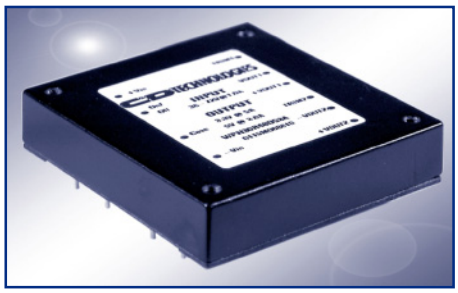
C&D TECHNOLOGIES
Power Solutions

Corporate: www.cdtechno.com
Product: www.cdpoweronline.com

WPN30R

30 Watt Single Output Half Brick DC/DC Converter



- 36 - 75V Input Range
- Industry Standard Pinouts
- Input & Output Filtering
- Extended Temperature Range: -40°C to +100°C Baseplate
- Remote On/Off Function
- Input Reverse Voltage Protection
- Fixed Frequency Operation
- Short Circuit Protection
- UL/CUL 60950, VDE EN60950

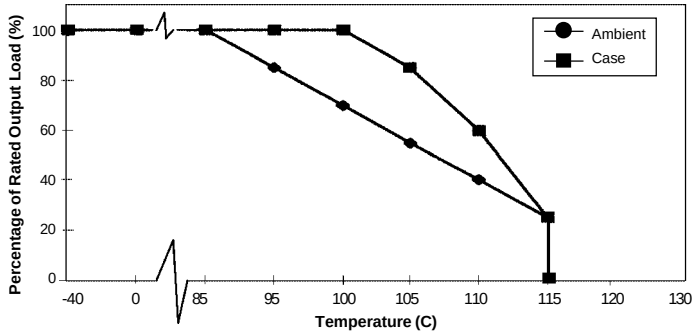
The WPN30R Series is a family of high performance DC/DC converters. The unit is housed in a space-saving shell and combines low cost with high performance across all line and load conditions. An output trim feature is provided, allowing the user to compensate for long line lengths. The WPN30R Series is assembled by a fully automated process using surface mount components for increased reliability. Through-holes are provided to simplify unit mounting or the addition of a heatsink for high temperature applications. Other features include:

- Full Regulation Down to Zero Load
- Under Voltage Lock-Out, Auto-Start
- Internal Temperature Shutdown, Auto-Reset
- Soft Start
- Remote On/Off (Available in Positive or Negative Logic)
- Remote Sense
- Over Current Protection
- Output Over Voltage Protection
- Output Voltage Adjust

PRODUCT SELECTION CHART

MODEL	NOMINAL INPUT VOLTAGE (VDC)	RATED OUTPUT VOLTAGE (VDC)	OUTPUT CURRENT MIN LOAD(A)	OUTPUT CURRENT NOM LOAD (A)	OUTPUT CURRENT MAX LOAD (A)	INPUT CURRENT NOM LOAD (A)	EFFICIENCY (%)
WPN30R48S03	48	3.3	0.0	9.0	11.0	0.755	82
WPN30R48S05	48	5.0	0.0	6.0	7.5	0.744	84
WPN30R48S12	48	12	0.0	2.5	3.0	0.718	87
WPN30R48S15	48	15	0.0	2.0	2.4	0.718	87

THERMAL DERATING CURVE



SPECIFICATIONS, ALL MODELS

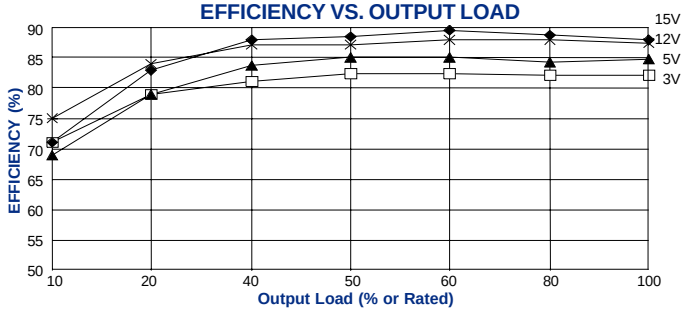
Specifications are at T_{CASE} = +40°C nominal input voltage unless otherwise specified.

	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
INPUT	**INPUT**					
	Voltage Range	WPN30R48xxyzz	36	48	75	VDC
	Reflected Ripple Current			50	75	mA
	INPUT CONTROL					
	Temperature Shutdown				107	°C
	Temperature Hysteresis				5	°C
	Quiescent Standby Current	Current into & Vin		8	10	mA
	Under Voltage Shutdown	WPN30R48xxyzz		32.5		V
	Under Voltage Hysteresis	WPN30R48xxyzz		1		V

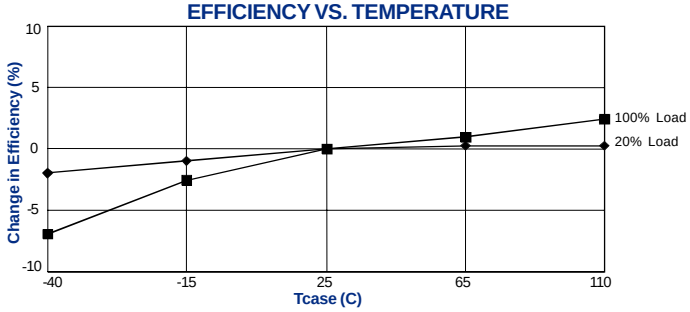
	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNITS
GENERAL	**ISOLATION**					
	Rated Voltage		1500			VDC
	Resistance			10		GΩ
	Capacitance			1000		pF
	Leakage Current	240VAC			100	µArms
	OUTPUT					
	Rated Power				30	W
	Voltage Setpoint Accuracy					
	Single Output				±1.5	%
	Temperature Coefficient			±0.2		%/°C
	Line Regulation	High Line to Low Line				
	Single Output				±0.1	%
	Load Regulation	Min. Load to Nom Load				
	Single Output				±0.4	%
	Ripple & Noise					
	Single Output	BW = 5Hz to 20 MHz		50	80	mVp-p
	Output Adjust Range	All Outputs		±9.5		%
	Output Adjust Current	Current Sourced/Sunk by Vadj Pin			±0.5	mA
	Short Circuit Protection					
	Single Output				7.5	A
	GENERAL					
	Switching Frequency				300	kHz
	MTTF per MIL-HDBK-217	Circuit Stress Method				
	Ground Benign	TA = +25°C, Unmodified Database			1,500,000	Hr
	Package Weight			90		g
	TEMPERATURE					
	Operation/Specification	Case Temperature	-40		+100	°C
	Storage	Case Temperature	-55		+110	°C
	Shutdown Temperature	Case Temperature	+105		+107	°C
	Thermal Impedance, Case-Ambient				7	°C/W

PERFORMANCE GRAPHS

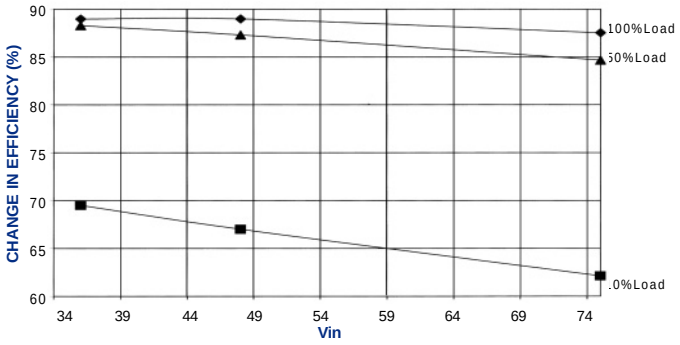
EFFICIENCY VS. OUTPUT LOAD



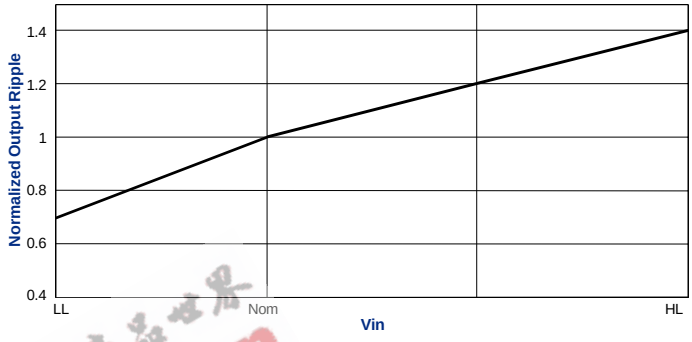
EFFICIENCY VS. TEMPERATURE



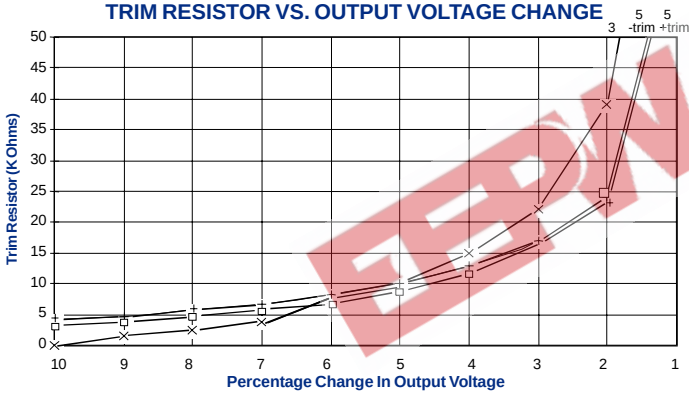
EFFICIENCY VS. INPUT VOLTAGE



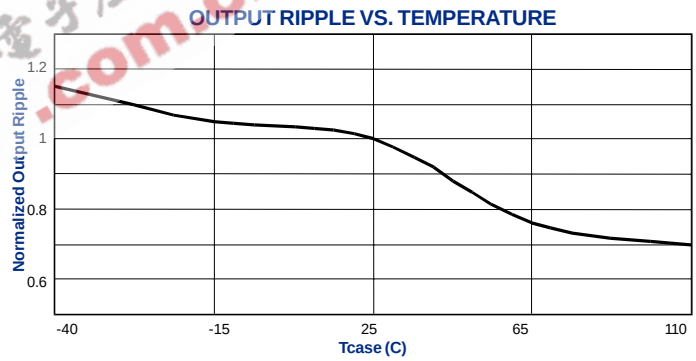
OUTPUT RIPPLE VS. INPUT VOLTAGE



TRIM RESISTOR VS. OUTPUT VOLTAGE CHANGE



OUTPUT RIPPLE VS. TEMPERATURE



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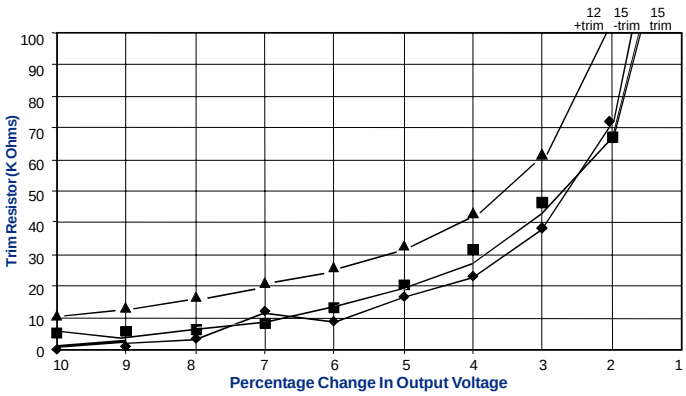
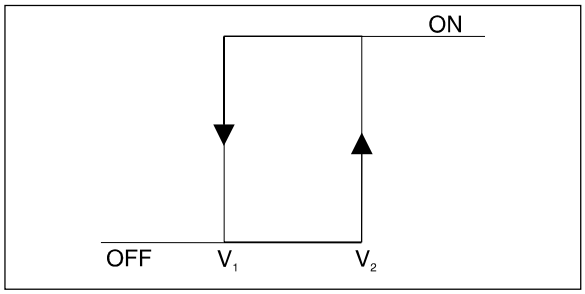


HYSTERESIS GRAPH

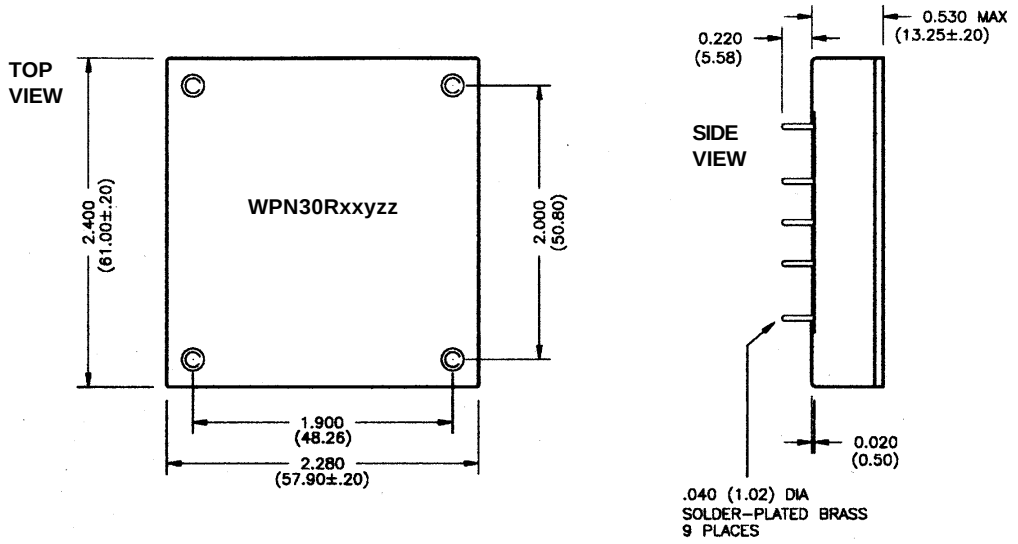


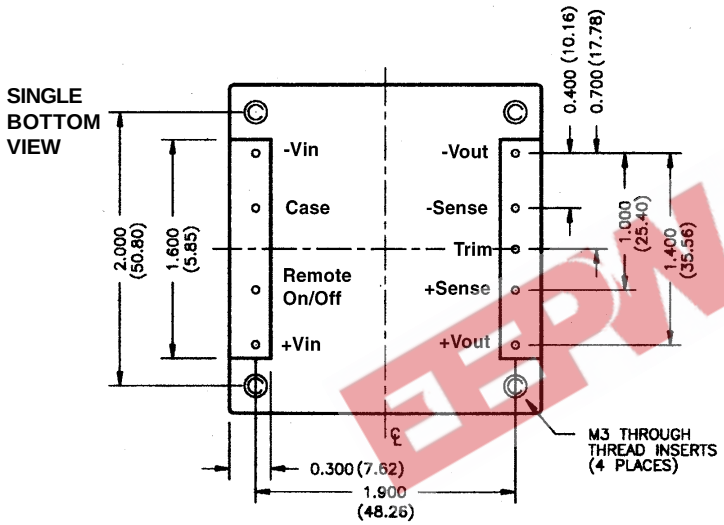
Undervoltage Lockout Threshold Voltages

Nominal Input Voltage Range	Shutdown Low Voltage (V1) OFF	Shutdown High Voltage (V2) ON
48	32.5	33.5

Specifications typical at TA=25°C, rated output current.

MECHANICAL





NOTES
All dimensions are in inches (millimeters).

Unless stated otherwise, dimensional tolerance ± 0.010" (±0.2mm).

Pin placement tolerance: ±0.015" (±0.2mm).

Marked with specific model ordered, date, code, job code.

MATERIAL: Lead material is brass with a solder plated surface to allow ease of solderability.

ORDERING INFORMATION

WPN30R xxyzz -

Device Family
Indicated 30 Watt Regulated DC/DC Converter

Model Number
Selected from Table of Electrical Characteristics
Where:
xx = Input Voltage
y = Number of Outputs (Single "S")
zz = Output Voltage

Remote On/Off Logic
Positive Logic - No Number
Negative Logic - 1

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