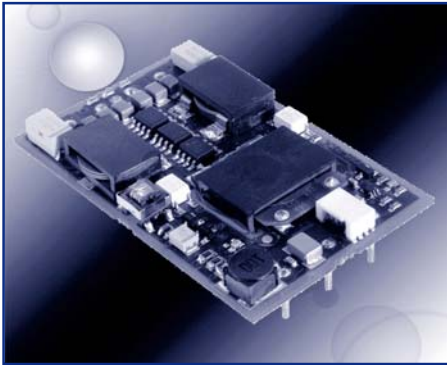


WPA60 Series

60 Watt Dual Output Quarter Brick DC/DC Converter



- 2.3" x 1.45" x 0.40"
(58.42mm x 36.83mm x 10.16mm)
- Dual Outputs - Output 1/Output 2 Vdc:
1.0/1.5 1.2/1.8; 1.5/2.2; 1.8/2.5;
1.2/3.3; 1.8/3.3; 2.5/3.3; 1.5/5.0;
3.3/5.0
- Independently Regulated Outputs
- 36V - 75V Input Range
- Industry Standard Pinouts
- Input & Output Filtering
- Remote On/Off Function
- Meets Operational Insulation Requirements of EN60950
- UL/CUL 60950, VDE EN60950 Approved
- Fixed Frequency Operation
- No Minimum Load Requirements
- Hiccup Mode Current Limiting
- Self-resetting Over Voltage Protection
- C&D Technologies, Power Electronics Division is ISO9001:2000 Certified

The WPA60 Series are high performance DC/DC converters providing two independent regulated outputs. For maximum flexibility, power can be traded between outputs as required. The unit delivers high performance across all line and load conditions.

The WPA60 Series are assembled by a fully automated process using surface mount components for increased

reliability.

WPA DC-DC converter modules are certified to UL/CUL 60950, and VDE to EN60950. It meets CISPR22/EN55022/ FCC15J Class B specs for EMI levels with external filtering.

Other features include:

- Full Regulation Down to Zero Load
- Undervoltage Lock-Out
- Auto-Start

- Internal Temperature Shutdown
- Auto-Reset
- Soft Start
- Remote On/Off (Available in Positive or Negative Logic)
- Over Current Protection
- Overvoltage Protection
- Output Voltage Adjust on Both Outputs

PRODUCT SELECTION CHART ¹

MODEL	NOMINAL INPUT VOLTAGE (VDC)	OUTPUT #1	OUTPUT #2	OUTPUT CURRENT		TYPICAL EFFICIENCY (%)
				MIN LOAD(A)	MAX LOAD (A)	
WPA60R48D1510*	48	1.0	1.5	0.0	12.0	82
WPA60R48D1812*	48	1.2	1.8	0.0	12.0	82
WPA60R48D2215*	48	1.5	2.2	0.0	12.0	86
WPA60R48D2518*	48	1.8	2.5	0.0	12.0	86
WPA60R48D3312*	48	1.2	3.3	0.0	12.0	89
WPA60R48D3318*	48	1.8	3.3	0.0	12.0	89
WPA60R48D3325*	48	2.5	3.3	0.0	12.0	89
WPA60R48D0515*	48	1.5	5.0	0.0	12.0	89
WPA60R48D0533*	48	3.3	5.0	0.0	12.0	89

Input current at nominal input line = 1.45A (Output Power = 60W)

*Models available with -1 option (positive logic)

¹Total output power not to exceed 60 Watts

SPECIFICATIONS, ALL MODELS

Specifications are at $T_A = +25^{\circ}\text{C}$, Airflow = 300LFM (1.5m/s) at nominal input voltage unless otherwise specified.

	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT	INPUT					
	Voltage Range	WPA60R48D315	36	48	75	VDC
	Reflected Ripple Current				675	mApk-pk
	INPUT CONTROL					
	Temperature Shutdown	PCB		120		$^{\circ}\text{C}$
	Temperature Hysteresis			5		$^{\circ}\text{C}$
	Quiescent Standby Current	$V_{in} = 48\text{VDC}$		8	10	mA
	Undervoltage Lockout			32.5		V
	Undervoltage Shutdown			2		V

SPECIFICATIONS

Specifications are at $T_A = +25^{\circ}\text{C}$, Airflow = 300LFM (1.5m/s) at nominal input voltage unless otherwise specified.

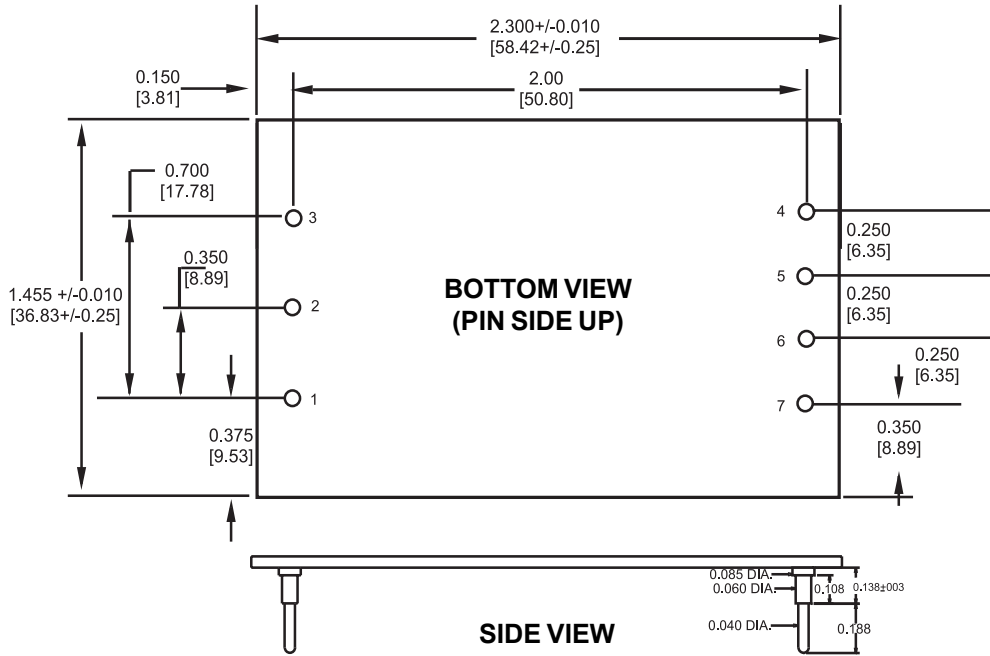
	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
GENERAL	ISOLATION					
	Rated Voltage		2000			VDC
	Resistance			10		$\text{M}\Omega$
	Capacitance			1000		pF
	Leakage Current	240 VAC		90		μArms
	OUTPUT					
	Rated Power				60	W
	Voltage Setpoint Accuracy				± 1.5	%
	Temperature Coefficient			± 0.005		$\%/^{\circ}\text{C}$
	Output Voltage (Over all conditions of I/P voltage load & temperature)	V1 v2			2 8	% of Nom % of Nom
	Ripple & Noise (NOTE 1)	BW = 5Hz to 20MHz			90	mVp-p
	Output Adjust Range Trim Up				10	%
	Trim Down				10	%
	Short Circuit and Overcurrent Protection				120	%
	Max Capacitive Load				10,000	μF
	Overvoltage Protection				15	%
	GENERAL					
	Switching Frequency				350	KHz
	MTTF per ML-HDBK-217 Ground Benign	Circuit Stress Method $T_A = +25^{\circ}$ Unmodified Database			1,000,000	Hr
	Package Weight				30	g
	TEMPERATURE					
	Operation/Specification	PCB Temperature		-40		$^{\circ}\text{C}$
	Storage	PCB Temperature		-55		$^{\circ}\text{C}$
	Shutdown Temperature	PCB Temperature			+120	$^{\circ}\text{C}$

NOTE 1: Measured at 20 MHz bandwidth across a 6 μf multi layer ceramic capacitor located approximately 1" from output terminals.

PERFORMANCE CURVES

Rev B of the WPA60 Datasheet will include extensive performance curves and graphs.

MECHANICAL



PIN CONNECTIONS	
#	Function
1	+Vin
2	On/Off
3	-Vin
4	+Vout1
5	RTN (-Vout1 and -Vout2)
6	Trim
7	+Vout2

NOTES:
 All dimensions are in inches (millimeters).
 All through hole pins are \varnothing 0.040" [1.02] with \varnothing 0.078" [1.98] shoulder
 Pin placement tolerance: +.010
 Pin material: Brass
 Pin Finish: Tin/Lead over Nickel
 Converter weight: [30g]
 Max height 12.5mm

ORDERING INFORMATION

To Find Model Number

Device Family WPA60R48D yz -

60 Watt, Dual Output,
 Quarter Brick, 48VDC Input Range

Model Number _____

Selected from Product Selection Chart (above)
 y = 15 = 1.5V, 18 = 1.8V, 22 = 2.2V, 25 = 2.5V,
 33 = 3.3V, 05 - 5.0V,
 z = 10 = 1.0V, 12 = 1.2V, 15 = 1.5V, 18 - 1.8V
 25 = 2.5V, 33 = 3.3V

Remote On/Off Logic _____

Positive Logic - No Number
 Negative Logic - 1

Model Numbers	Part Numbers
WPA60R48D1510	6064965
WPA60R48D1812	6064957
WPA60R48D2215	6064956
WPA60R48D2518	6064955
WPA60R48D3312	6064953
WPA60R48D3318	6064952
WPA60R48D3325	6064951
WPA60R48D0515	6064966
WPA60R48D0533	6064954
WPA60R48D1510-1	6064993
WPA60R48D1812-1	6064992
WPA60R48D2215-1	6064991
WPA60R48D2518-1	6064990
WPA60R48D3312-1	6064989
WPA60R48D3318-1	6064988
WPA60R48D3325-1	6064987
WPA60R48D0515-1	6064994
WPA60R48D0533-1	6064986

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