

## 3 WATTS UNREGULATED DC/DC CONVERTERS

### PWR12XX



#### DESCRIPTION

The PWR12XX Series offers a broad line of low-cost, high-performance, unregulated, single and dual output DC/DC converters in a 24-pin DIP package. These miniature converters offer better performance and lower cost in industry-standard packages and pinouts. The PWR12XX Series is internally filtered. No external parts are necessary.

Surface mounted components and a low thermal resistance encapsulant allow for superior reliability, excellent thermal dissipation, and an extended temperature range of  $-25^{\circ}\text{C}$  to  $+85^{\circ}\text{C}$  at no extra cost.

The PWR12XX Series is ideal for use on high-density PC boards where isolated, unregulated, power is needed. Standoffs allow for PC board cleaning, helping preserve isolation. They also allow for visual inspection of solder joints.

#### FEATURES

- LOW COST
- INDUSTRY-STANDARD PACKAGE
- SINGLE AND DUAL OUTPUTS
- 24-PIN DIP PACKAGE
- BUILT-IN STANDOFFS
- INTERNAL INPUT AND OUTPUT FILTERING

#### MECHANICAL

**TOP VIEW**

**SIDE VIEW**

NC = Do Not Connect  
Duplicate pin functions are internally connected.  
All dimensions are in inches (millimeters).  
GRID: 0.100 inches (2.54 millimeters)  
PIN PLACEMENT TOLERANCE:  $\pm 0.015''$

**MATERIAL:** Units are encapsulated in a low thermal resistance molding compound which has excellent chemical resistance, wide operating temperature range, and good electrical properties under high humidity environments. The encapsulant and outer shell of the unit have UL94V-0 ratings. Lead material is brass with a solder plated surface to allow ease of solderability.

**BOTTOM VIEW**

PIN #	SINGLES	DUALS
1	+VIN	+VIN
2	NC	-VOUT
3	NC	Common
10	-VOUT	Common
11	+VOUT	+VOUT
12	-VIN	-VIN
13	-VIN	-VIN
14	+VOUT	+VOUT
15	-VOUT	Common
22	NC	Common
23	NC	-VOUT
24	+VIN	+VIN

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# ABSOLUTE MAXIMUM RATINGS

Output Short-Circuit Duration .....	Momentary
Internal Power Dissipation .....	1.3W
Lead Temperature (soldering, 10 seconds max) .....	+300°C

# ORDERING INFORMATION

Device Family _____	<b>PWR</b>	<b>12XX</b>
PWR indicates DC/DC converter		
Model Number _____		
Selected from Table of Electrical Characteristics		

# APPLICATION NOTES

## UNBALANCED LOADS

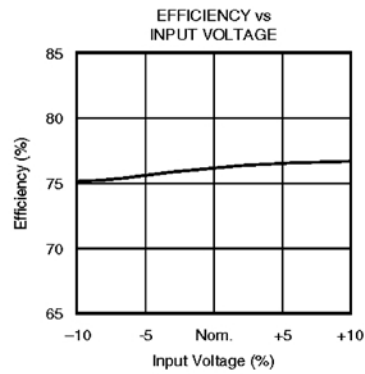
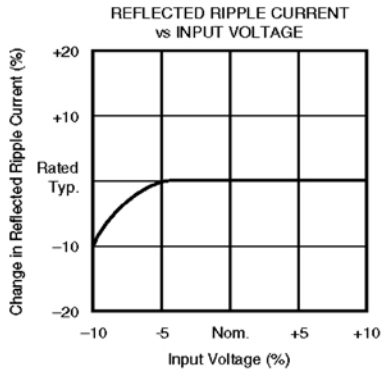
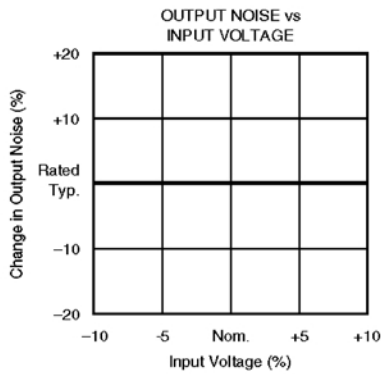
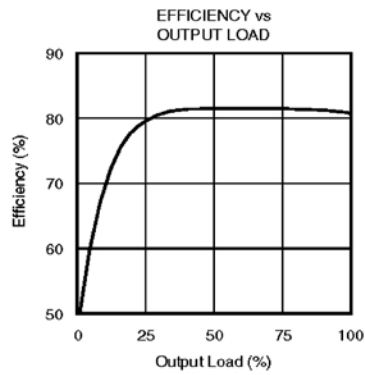
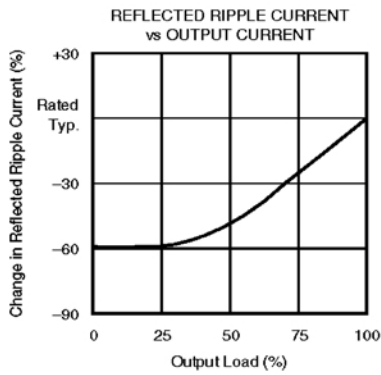
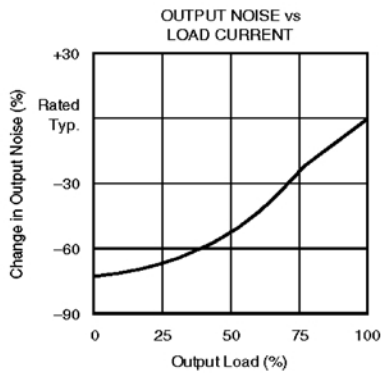
Unbalanced loads may be used on dual output models with either side providing up to its rated current. Output voltages, by design, will track each other in an unbalanced state within ±10% of one another.

## OUTPUT NOISE

Output noise can be reduced to 30mVp-p, typically, by adding a 10µF tantalum capacitor with an equivalent series resistance (ESR) of less than 150mΩ at 10kHz across each output.

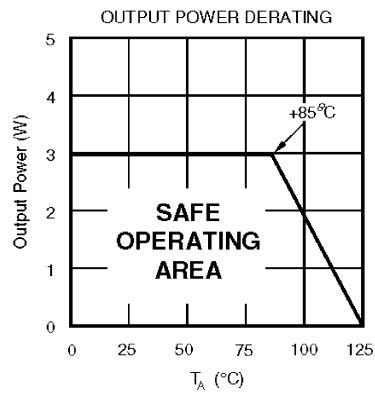
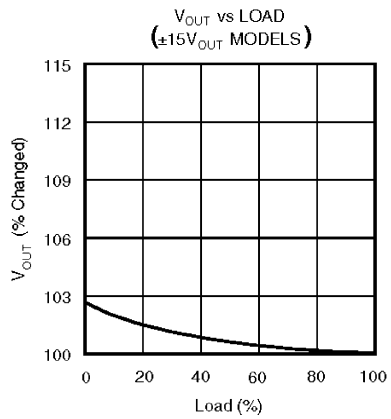
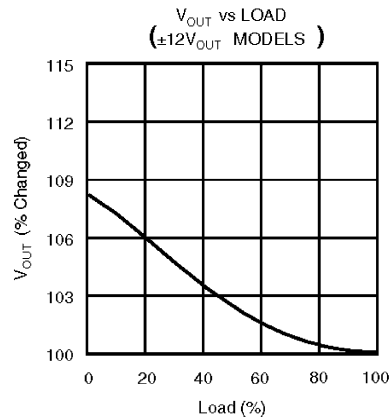
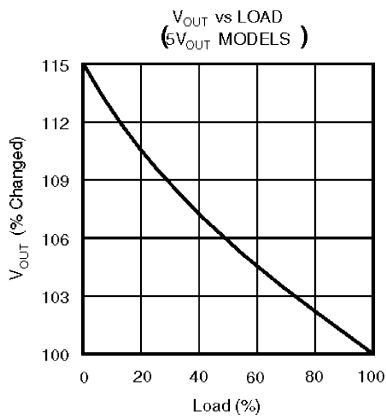
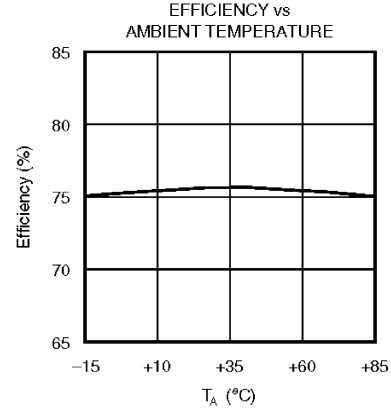
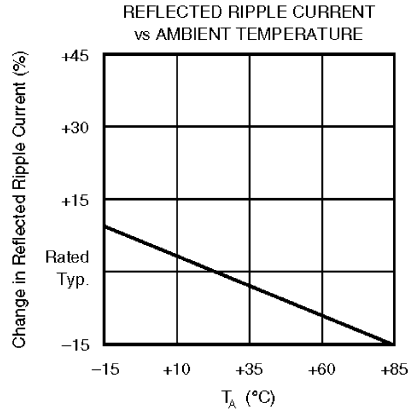
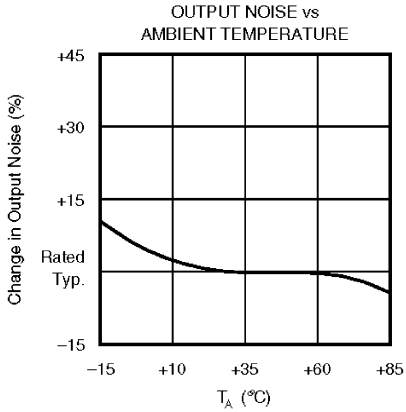
# TYPICAL PERFORMANCE CURVES

T<sub>A</sub> = +25°C, Rated Input Voltage, Rated Output Current unless otherwise noted.



# TYPICAL PERFORMANCE CURVES

$T_A = +25^\circ\text{C}$ , Rated Input Voltage, Rated Output Current unless otherwise noted.



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