

# SPECIFICATION

1U 200W  
ATX PFC  
Small footprint (80x185 mm)  
Power Supply

Model: P6200NP 1F

Specification subject to change without prior notice.



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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	20.0 A	- 5 %	+ 5 %	50 mV	100 mV
3.	+12.0 V	0.5 A	8.0 A	- 5 %	+ 5 %	100 mV	150 mV
4.	-12.0 V	0.0 A	1.0 A	- 10 %	+ 10 %	150 mV	200 mV
5.	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 22A.
5. The total output power shall not exceed 200W.

### 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.

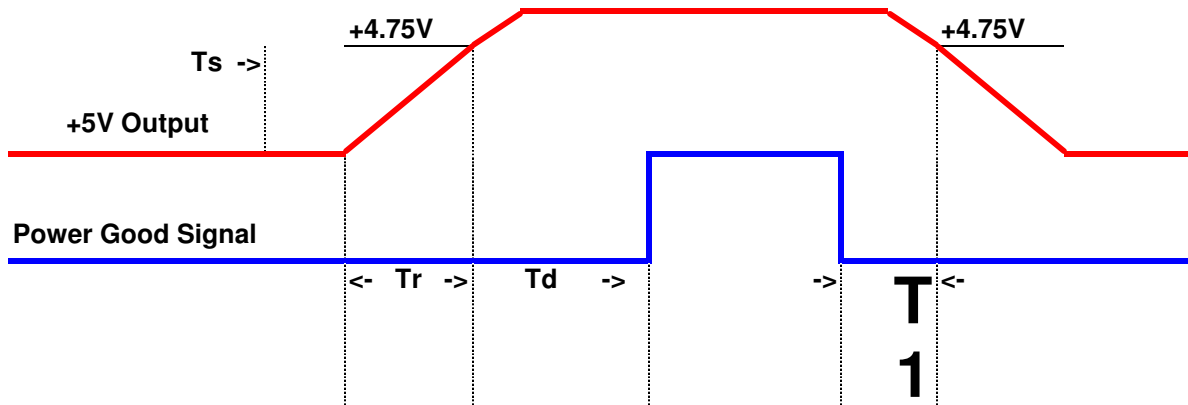
7.6 Vibration ----- 0.38mm. 5-55-5Hz, 1 minutes per cycle; 30 minutes for each axis ( X,Y,Z ).

## 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 185.0 ( mm )

REVISIONS			
NO	DESCRIPTION	DATE	APPROVED

The drawing includes the following views and dimensions:

- Top View:** Shows a rectangular board with a total width of 185 mm and a total height of 40 mm. A central section is 130 mm wide and 20 mm high. There are 6 mounting holes along the top edge, with 2 holes on the left and 4 on the right. Callout: 2\*2-6#32.
- Side View:** Shows a height of 80 mm. The board is 35 mm wide on the left side. A central section is 130 mm wide. There are 4 mounting holes on the top edge, with 1 hole on the left and 3 on the right. Callout: 4-6#32(Bose). Other dimensions include 20 mm, 6.5 mm, and 6 mm.
- Front View:** Shows a height of 20 mm and a width of 185 mm. It features a power jack on the left and a series of components on the right.

Top Microsystems Corp.					
APPROVED	DATE	TITLE	PART NO.	REV.	
		P6200NP 1F	692401-12T	A	
CHECKED	DATE	DRAWING NO.	D/N	MODEL NO.	SHEET
DESIGNED	DATE	SCALE : (MM/INCHES)	TOLERANCES:		
			XX = ±0.1 XXX = ±0.05	M/N	SHEET