



PWR6XX Series

2W 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 $+95^{\circ}\text{C}$
- Input and Output Filtering
- Six-Sided Shielding

DESCRIPTION

The PWR6XX Series offers a large selection of regulated two-watt 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.

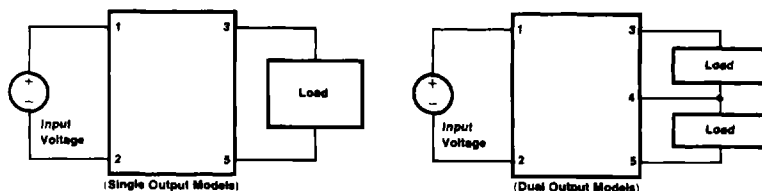
Thirty-six models allow the user to select input voltages ranging from +5VDC to +48VDC and output voltages of +5, +12, +15, ± 5 , ± 12 , or ± 15 V.

Surface-mounted devices and manufacturing processes are used in the PWR6XX 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 PWR6XX Series superior isolation voltage. Each PWR6XX Series unit is tested in compliance with the dielectric withstand voltage requirements of UL544, VDE750, and CSAC22.2.

ORDERING INFORMATION

Device Family _____ PWR 6XX .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 SPECIFICATIONS⁽¹⁾

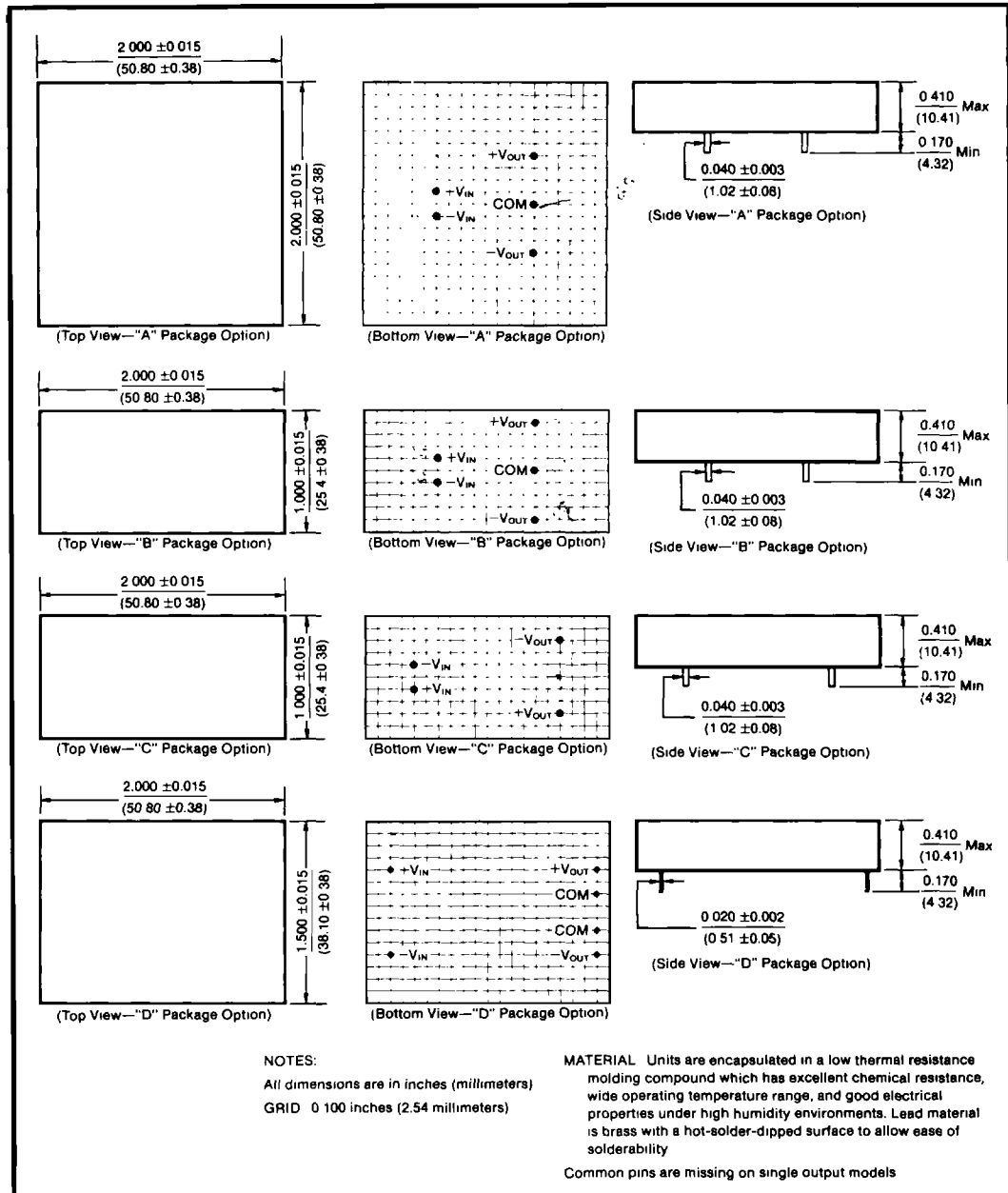
Model	Nominal Input Voltage (VDC)	Rated Output Voltage (VDC)	Rated Output Current (mA)	Input Current		Reflected Ripple Current, typ (mA)	Regulation		Efficiency, min (%)
				No Load, typ (mA)	Rated Load, typ (mA)		Line, typ (%)	Load, typ (%)	
PWR600	5	5	400	45	645	25	0.02	0.04	59
PWR601		12	167	45	597	25	0.02	0.04	63
PWR602		15	134	45	580	25	0.02	0.04	64
PWR603		±5	±200	45	645	25	0.02	0.04	60
PWR604		±12	±84	45	600	25	0.02	0.04	63
PWR605	±15	±67	45	580	25	0.02	0.04	64	
PWR606	12	5	400	22	268	20	0.02	0.04	59
PWR607		12	167	22	248	20	0.02	0.04	63
PWR608		15	134	22	241	20	0.02	0.04	64
PWR609		±5	±200	22	269	20	0.02	0.04	60
PWR610		±12	±84	22	249	20	0.02	0.04	63
PWR611	±15	±67	22	243	20	0.02	0.04	64	
PWR612	15	5	400	15	214	20	0.02	0.04	59
PWR613		12	167	15	199	20	0.02	0.04	63
PWR614		15	134	15	193	20	0.02	0.04	64
PWR615		±5	±200	15	215	20	0.02	0.04	60
PWR616		±12	±84	15	200	20	0.02	0.04	63
PWR617	±15	±67	15	195	20	0.02	0.04	64	
PWR618	24	5	400	10	134	15	0.02	0.04	59
PWR619		12	167	10	124	15	0.02	0.04	63
PWR620		15	134	10	120	15	0.02	0.04	64
PWR621		±5	±200	10	135	15	0.02	0.04	60
PWR622		±12	±84	10	126	15	0.02	0.04	63
PWR623	±15	±67	10	122	15	0.02	0.04	64	
PWR624	28	5	400	10	114	15	0.02	0.04	59
PWR625		12	167	10	107	15	0.02	0.04	63
PWR626		15	134	10	104	15	0.02	0.04	64
PWR627		±5	±200	10	114	15	0.02	0.04	60
PWR628		±12	±84	10	108	15	0.02	0.04	63
PWR629	±15	±67	10	105	15	0.02	0.04	64	
PWR630	48	5	400	10	67	10	0.02	0.04	59
PWR631		12	167	10	63	10	0.02	0.04	63
PWR632		15	134	10	63	10	0.02	0.04	64
PWR633		±5	±200	10	67	10	0.02	0.04	60
PWR634		±12	±84	10	63	10	0.02	0.04	63
PWR635	±15	±67	10	63	10	0.02	0.04	64	

COMMON SPECIFICATIONS⁽¹⁾

Parameter	Conditions	Min	Typ	Max	Units
INPUT					
Voltage Range	$V_{in} = 5V$ Models $V_{in} = 12V$ Models $V_{in} = 15V$ Models $V_{in} = 24V$ Models $V_{in} = 28V$ Models $V_{in} = 48V$ Models	4.5 10.8 13.8 21.6 25.2 43.2		5.5 13.5 16.5 26.5 31.0 53.0	VDC VDC VDC VDC VDC VDC
ISOLATION					
Rated Voltage		1000			VDC
Test Voltage	60 Seconds, 60Hz	3000			V_{PK}
Resistance			10		GΩ
Capacitance			140		pF
Leakage Current	240V, 60Hz			20	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		+95	°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



ABSOLUTE MAXIMUM RATINGS

Input Voltage	120% of nominal
Output Short-Circuit Duration	5 seconds
Internal Power Dissipation	1.5W
Lead Temperature (soldering, 10 seconds)	+300°C
Junction Temperature	+150°C
Package Thermal Resistance (Junction-to-Ambient, θ_{JA})	45°C/W