



## PWR4XX Series

### 3 Watts Rated Output Power UNREGULATED DC/DC CONVERTER SERIES

#### FEATURES

- Isolation Voltage Tested per UL544, VDE750, and CSAC22.2 Dielectric Withstand Requirement
- Barrier Leakage Current 100% Tested at 240VAC
- Single Channel
- Single or Dual Unregulated Outputs
- Wide Operating Temperature Range:  $-40^{\circ}\text{C}$  to  $+100^{\circ}\text{C}$
- Input and Output Filtering
- Six-Sided Shielding

#### DESCRIPTION

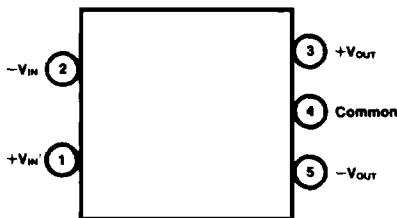
The PWR4XX Series offers a large selection of unregulated 3W DC/DC converters for use in such

diverse applications as process control, telecommunications, portable equipment, medical systems, airborne and shipboard electronic circuits, and automatic test equipment.

Thirty-six models allow the user to select input voltages ranging from +5VDC to +48VDC and output voltages of +5, +12, +15,  $\pm 5$ ,  $\pm 12$ , or  $\pm 15\text{V}$ .

Surface-mounted devices and manufacturing processes are used in the PWR4XX Series to give the user a device which is more environmentally rugged than most DC/DC converters. The use of surface-mount technologies also gives the PWR4XX Series superior isolation voltage. Each PWR4XX Series unit is tested in compliance with the dielectric withstand voltage requirements of UL544, VDC750, and CSAC22.2.

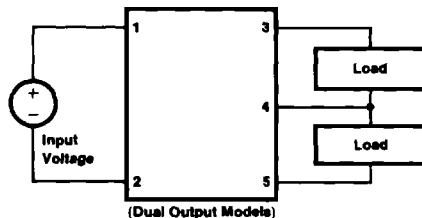
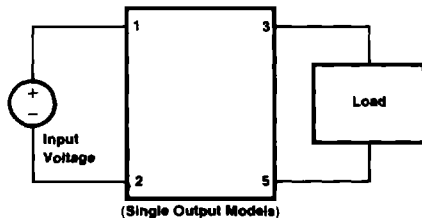
#### CONNECTION DIAGRAM



#### ORDERING INFORMATION

Device Family \_\_\_\_\_ PWR 4XX / G  
 PWR indicates DC/DC converter  
 Model Number \_\_\_\_\_  
 Selected from table of Electrical Characteristics  
 Reliability Screening \_\_\_\_\_  
 No designator indicates standard manufacturing processing  
 /G indicates Level I screening—burn-in only  
 /T indicates Level II screening—stabilization bake, temperature cycling, and burn-in

#### TYPICAL APPLICATIONS



# SPECIFICATIONS

## ELECTRICAL CHARACTERISTICS<sup>(1)</sup>

Model	Nominal Input Voltage (VDC)	Rated Output Voltage (VDC)	Rated Output Current (mA)	Maximum Input Current (mA)
PWR400	5	5	600	1034
PWR401		12	250	1034
PWR402		15	200	1034
PWR403		±5	±300	1034
PWR404		±12	±125	1034
PWR405	±15	±100	1034	
PWR406	12	5	600	380
PWR407		12	250	380
PWR408		15	200	380
PWR409		±5	±300	380
PWR410		±12	±125	380
PWR411	±15	±100	380	
PWR412	15	5	600	286
PWR413		12	250	286
PWR414		15	200	286
PWR415		±5	±300	286
PWR416		±12	±125	286
PWR417		±15	±100	286
PWR418		24	5	600
PWR419	12		250	184
PWR420	15		200	184
PWR421	±5		±300	184
PWR422	±12		±125	184
PWR423	±15		±100	184
PWR424	28	5	600	162
PWR425		12	250	162
PWR426		15	200	162
PWR427		±5	±300	162
PWR428		±12	±125	162
PWR429		±15	±100	162
PWR430	48	5	600	105
PWR431		12	250	105
PWR432		15	200	105
PWR433		±5	±300	105
PWR434		±12	±125	105
PWR435		±15	±100	105

## COMMON SPECIFICATIONS<sup>(1)</sup>

Parameter	Conditions	Min	Typ	Max	Units
<b>INPUT</b>					
Voltage Range		±20% of Rated Input			
Input Ripple Current	I <sub>LOAD</sub> = Rated Load		70		mA, p-p
<b>ISOLATION</b>					
Rated Voltage		1000			VDC
Test Voltage	60Hz, 60 seconds	3000			V <sub>PEAK</sub>
Resistance			10		GΩ
Capacitance			50		pF
Leakage Current	V <sub>ISO</sub> = 240VAC			10	μA
<b>OUTPUT</b>					
Voltage Accuracy	I <sub>LOAD</sub> = Rated Load			±5	%
Voltage (No Load)	V <sub>OUT</sub> = 5V Models			7	VDC
	V <sub>OUT</sub> = 12V Models			15	VDC
	V <sub>OUT</sub> = 15V Models			18	VDC
Ripple Voltage	I <sub>LOAD</sub> = Rated Load		100		mV, p-p
Line Regulation			1		%/%
<b>TEMPERATURE</b>					
Specification		-25		+85	°C
Operation		-40		+100	°C
Storage		-55		+125	°C

NOTE: (1) Specifications typical at T<sub>a</sub> = +25°C, nominal input voltage, and rated output current unless otherwise noted

## ABSOLUTE MAXIMUM RATINGS

Input Voltage	120% X rated voltage
Output Short-Circuit Duration	Momentary
Internal Power Dissipation	2.5W
Junction Temperature	+125°C
Package Thermal Resistance	16°C/W
Lead Temperature (soldering, 10 seconds)	+300°C

## MECHANICAL

**(Top View)**  
 Dimensions: 1.125 ± 0.015 (28.58 ± 0.38) inches wide by 1.125 ± 0.015 (28.58 ± 0.38) inches high.  
 Features: BURR-BROWN logo, PWR4XX marking, and a note: "Marked with specific model number ordered".

**(Bottom View)**  
 Shows a 5-pin configuration on a grid. Pin 4 is missing on single output models.

**(Side View)**  
 Dimensions: 0.410 (10.41) inches max height, 0.170 (4.32) inches min height, and 0.040 ± 0.003 (1.02 ± 0.08) inches lead length.

**NOTES:**  
 All dimensions are in inches (millimeters)  
 GRID: 0.100 inches (2.54 millimeters)  
**MATERIAL:** Low thermal resistance molding compound which has excellent chemical resistance, wide operating temperature range and good electrical properties under high humidity environments. Lead material is brass with a hot-solder-dipped surface to allow ease of solderability.