



SWITCHING POWER SUPPLY SPECIFICATION

CP-01030

CLAYPOWER
C O M P A N Y

REV.00

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www.claypower.com

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) --- 6.0A 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 | 18.0 A | - 5 % | + 5 % | 50 mV | 100 mV |
| 2. | +5.0 V | 2.0 A | 30.0 A | - 5 % | + 5 % | 50 mV | 100 mV |
| 3. | +12.0 V | 0.5 A | 16.0 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 32A.
5. The total output power shall not exceed 300W.

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 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 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.

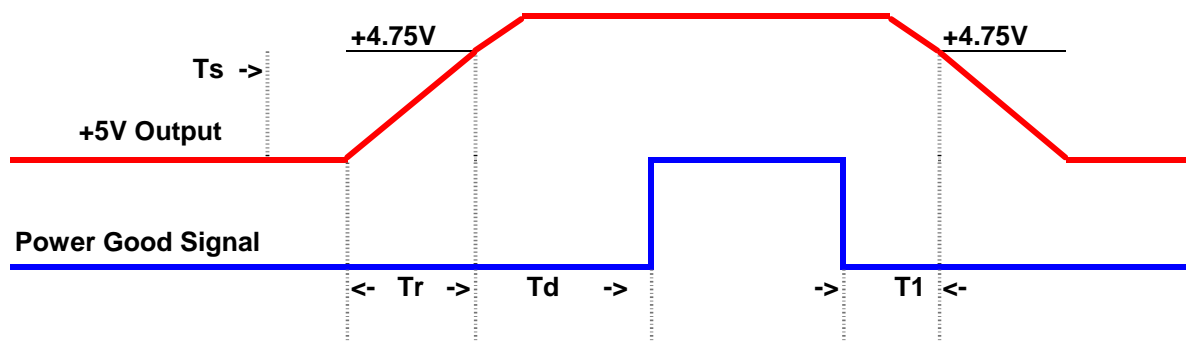
7.6 Vibration ----- 0.38mm. 5-55-5Hz, 1 minutes per cycle; 30 minutes for each axis (X,Y,Z).

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.

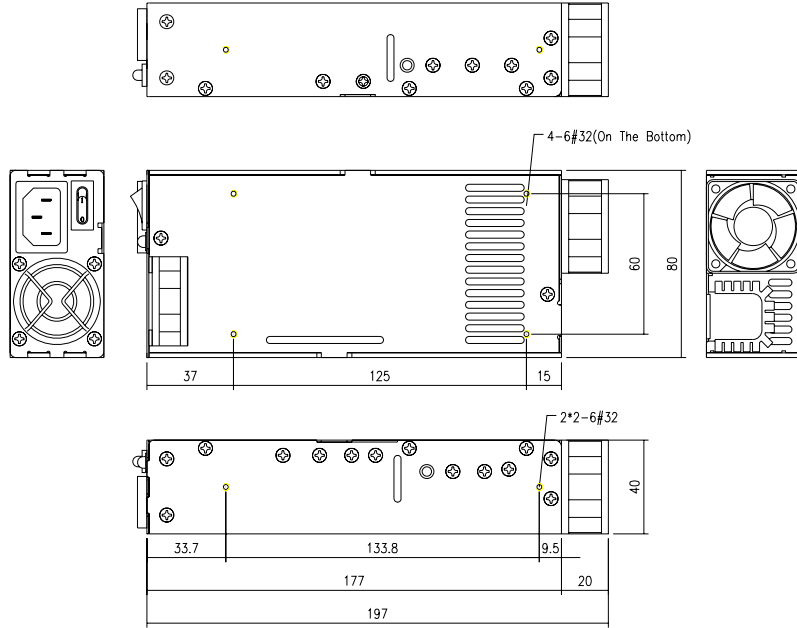
10. Power-Good Signal:



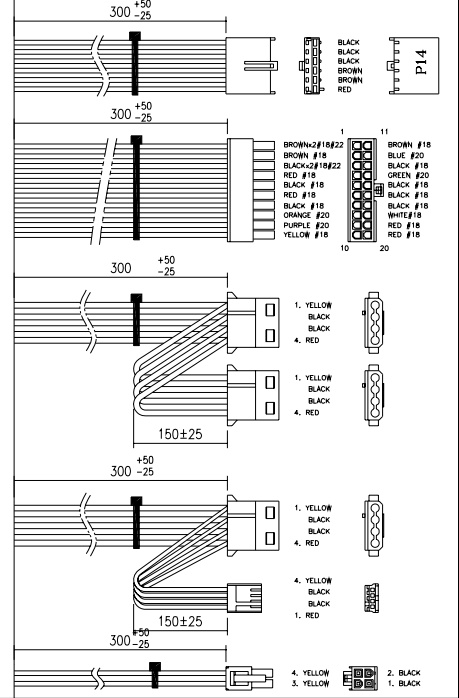
Note: $T_r \leq 100$ ms, $T_1 \geq 1$ ms, $T_d = 100 - 500$ ms.

11. Dimension

11.1 W x H x D ----- 80.0 x 40.0 x 197.0 (mm)



| REVISIONS | | | |
|-----------|-------------|------|----------|
| NO | DESCRIPTION | DATE | APPROVED |



CLAY POWER COMPANY

| | | | | |
|----------|------|-------------------|----------------------|-----------|
| APPROVED | DATE | TITLE | | |
| | | CP-01030 | | |
| CHECKED | DATE | DRAWING NO. | PART NO. | REV. |
| | | | | A |
| DESIGNED | DATE | SCALE: MM(INCHES) | TOLERANCES: | MODEL NO. |
| Yubo | | 1:3 | XX +.10 XXX +.000 | STD |
| | | | SHEET | 1 of 1 |

| FINISH: | | MATERIAL: | |
|---------|--|-----------|----|
| 採購 | | 生產 | 品質 |