



SWITCHING POWER SUPPLY SPECIFICATION

# CP-02046

**CLAYPOWER**  
C O M P A N Y

REV.00

TEL 626.303.8885 FAX 626.301.0588

727 Philips Drive City of Industry, CA 91748

[www.claypower.com](http://www.claypower.com)

## 1. Input Characteristics:

1.1 Input Voltage Range ---100~240Vac, full range with active power factor 90% min

1.2 Input Frequency Range --- 47Hz to 63Hz.

1.3 Input Ac Current ( Max ) ---8.0A max, full load.

1.4 Inrush Current --- At 132Vac / 264Vac, full load condition, no damage occur, input fuse shall not blow.

1.5 Efficiency --- 70% min, at nominal line input full load.

1.6 Input Leakage Current --- Leakage current from line to ground will be less 10mA rms, measurement will be made at 240Vac/60Hz.

## 2. Output Characteristics:

### 2.1 Static Output Characteristics.

Output Voltage	Load Range		Regulation		Ripple Max mV P-P	Ripple & Noise Max. mV P-P
	Min.	Max.	Min.	Max.		
1. +3.3 V	0.5 A	20.0 A	- 5 %	+ 5 %	50 mV	100 mV
2. +5.0 V	0.3 A	30.0 A	- 5 %	+ 5 %	50 mV	100 mV
3. +12.0 V	1.0 A	35.0 A	- 5 %	+ 5 %	100 mV	150 mV
4. -5.0 V	0.0 A	0.5 A	- 10 %	+ 10 %	150 mV	200 mV
5. -12.0 V	0.0 A	0.5 A	- 10 %	+ 10 %	150 mV	200 mV
6. SB +5.0 V	0.0 A	3.0 A	- 5 %	+ 5 %	100 mV	100 mV

#### Note:

1. Noise Test --- Noise bandwidth is from Dc to 20MHz.
2. Ripple frequencies greater than 1 MHz shall be attenuated by the measurement system.
3. Add 0.1uF / 10uF capacitor at output connector terminals for ripple & noise measurements.
4. Combined total power from +3.3V and +5V rails shall not exceed 150W.
5. The total output power shall not exceed 460W.

### 2.2 Dynamic Output Characteristics:

2.2.1 Initial Delay Time --- NONE.

2.2.2 Rise Time --- 50 mS max, at nominal line full load.

**2.2.3 Turn-on Delay Time --- 600mS max, at nominal line full load.**

**2.2.4 Hold-up Time --- 16mS min. for + 5V output at nominal line full load.**

**2.2.5 Transient Overshoot --- 10% max. of delay state after load change of 25% within the range of 50% to 100% of full load.**

**2.2.6 Temperature Coefficient --- 0.03% per °C max.**

### **3. Protections:**

**3.1 Over Voltage Protection --- Standard on +3.3V output set at 3.7Vdc – 4.5Vdc.  
+5.0V output set at 5.7Vdc – 6.5Vdc.  
+12.0V output set at 13.5Vdc – 14.5Vdc.**

**3.2 Short Circuit Protection --- A short circuit placed between DC return and output shall cause no damage and the power supply shall shutdown.**

**3.3 Over Power Protection --- The power supply can use electronic circuit to limit the output. Power against excessing +115% - 150% of full load, or protected against excessive power delivery due to short circuit of any output or over total power.**

**3.4 No load Operation --- No parts damaged on power supply.**

### **4. Dielectric Withstand Voltage:**

**4.1 Primary to Secondary ----- 1500Vac for 1 minute. Or 2200Vdc for 3 sec.**

**4.2 Primary to Safety Ground --- 1500Vac for 1 minute. Or 2200Vdc for 3 sec.**

**4.3 Insulation Resistance ----- Primary fo safety ground - 500Vdc, 100M ohms min.**

### **5. Conducted EMI: Internal Filter Can Meet.**

**5.1 FCC Requirement --- Part15, SUB-Part J, Computing Devices “ Class B “ Limits.**

**5.2 VDE Requirement --- Class “ B “ ( General Operating Permit ) Requirements Of VFG 234/1991.**

**5.3 CISPR Requirement --- Class “ B “ Requirements Of CLSPR 22.**

**5.4 Harmonic Requirement --- IEC61000-3-2 & IEC61000-3-3 Class “ D “.**

**6. Product Safety: This Power Supply Is Designed Can Meet The Following Spec.**

6.1 UL/CUL ----- UL60950-1

6.2 TUV ----- EN 60950-1

**7. Environment:**

7.1 Operation Temperature ----- Air temperature 0 °C to 50 °C.

7.2 Operation Relative Humidity ----- 20% to 90%.

7.3 Storage Temperature ----- Air temperature -20 °C to 60 °C.

7.4 Storage Relative Humidity ----- 5% to 95%.

7.5 Altitude ----- Operate properly at any altitude between 0 To 100,000 feet, storage 40,000 feet.

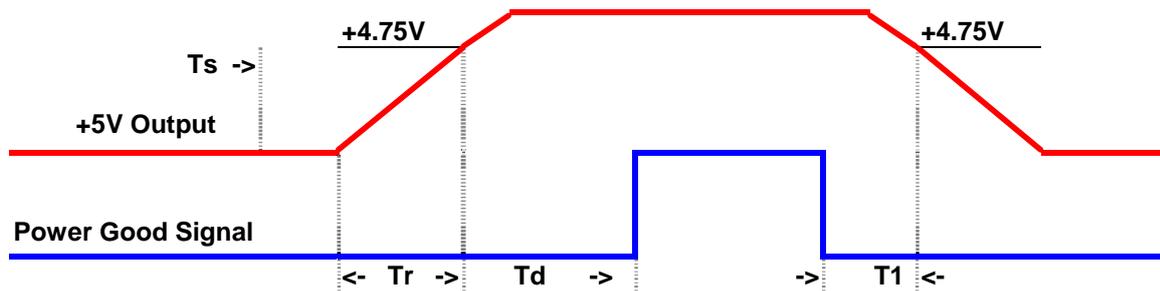
7.6 Vibration ----- 0.38mm. 5-55-5Hz, 1 minutes per cycle; 30 minutes for each axis ( X,Y,Z ).

**8. Burn-In**

8.1 Burn-In ----- At 45 °C, max. load, 4 hours.

9. Mean Time Between Failure ----- 60 KHrs minimum at 75% load for 25 °C ambient temperature.

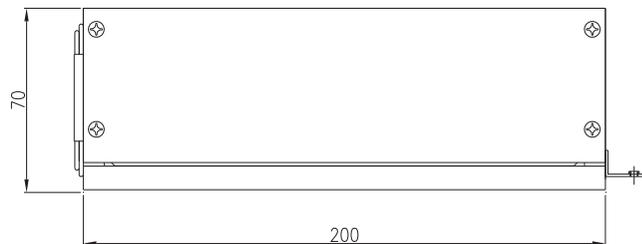
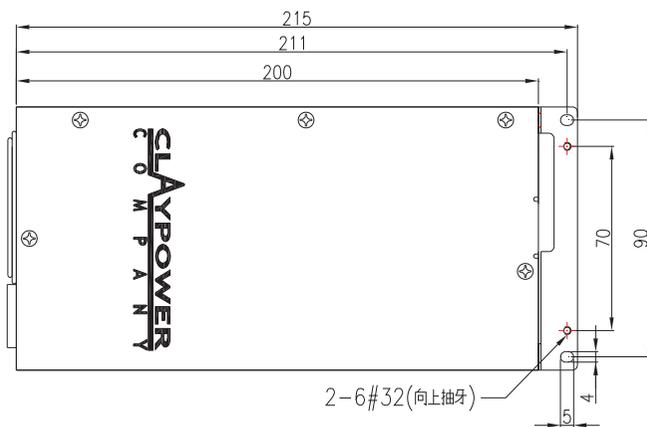
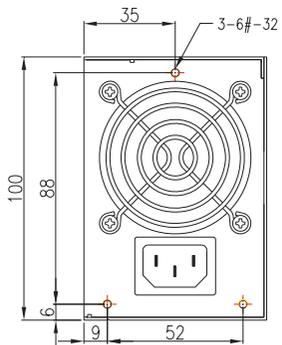
**10. Power-Good Signal:**



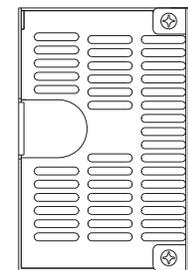
Note:  $T_r \leq 100$  ms,  $T_1 \geq 1$  ms,  $T_d = 100 - 500$  ms.

**11. Dimension**

11.1 W x H x D ----- 100.0 x 70.0 x 200.0 ( mm )



REVISIONS			
NO	DESCRIPTION	DATE	APPROVED

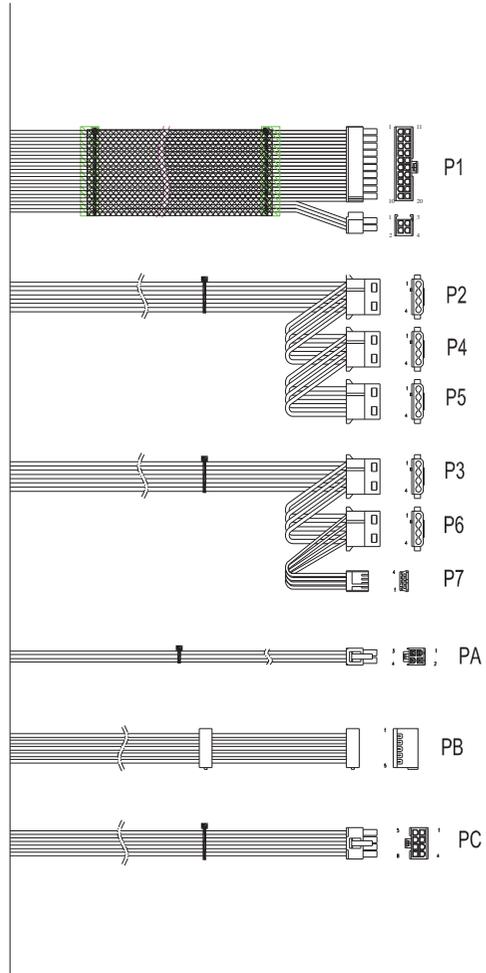


**CLAYPOWER**  
COMPANY

APPROVED	DATE	TITLE	PART NO.	
		CP-02046	PRX 2U	
CHECKED	DATE	SCALE : MM(INCHES)	DRAWING NO.	REV.
		1:2.5	PRX 2U	A0
DESIGNED	DATE	TOLERANCES:	MODEL NO.	SHEET
2008	06/18/08	.XX = ±.10 .XXX = ±.010	PRX 2U	1 of 1

第三角法 (Projection) 	FINISH:	MATERIAL:			
	採購	生產	品管		

REVISIONS			
NO	DESCRIPTION	DATE	APPROVED



REF.ID	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	LENGTH
P1	1	+3.3V	ORANGE	18	LIT/h756-20S+ LIT/h756-4S	600 <sup>+50mm</sup> -25mm
	2	+3.3V Sense	ORANGE	22		
	3	+3.3V	ORANGE	18		
	4	COM	BLACK	18		
	5	+5V	RED	18		
	6	COM	BLACK	18		
	7	+5V	RED	18		
	8	COM	BLACK	18		
	9	PWR OK	GRAY	22		
	10	+5VSB	PURPLE	18		
	11	+12V	YELLOW	18		
	12	+3.3V	ORANGE	18		
	13	+3.3V	ORANGE	18		
	14	-12V	BLUE	18		
	15	COM	BLACK	18		
	16	PS-ON	GREEN	22		
	17	COM	BLACK	18		
	18	COM	BLACK	18		
	19	COM	BLACK	18		
	20	-5V	WHITE	20		
	21	+5V	RED	18		
	22	+5V	RED	18		
	23	+5V	RED	18		
	24	COM	BLACK	18		
P2	1	+12V	YELLOW	18	WST/P4-A10202 or equivalent	600 <sup>+50mm</sup> -25mm
P3	2	COM	BLACK	18		
	3	COM	BLACK	18		
P4	4	+5V	RED	18	WST/P4-A10202 or equivalent	150 <sup>±20mm</sup>
	1	+12V	YELLOW	18		
	2	COM	BLACK	18		
	3	COM	BLACK	18		
P6	4	+5V	RED	18	YYI/h6681-004 or equivalent	150 <sup>±20mm</sup>
	1	+12V	YELLOW	22		
P7	2	COM	BLACK	22	YYI/h6681-004 or equivalent	150 <sup>±20mm</sup>
	3	COM	BLACK	22		
	4	+5V	RED	22		

PA	1	COM	BLACK	18	YYI/h6657#M or equivalent	600 <sup>+50mm</sup> -25mm
	2	COM	BLACK	18		
	3	+12V	YELLOW	18		
	4	+12V	YELLOW	18		
PB	1	+3.3V	ORANGE	18	TKP/h127M2 or equivalent	600 <sup>+50mm</sup> -25mm
	2	GND	BLACK	18		
	3	+5V	RED	18		
	4	GND	BLACK	18		
	5	+12V	YELLOW	18		
PC	1	GND	BLACK	18	YYI/h6657#M or equivalent	600 <sup>+50mm</sup> -25mm
	2	GND	BLACK	18		
	3	GND	BLACK	18		
	4	GND	BLACK	18		
	5	+12V	YELLOW	18		
	6	+12V	YELLOW	18		
	7	+12V	YELLOW	18		
	8	+12V	YELLOW	18		

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DESIGNED	DATE	TOLERANCES: .XX = ±.10 .XXX = ±.010	REV. A0
2028	02/27/08	MODEL NO.	SHEET 1 of 1

第三角法 (Projection)	FINISH:	MATERIAL:
	採購	生產