BURR-BROWN®

PWR7XX Series

5W Rated Output Power REGULATED 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 Regulated Outputs
- Linear Output Regulation
- Wide Operating Temperature Range: −40°C to +100°C
- Input and Output Filtering
- Six-Sided Shielding

DESCRIPTION

The PWR7XX Series offers a large selection of regulated 5W 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, ±5, ±12, or ±15V.

Surface-mounted devices and manufacturing processes are used in the PWR7XX 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 PWR7XX Series superior isolation voltage. Each PWR7XX Series unit is tested in compliance with the dielectric withstand voltage requirements of UL544, VDC750, and CSAC22.2.

ORDERING INFORMATION

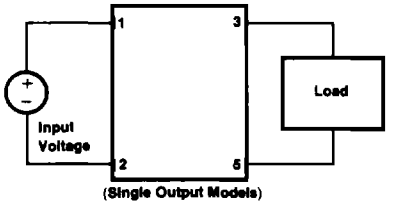
PWR 7XX /G

Device Family
PWR indicates DC/DC converter

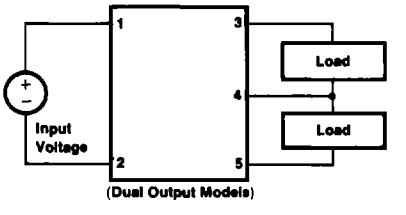
Model Number
Selected from table of Electrical Characteristics

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



(Single Output Models)



(Dual Output Models)

International Airport Industrial Park · P.O. Box 11400 · Tucson, Arizona 85734 · Tel. (602) 746-1111 · Twx: 910-952-1111 · Cable: BBRCORP · Telex: 66-6491

PDS-662A

SPECIFICATIONS

ELECTRICAL SPECIFICATIONS[1]

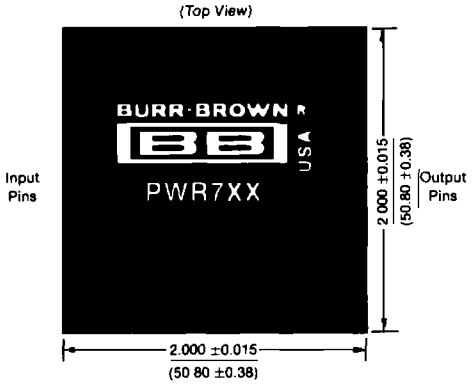
Model	Nominal Input Voltage (VDC)	Rated Output Voltage (VDC)	Rated Output Current (mA)	Input Current		Reflected Ripple Current, typ (mA) p-p	Regulation		Efficiency, min (%)
				No Load, typ (mA)	Rated Load, typ (mA)		Line, typ (%)	Load, typ (%)	
PWR700	5	5	1000	168	1600	30	.02	.04	61
PWR701		12	417	168	1535	30	.02	.04	63
PWR702		15	334	168	1490	30	.02	.04	65
PWR703		±5	±500	168	1560	30	.02	.04	62
PWR704		±12	±209	168	1490	30	.02	.04	65
PWR705		±15	±167	168	1450	30	02	.04	67
PWR706	12	5	1000	38	620	10	.02	.04	61
PWR707		12	417	38	550	10	.02	.04	63
PWR708		15	334	38	535	10	.02	.04	65
PWR709		±5	±500	38	640	10	.02	.04	62
PWR710		±12	±209	38	550	10	.02	.04	65
PWR711		±15	±167	38	535	10	.02	.04	67
PWR712	15	5	1000	35	510	10	.02	.04	61
PWR713		12	417	35	490	10	.02	.04	63
PWR714		15	334	35	470	10	.02	.04	65
PWR715		±5	±500	35	520	10	.02	.04	62
PWR716		±12	±209	35	480	10	.02	04	65
PWR717		±15	±167	35	455	10	.02	.04	67
PWR718	24	5	1000	33	320	20	.02	.04	61
PWR719		12	417	33	305	20	.02	.04	63
PWR720		15	334	33	300	20	.02	.04	65
PWR721		±5	±500	33	330	20	02	.04	62
PWR722		±12	±209	33	310	20	.02	.04	65
PWR723		±15	±167	33	305	20	.02	.04	67
PWR724	28	5	1000	33	280	20	.02	.04	61
PWR725		12	417	33	270	20	.02	.04	63
PWR726		15	334	33	260	20	.02	.04	65
PWR727		±5	±500	33	280	20	02	.04	62
PWR728		±12	±209	33	270	20	.02	.04	65
PWR729		±15	±167	33	260	20	.02	.04	67
PWR730	48	5	1000	31	165	10	.02	.04	61
PWR731		12	417	31	160	10	.02	.04	63
PWR732		15	334	31	155	10	.02	.04	65
PWR733		±5	±500	31	165	10	.02	.04	62
PWR734		±12	±209	31	155	10	.02	.04	65
PWR735		±15	±167	31	155	10	.02	.04	67

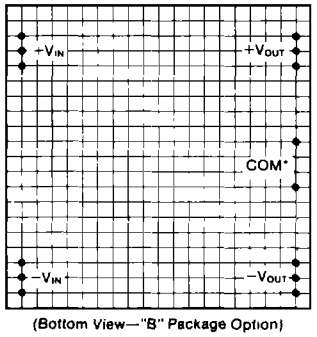
COMMON SPECIFICATIONS[1]

Parameter	Conditions	Min	Typ	Max	Units
INPUT					
Voltage Range	V_{IN} = 5V Models	4 65		6	VDC
	V_{IN} = 12V Models	11.00		15	VDC
	V_{IN} = 15V Models	13.70		17	VDC
	V_{IN} = 24V Models	21.00		27	VDC
	V_{IN} = 28V Models	25.00		31	VDC
	V_{IN} = 48V Models	44.50		53	VDC
ISOLATION					
Rated Voltage		1000			VDC
Test Voltage	60 Seconds, 60Hz	3000			V_{PK}
Resistance			10		GΩ
Capacitance			170		pF
Leakage Current	240V rms, 60Hz			25	μA, rms
OUTPUT					
Voltage Accuracy			±0 5	±1	%
Voltage Balance	Dual Output Units Only		±0.3		%
Temperature Coefficient	−25°C ≤ T_A ≤ +85°C		±0.01		%/°C
Ripple and Noise	BW = DC to 10MHz		30		mV, p-p
TEMPERATURE					
Specification		−25		+85	°C
Operation		−40		+100	°C
Storage		−55		+125	°C

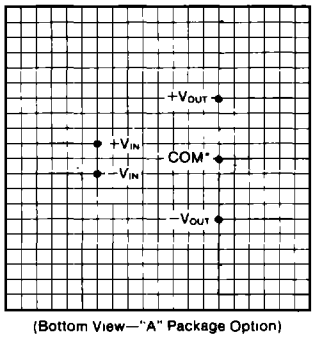
NOTE: (1) Specifications typical at T_A = +25°C, nominal input voltage, and rated output current unless otherwise noted

MECHANICAL

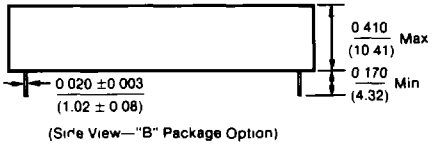




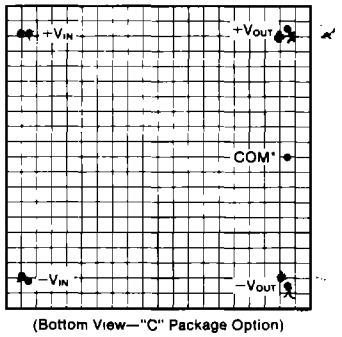
(Bottom View—"B" Package Option)



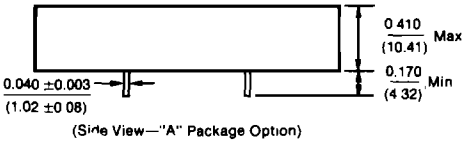
(Bottom View—"A" Package Option)



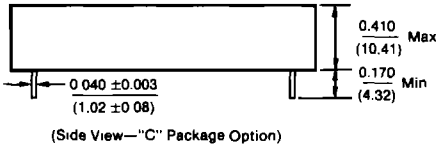
(Side View—"B" Package Option)



(Bottom View—"C" Package Option)



(Side View—"A" Package Option)



(Side View—"C" Package Option)

NOTES:

All dimensions are in inches (millimeters)

GRID: 0.100 inches (2 54 millimeters)

*Common pins are missing on single output models

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. Lead material is brass with a hot-solder-dipped surface to allow ease of solderability.

ABSOLUTE MAXIMUM RATINGS

Input Voltage	120% of nominal
Output Short-Circuit Duration	5 seconds
Internal Power Dissipation	3.5W
Lead Temperature (soldering, 10 seconds)	+300°C
Junction Temperature	+150°C
Package Thermal Resistance, Junction-to-Ambient, θ_{JA}	15°C/W