK REQUIRED
- 1KVDC ISOLATION
- WIDE INPUT(2:1)
- REGULATED OUTPUT
- PCB MOUNTING
- SHORT CIRCUIT PROTECT



ELECTRICAL SPECIFICATIONS

All specifications tested typically @ 25°C, humidity<75%, nominal input and rated output unless otherwise noted.

OUTPUT SPECIFICATIONS

Items:	Testing condition	Min	Typ	Max
Output accuracy:	At full load and nominal Vin			±2%
Line regulation:	Input voltage from low to full load			+/-0.5%
Load regulation:	From 20% to full load			+/-0.5%
Ripple and noise:	20MhzBandwidth			60 mV p-p
Temperature drift:				±0.02 %/°C
Minimum load				10%
Switching frequency			250KHz	
Over load protection	% of FL at nominal input		120	
Short circuit protection		Continuous And Automatic Recovery>30sec		

INPUT SPECIFICATIONS

Items:	Testing condition	Min	Typ	Max
Input voltage range	5VDC input		4.5-9VDC	
	12VDC input		9-18VDC	
	24VDC input		18-36VDC	
	48VDC input		36-72VDC	
Input filter			Pi	
Start-up time	Nominal Vin and certain load		100ms	

COMMON SPECIFICATIONS

Items	Min	Typ.	Max
Operating temperature range	-40°C		+65°C
Storage temperature range	-55°C		+125°C
Humidity			<90%
Cooling	Free Air Convection		
Isolation voltage (VDC)	Input to Output		1,000
Isolation resistance (ohms)			10 ⁹

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YUAN WRBXXXD-2-6W SERIES DC-DC CONVERTER

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Items	Min	Typ.	Max
Isolation capacitance (pF)			60
Efficiency (%)	See Product List	70	85
Case material	Non-conductive black plastic		
Potting material	Epoxy Resin UL94-V0		
Packing material	Tube		
Dimension (mm)	30.8x20.3x10.14		
Weight (g)	14.5		
MTBF (Hrs)	>1,000,000		

PRODUCT LIST

Part Number	Input Voltage (VDC)			Output		Efficiency (% Typ.)	Package
	Range	Nominal	Max.	Current (mA)max	Voltage (VDC)		
WRB0505D-2W	4.5-9.0	5	9	400	5	70	DIP
WRB1205D-3W	9.0-18.0	12	18	600	5	75	DIP
WRB1212D-2W	9.0-18.0	12	18	167	12	80	DIP
WRB1212D-3W	9.0-18.0	12	18	250	12	81	DIP
WRB1212D-4W	9.0-18.0	12	18	334	12	82	DIP
WRB1212D-5W	9.0-18.0	12	18	420	12	82	DIP
WRB243R3D-5W	18.0-36.0	24	36	1200	3.3	72	DIP
WRB2405D-3W	18.0-36.0	24	36	600	5	75	DIP
WRB2405D-4W	18.0-36.0	24	36	800	5	76	DIP
WRB2405D-5W	18.0-36.0	24	36	1000	5	76	DIP
WRB2412D-2W	18.0-36.0	24	36	167	12	79	DIP
WRB2412D-3W	18.0-36.0	24	36	250	12	80	DIP
WRB2412D-4W	18.0-36.0	24	36	334	12	81	DIP
WRB2412D-5W	18.0-36.0	24	36	420	12	81	DIP
WRB2415D-2W	18.0-36.0	24	36	134	15	80	DIP
WRB4805D-2W	36.0-72.0	48	75	400	5	75	DIP
WRB4805D-4W	36.0-72.0	48	75	800	5	76	DIP
WRB4805D-4W	36.0-72.0	48	75	800	5	77	DIP
WRB4805D-5W	36.0-72.0	48	75	1000	5	78	DIP
WRB4812D-2W	36.0-72.0	48	75	167	12	79	DIP
WRB4812D-4W	36.0-72.0	48	75	334	12	80	DIP
WRB4812D-5W	36.0-72.0	48	75	420	12	82	DIP
WRB4812D-6W	36.0-72.0	48	75	470	12	82	DIP
WRB2424D-6W	18-36	24	36	250	24	80	DIP

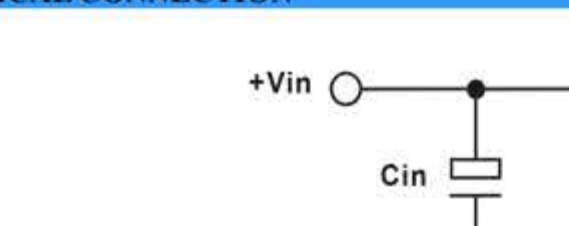
If you need other modules, please tell details.

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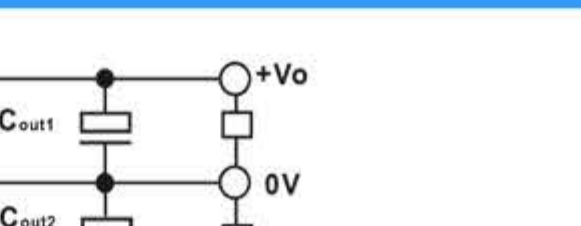
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YUAN WRBXXXD-2-6W SERIES DC-DC CONVERTER

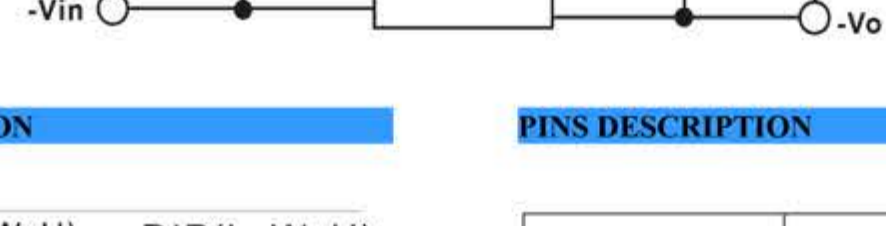
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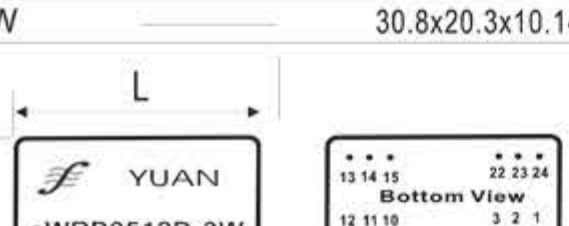
TEMPERATURE DERATING GRAPH



TYPICAL CONNECTION



OUTLINE DIMENSION



PINS DESCRIPTION

Pin	Connection
1, 24	+Vin Input
12, 13	GND Input
11, 14	+Vout Output
10, 15	0V Output
2, 3, 22, 23	NC

Power	SIP(LxWxH)	DIP(LxWxH)
5W		30.8x20.3x10.14

Package	Vin	GND	-VO	0V	+VO
WRB	1,24	12,13	-	10,15	11,14