1. SCOPE

This specification defines electrical performance and characteristic of "**SS-200SU Active PFC**" Full Range Series power supplies which comply with 80PLUS Specification.

2. AC INPUT and AC OUTPUT:

	RANGE(100-240VAC)		
Limits	Minimum	Maximum	Unit
AC Input voltage	90	264	Vac
AC Input frequency	47	63	Hz
AC Input Current		4	Amp(rms)
Inrush current [2.] (cold		100	Amp(peak)
Inrush current (warm	NO COMPONENT OVER STRESSED.		
	NO FUSE BLOW.		
	NO DAMAGE TO THE POWER SUPPLY.		
NOTE: 1. The AC input is protected by the AC fuse.			
2. Measured at 25 Deg C Ambient.			

3. DC OUTPUT REQUIREMENTS:

3.1 DC OUTPUT CURRENT RATINGS

DC OUPTUT		Tolerance
Group1	+3.3VDC	+5%/-5%
	+5VDC	+5%/-5%
	+12VDC	+5%/-5%
	-12VDC	+10%/-10%
Group2	+5Vsb	+5%/-5%

Load Range

Output	Minimum Load	Maximum Load	Peak Load
+12V1	0.1A	6A	9A
+12V2	0.5A	12A	15A
+5V	0.2A	17A	X
+3.3V	0.1A	14A	X
-12V	0A	0.8A	X
+5Vsb	0A	2A	2.5A

1. Maximum continuous total DC output power should not exceed 200 W
2. Maximum continuous combined load on +3.3 VDC and +5 VDC outputs should not exceed 110 W.
3. Max. continuous combined load on +12 V1DC and +12V2DC outputs should not exceed 168 W/14A.
4. Maximum peak total DC output power should be approximate 220 W.
5. Peak power and current loading should be supported for a minimum of 1 second

3.2 CROSS REGULATION

The +5V & +3.3V combined load and +12VDC load shall remain within the Defined in section 3.1 over cross load combinations shown Figure 1

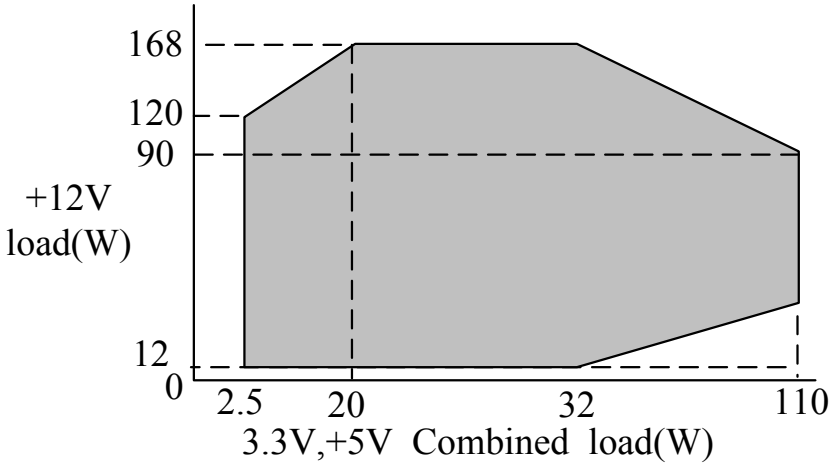


Figure 1 +5V&+3.3V , +12V Output Cross Load Combinations

3.3 OUTPUT RIPPLE and NOISE

Measurement is made with an oscilloscope with 20 MHz bandwidth. Output should be at the connector with a 0.1uF ceramic disk capacitor and a 10uF electrolytic capacitor simulate system load. The length of ground wire on probe should not longer than non-differential type of scope was used.

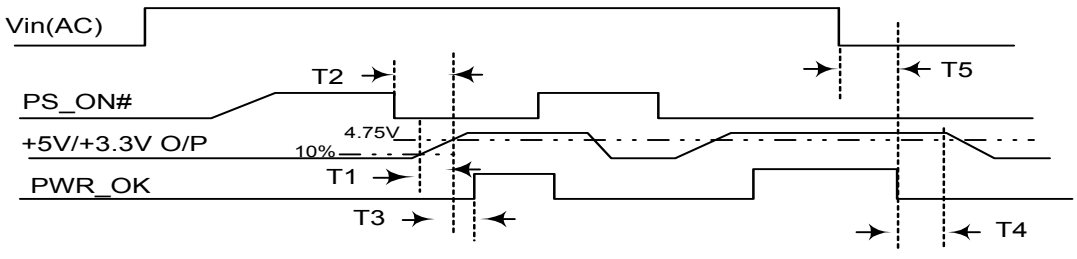
+3.3V	+5V	+12V	-12V	+5Vsb
50mV	50mV	120mV	120mV	50mV

3.4 DYNAMIC DC OUTPUT CHARACTERISTICS

+/-10% Max. Excursion for 50% to 100%, or 100% to 50% load change with return to Regulation in 0.5 mS.

3.5 DC OUTPUT ON/OFF CONTROL

A low active PS-ON (DC ON/OFF) input signal is equipped, which provide the interface **ENABLE** or to **DISABLE** the **GROUP1** of DC output. This signal is electrically to interface with **TTL,OPEN COLLECTOR** and the **HARD SWITCH.**



SIGNAL NAME		MAXIMUM	MINIMUM
T1	+5V RISE TIME	20 mS	
T2	+5V TURN-ON DELAY TIME	100 mS	

T3	PWR_OK DELAY TIME	500 mS	100 mS
T4	DC SAVE TIME		1 mS
T5	HOLD-ON TIME (AT NOMINAL AC INPUT)		12 mS

4. OUTPUT PROTECTION

4.1 TOTAL POWER PROTECTION: (OPP)

Total power 135% max with shut-down and latch off protection.

4.2 OVER VOLTAGE PROTECTION: (OVP)

OVER VOLTAGEAT	ACTIVE RANGE Min.	ACTIVE RANGE Max.	RESULT
+3.3V	3.76V	4.8V	Shutdown&Latch OFF The Group 1 DC Output
+5V	5.7V	7.0V	
+12V		15.6V	

4.3 SHORT CIRCUIT PROTECTION: (SCP)

The short between any output of group 1 will shut down all group1.
The short at group 2 will Shut down both group 1 and group 2.

4.4 RESET AFTER SHUTDOWN

Whenever the power supply latches into shutdown state due to fault condition on its
The power supply will return to normal operation only after the fault has been removed
the power switch has been cycled off/on with **A MINIMUM OFF TIME OF 20mS.**

5. POWER GOOD SIGNAL:

Signal Type: open collector +5DC, TTL compatible.
Logic Level: <0.4V while sinking 4 mA.
Logic Level High: between 2.4VDC and +5V output while sourcing 200 uA.

6. EFFICIENCY:

6.1 80PLUS **Specification:**

>= 80% at normal input voltage(AC 115V 60Hz or AC 230V 50Hz)
when 20%,50%,100% loading

6.2 *ENERGY STAR MODE*

Over 50% at 30W max power consumption with 15W load or more delivered to DC power output.

6.3 *STANDBY MODE*

During measurement of the **"STANDBY MODE"** condition, the main converter is off (PS_ON=High). +5Vsb converter is working and standby input power is measured.

true RMS input power (standby) +5Vsb < 90mA; input voltage: 230VAC 50HZ	< 0.9W

Load Condition	**5Vsb Efficiency**
90mA	**>=50%**
250mA	**>=60%**
>=1A	**>=70%**

7. COOLING OF PSU

A DC FAN was equipped to cooling the power supply and system load , the FAN will draw in air from system into PSU directly, and exhaust air through vent hole in AC receptacle side.

Fan parameters

Rated voltage	12VDC
Dimensions	40*40*20 (mm)
Air flow	9.5 CFM min.
Noise	<45.5 dBA

8. ACTIVE POWER FACTOR CORRECTION (PFC):

8.1 Harmonic current meets IEC1000-3-2 / EN61000-3-2 standards.

8.2 PFC >0.95 at full load.
=0.99 at AC 110v 60Hz(typical)
=0.98 at AC 220v 50Hz(typical)

9. ENVIRONMENT

9.1 OPERATING

Temperature: 0 to 40 °C

Relative Humidity: 20% to 85%

9.2 SHIPPING / STORAGE

Temperature: -40 to 85 Deg C
Relative Humidity: 10% to 95%

10 MTBF

Over 100,000 hours at 100% Load and 25 °C ambient conditions and 115V~ or 230V~ input excluding the DC Fan.

11 EMC

Comply to(CE) EN55022: 2006 CLASS B
EN55024:1998/A1: 2001/A2: 2003 ;
EN 61000-3-3:1995/A1:2001/A2:2005
EN 61000-3-2:2006 CLASS D
(FCC) FCC Part 15 & Part 2 (CISPR 22 CLASS B)
(C-TICK) AS/NZS CISPR 22:2006 CLASS B

12 SAFETY:

Conform to (CUL) UL 60950-1 2nd Edition & CSA C22.2 NO. 60950-1-072nd Edition
(CB) IEC 60950-1:2005
(TUV) EN60950-1/A11:2009

13 MECHANICAL DRAWING:

Dimension : L150*W81.5*H40.5 mm