

# SWITCHING

SWITCHING POWER SUPPLY SPECIFICATION

# CP - 40023

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

REV.00

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## 1. Input Characteristics

1.1 Input Voltage Range ----- -38Vdc To -72Vdc,

1.2 Input Dc Current ( Max ) ----- 9.0A Max. Full Load.

## 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	15.0 A	- 5 %	+ 5 %	50 mV	100 mV
2.	+5.0 V	2.5 A	25.0 A	- 5 %	+ 5 %	50 mV	100 mV
3.	+12.0 V	0.5 A	9.0 A	- 5 %	+ 5 %	100 mV	150 mV
4.	-5.0 V	0.0 A	1.0 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	1.5 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 125W.
5. The Total Output Power Shall Not Exceed 230W..

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 ----- 16 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 4.10Vdc At +/-0.40Vdc.  
+5.0V Output Set At 6.25Vdc At +/-0.75Vdc.  
+12.0V Output Set At 14.6Vdc At +/-1.0Vdc.
- 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.

### 4. Environment

- 4.1 Operation Temperature ----- Air Temperature 0 °C To 50 °C.
- 4.2 Operation Relative Humidity ----- 20% To 90%.
- 4.3 Storage Temperature ----- Air Temperature -20 °C To 60 °C.
- 4.4 Storage Relative Humidity ----- 5% To 95%.
- 4.5 Altitude ----- Operate Properly At Any Altitude Between 0 To 100,000 Feet. Storage 40,000 Feet.
- 4.6 Vibration ----- 0.38mm. 5-55-5Hz, 1 Minutes Per Cycle; 30 Minutes For Each Axis ( X,Y,Z ).

### 5. Burn-In

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

### 6. Mean Time Between Failure ----- 150 KHrs Minimum At Full Load For 25 °C Ambient Temperature.

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

7.1 UL/CUL ----- UL 60950-1

7.2 TUV ----- EN 60950-1

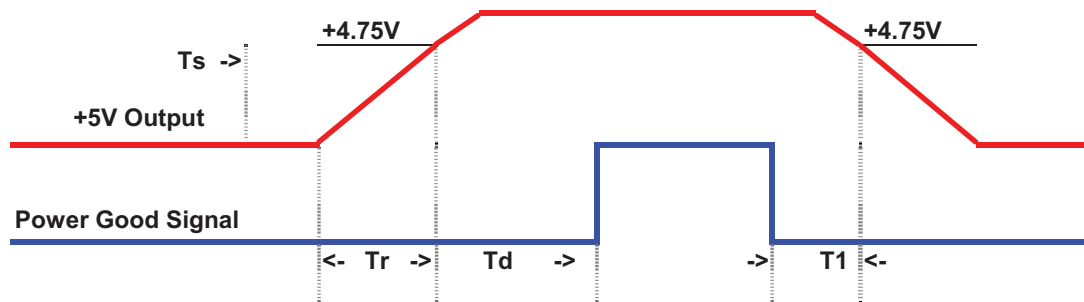
**8. Conducted EMI:** Internal Filter Can Meet.

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

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

8.3 CISPR Requirement --- Class “ A “ Requirements Of CLSPR 22.

**9. Power-Good Signal**

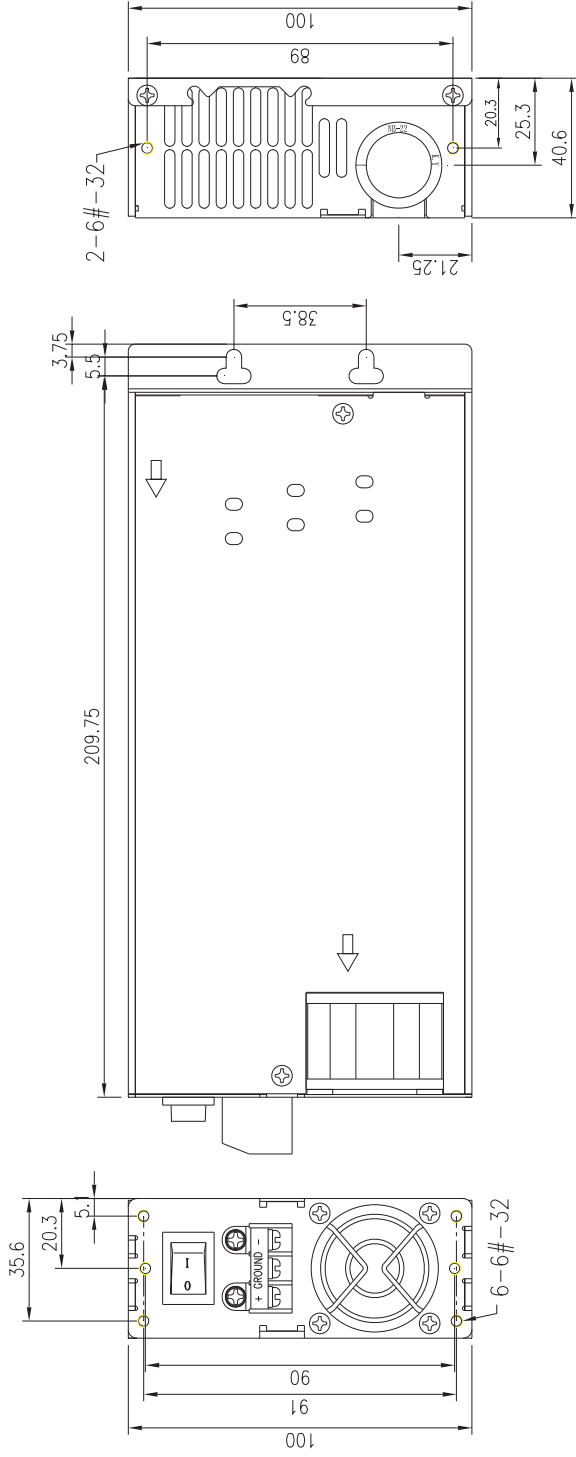


Note:  $Tr \leq 100$  ms,  $T1 \geq 1$  ms,  $Td = 100 - 500$  ms.

**10. Dimension**

10.1 W x H x D ----- 100.0 x 40.6 x 205.2 ( mm )

REVISIONS			
NO	DESCRIPTION	DATE	APPROVED

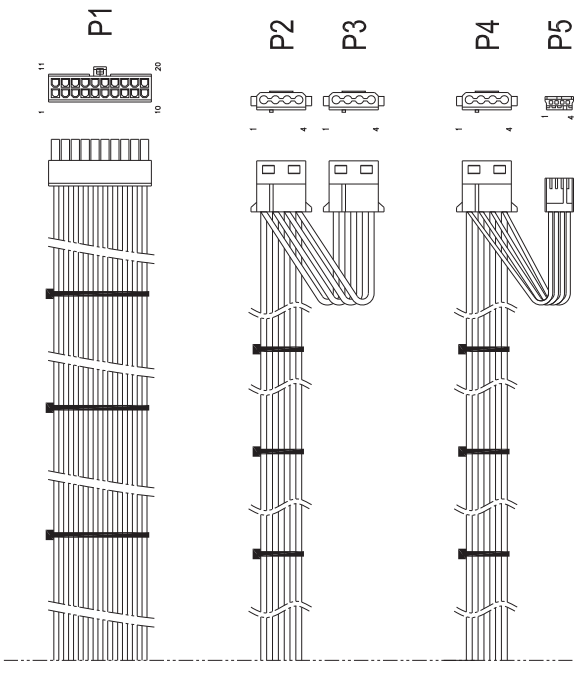


		TITLE	PART NO.
APPROVED	DATE	CP-40023	PSD230D-A
CHECKED	DATE	SCALE: MM(INCHES)	DRAWING NO.
DESIGNED	DATE	1:1	PSD230D-A
	DATE	TOLERANCES:	MODEL NO.
	10/27/08	XX #= .10	
		XXX #= .010	
			REV.
			A0
			SHEET
			1 of 1

FINISH:	MATERIAL:
第三種鍍 (Protecion)	
採購	生產
	品質

REVISIONS		
NO	DESCRIPTION	DATE

REF.ID	PIN NO.	SIGNAL	WIRE COLOR	GAUGE	CONNECTOR TYPE	LENGTH
P1	1	+3.3V	BROWN	18	JMT/JP2416-20 or equivalent	540±20mm
	2	+3.3V Sense	BROWN	22		
	3	+3.3V	BROWN	18		
	4	COM	BLACK	18		
	5	COM Sense	BLACK	22		
	6	+5V	RED	18		
	7	COM	BLACK	18		
	8	PWR OK	ORANGE	20		
	9	+5VSB	PURPLE	20		
	10	+12V	YELLOW	18		
	11	+3.3V	BROWN	18		
	12	-12V	BLUE	20		
	13	COM	BLACK	18		
	14	PS-ON	GREEN	20		
	15	COM	BLACK	18		
	16	COM	BLACK	18		
	17	COM	BLACK	18		
	18	-5V	WHITE	20		
	19	+5V	RED	18		
	20	+5V	RED	18		
P2 / P4	1	+12V	YELLOW	18	JMT/JP1120-4 or equivalent	P2=530±20mm P3=150±20mm P4=530±20mm
	2	COM	BLACK	18		
	3	COM	BLACK	18		
	4	+5V	RED	18		
P5	1	+12V	YELLOW	22	JMT/JP11635-4 or equivalent	150±20mm
	2	COM	BLACK	22		
	3	COM	BLACK	22		
	4	+5V	RED	22		



APPROVED	DATE	TITLE	PART NO.
CHECKED	DATE	CP-40023	PSD230D-A
DESIGNED	DATE	SCALE: MM(INCHES)	DRAWING NO.
203Δ	10/22/08	1:1	PSD230D-A
		TOLERANCES: .XX = ±.10 .XXX = ±.010	MODEL NO.
			REV. A0
			SHEET 1 of 1

FINISH:	MATERIAL:
第二角法 (Projection)	
採購	生產
	品管