



# 1U

SWITCHING POWER SUPPLY SPECIFICATION

# CP-01025

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

REV.00

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## 1. Input Characteristics:

1.1 Input Voltage Range --- 90~264Vac, Full Range With Active Power Factor 90% Min

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

1.3 Input Ac Current ( Max ) --- 4.0A Max. Full Load.

1.4 Inrush Current --- At 132Vac / 264Vac, Full Load Condition,  
No Damage Occur. Input Fuse Shall Not Blow.

1.5 Efficiency --- 63% Min, At Nominal Line Input Full Load.

1.6 Input Leakage Current --- Leakage Current From Line to Ground  
Will Be Less 3.5mA 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	0.3 A	20.0 A	- 5 %	+ 5 %	50 mV	100 mV
2.	+5.0 V	2.0 A	25.0 A	- 5 %	+ 5 %	50 mV	100 mV
3.	+12.0 V	0.5 A	14.0 A	- 5 %	+ 5 %	100 mV	150 mV
4.	-5.0 V	0.0 A	0.3 A	- 10 %	+ 10 %	150 mV	200 mV
5.	-12.0 V	0.0 A	1.0 A	- 10 %	+ 10 %	150 mV	200 mV
6.	SB +5.0 V	0.0 A	2.0 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 Current From +3.3V And +5V Rails Shall Not Exceed 27A.
5. The Total Output Power Shall Not Exceed 250W.

### 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 +120% - 170% 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 To Safety Ground - 500Vdc, 100M ohms Min.**

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

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

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

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

**5.4 Harmonic Requirement --- IEC10000-3-2 & IEC10000-3-3 Class “ D “.**

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

6.1 UL/CUL ----- UL60950

6.2 TUV ----- EN 60950

**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.

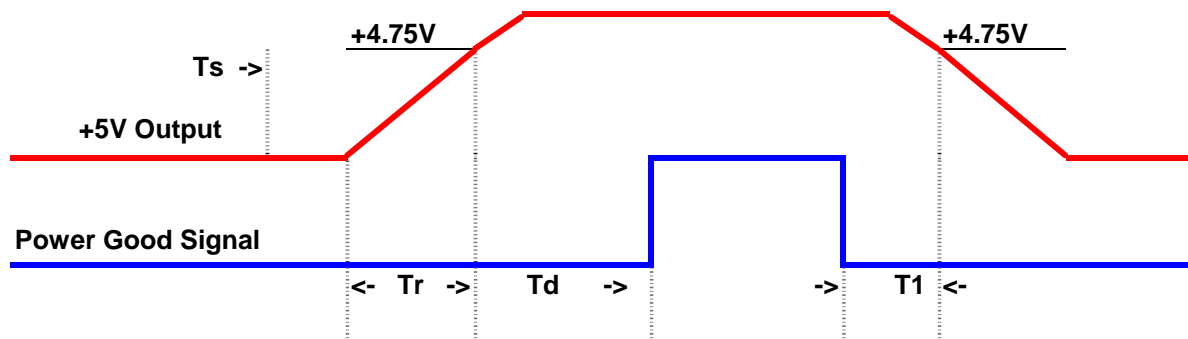
7.6 Vibration ----- 0.38mm. 5-55-5Hz, 1 Minutes Per Cycle; 30 Minutes For Each Axis ( X,Y,Z ).

**8. Burn-In**

8.1 Burn-In ----- At 45 °C, Max. Load, 4 Hours.

9. Mean Time Between Failure ----- 100 KHrs Minimum At 75% Load For 25 °C Ambient Temperature.

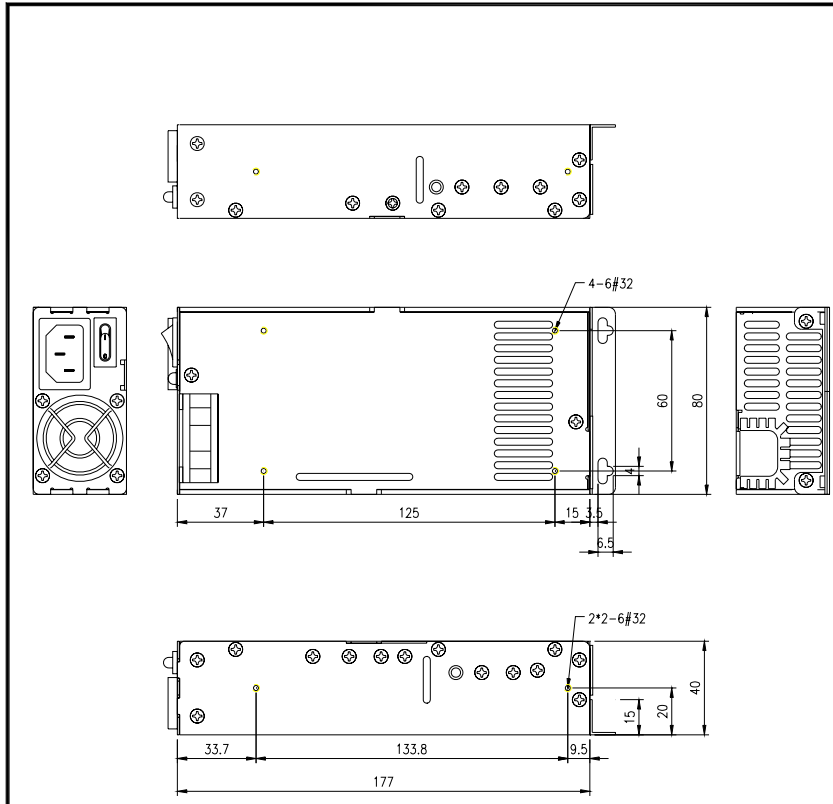
**10. Power-Good Signal:**



Note:  $Tr \leq 100 \text{ ms}$ ,  $T1 \geq 1 \text{ ms}$ ,  $Td = 100 - 500 \text{ ms}$ .

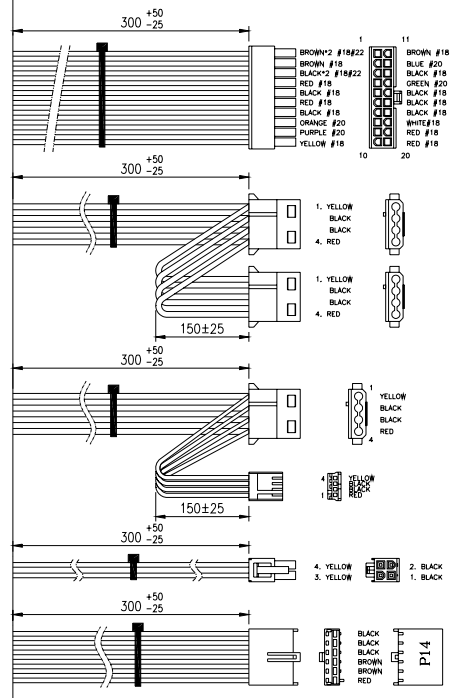
**11. Dimension**

11.1 W x H x D ----- 80.0 x 40.0 x 177.0( mm )



REVISIONS

NO	DESCRIPTION	DATE	APPROVED
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CLAYPOWER COMPANY

APPROVED	DATE	TITLE	PART NO.	REV.
		CP-01025		A
CHECKED	DATE	DRAWING NO.	MODEL NO.	SHEET
				1 of 1

FINISH:	MATERIAL:
採購	生產
	品質

DESIGNED: *Yuba* DATE: SCALE: MM(INCHES): 1.2 TOLERANCES: XX ±.10 XXX ±.010