

Professional Power Module

WRA-ZS-3W & WRB-ZS-3W GYfjYg

3W, WIDE INPUT, ISOLATED & REGULATED DUAL/SINGLE OUTPUT DC-DC CONVERTER



FEATURES

(4:1) I

Short Circuit Protection(automatic recovery)

1500VDC Isolation

Operating Temperature: -40 85

Excellent Load and Line regulation

Ultra-compact SIP-8 packaged

Internal SMD construction

Remote On/Off control

Small footprint: 21.8*9.2mm

Excellent Load and Line regulation

MODEL SELECTION

WRB[®] 24[®] 12[®] Z[®] S[®] -3W[®]

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APPLICATIONS

The WRA-ZS-3W & WRB-ZS-3W Series are specially designed for applications where a wide range input voltage power supplies are isolated from the input power supply in a distributed power supply system on a circuit board. These products apply to:

- 1) Where the voltage of the input power supply is wide range (Voltage range 4:1);
- 2) Where isolation is necessary between input and output (Isolation voltage 1500VDC);
- 3) Where the regulation of the Output voltage and the output ripple noise are demanded.



CE REACH

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SELECTION GUIDE

	I			C (A)	E (%)
	(DC)				
			(DC)		
WRB2403ZS-3W	24	9-36	3.3	700	81
WRB2405ZS-3W	24	9-36	5	600	83
WRB2412ZS-3W	24	9-36	12	250	74
WRB2415ZS-3W	24	9-36	15	200	76
WRA2405ZS-3W	24	9-36	±5	±300	81
WRA2412ZS-3W	24	9-36	±12	±125	81
WRA2415ZS-3W	24	9-36	±15	±100	85
WRB4803ZS-3W	48	18-75	3.3	700	83
WRB4805ZS-3W	48	18-75	5	600	85
WRB4812ZS-3W	48	18-75	12	250	74
WRB4815ZS-3W	48	18-75	15	200	78
WRA4805ZS-3W	48	18-75	±5	±300	80
WRA4812ZS-3W	48	18-75	±12	±125	80
WRA4815ZS-3W	48	18-75	±15	±100	85

NOTE:

Case material:non-conductive plastic

Weight: 4.8g (0.17oz)

Input Specifications

Parameter	Conditions	Max.
Input current at full load	24Vin models:	170mAmax.
	48 Vin models:	85mAmax.
Surge voltage (100 msec. max.)	24 Vin models:	50Vmax.
	48 Vin models:	100Vmax.
Input current at no load	24 Vin models:	25mA typ.
Input filter	48 Vin models: EN 55022 level A 24 Vin models: EN 55022 level B with external capacitor	15mA typ. 15mA typ. Level A

T R- S-3 3 DC/DC

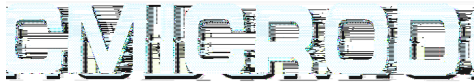
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SIP 2.0 2

(0.3 .) .A 40 +85 C

F O /O

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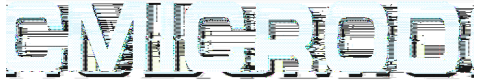


Output Specifications

Parameter	Conditions	
Voltage set accuracy	± 1 % max	
Regulation	- Input variation Vin min. to Vin max.	0.2 % max.
	- Load variation 5 – 100% single output models:	1.0% max.
	dual output models: 1.0 % max. balanced load	
	- Load cross regulation 25/100%	5.0 % max. (dual output models)
Minimum load	not required	
Temperature coefficient	0.1 %/K	
Ripple and noise (20 MHz Bandwidth)	30 mVpk-pk max.	
Start up time (constant resistive load)	- Power On	30 ms typ.
	- Remote On	30 ms typ.
Transient response setting time (25% load step change)	500 µs typ	
Temperature coefficient	± 0.1 %/°C	
Short circuit protection	continuous, automatic recovery	
Capacitive load	3.3 VDC output models: 1'760 µF max.	
	5 VDC output models: 1'000 µF max.	
	12 VDC output models: 170 µF max.	
	15 VDC output models: 110 µF max.	
	± 5 VDC output models: ± 470 µF max.	
	± 12 VDC output models: ± 100 µF max.	
	± 15 VDC output models: ± 47 µF max.	

General Specifications

Parameter	Conditions	
Temperature ranges	- Operating	- 40 °C + 85 °C (no derating)
	- Case temperature	+100 °C max.
	- Storage	- 55 °C + 125 °C
Load derating	3.5 %/K above 70°C	
Humidity (non condensing)	95 % rel. H max.	
Reliability, calculated MTBF (MIL-HDBK-217F ground benign)	>1.7Mio h @ 25°C	
Isolation voltage (60 sec)	- Input/Output	1'500 VDC
Isolation capacity	- Input/Output	200 pF max.
Isolation resistance	- Input/Output (500 VDC)	>1 GOhm
Switching frequency	100 kHz (PWM)	
Remote On/Off	- On:	open or high impedance
	- Off:	2...4 mA current applied via 1KOhm resistor
	- Off stand by input current	2.5 mA max.
Vibration and thermal shock	MIL-STD-810E	
Safety standards	UL /cUL 60950-1, EN 60950-1, IEC 60950-1	
Safety approvals	- UL/cUL	pending



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OUTLINE DIMENSIONS & FOOTPRINT DETAILS

Note:

Unit:mm[inch]

Pin section tolerances: $\pm 0.10\text{mm}[\pm 0.004\text{inch}]$

General tolerances: $\pm 0.25\text{mm}[\pm 0.010\text{inch}]$