



# SWITCHING

SWITCHING POWER SUPPLY SPECIFICATION

# CP-54010

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

REV.00

TEL 626.303.8885 FAX 626.301.0588 11911 Clark St. Suite C Arcadia, CA 91006

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

## 1. Input Characteristics

- 1.1 Input Voltage Range ----- 90Vac To 264Vac, Universal Input.
- 1.2 Input Frequency Range ----- 47Hz To 63Hz.
- 1.3 Input Ac Current ( Max ) ----- 4A Max. @115Vac, 2A Max. @230Vac Full Load.
- 1.4 Inrush Current ----- At 132Vac / 264Vac, Full Load Condition, No Damage Occur. Input Fuse Shall Not Blow.
- 1.5 Efficiency ----- 65% Min, At Typical 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		Surge 10 Sec.	Regulation		Ripple Max mV P-P	Ripple & Noise Max. mV P-P
		Min.	Max.		Min.	Max.		
1.	+3.3 V	0.1 A	12.0 A		- 5 %	+ 5 %	50 mV	50 mV
2.	+5.0 V	2 A	14.0 A		- 5 %	+ 5 %	50 mV	100 mV
3.	+12.0 V	0.3 A	7.0A		- 5 %	+ 5 %	100 mV	150 mV
4.	-12.0 V	0.0 A	1.0 A		- 10 %	+ 10 %	150 mV	200 mV

Note:

- Noise Test ----- Noise Bandwidth Is From Dc To 20MHz.
- Ripple Frequencies Greater Than 1 MHz Shall Be Attenuated By the Measurement System.
- Add 0.1uF / 10uF Capacitor At Output Connector Terminals For Ripple & Noise Measurements.
- Total Power Can Not Exceed 100W. (FAN 30CFM)

### 2.2 Dynamic Output Characteristics:

2.2.1 Rise Time ---- 100 ms Max. At Nominal Line Full Load.

2.2.2 Turn-on Delay Time ----- 600mS Max. At Nominal Line Full Load.

2.2.3 Hold-up Time ----- 10 ms Min. For + 5V Output At Nominal Line Full Load.

2.2.4 Transient Overshoot ----- 10% Max. Of Delay State After Load Change Of 25% Within The Range Of 50% To 100% Of Full Load.

2.2.5 Temperature Coefficient ----- 0.03% Per °C Max.

### **3. Protections**

3.1 Over Voltage Protection --- Standard On. **+3.3V output set at 3.75Vdc – 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 +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 1800Vac For 1 Sec.

4.2 Primary to Safety Ground --- 1500Vac For 1 Minute. Or 1800Vac For 1 Sec.

4.3 Insulation Resistance --- Primary To Safety Ground - 500Vdc, 50M ohms Min.

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

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

5.2 CISPR Requirement --- Class “ B “ Requirements Of CISPR 22.

5.3 VCCI Class “ 2 “.

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

6.1 UL/CUL ----- UL 60950-1

6.2 TUV ----- EN 60950-1

### **7. Environment**

7.1 Operation Temperature ----- Air Temperature 0 °C To 40 °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 40 °C, Max. Load, 4 Hours.

9.Mean Time Between Failure ----- 50 KHrs Minimum At Full Load For 25 °C Ambient Temperature.

### 11.Dimension

11.1 W x D x H -----130x78x40 ( mm )

