



全漢企業股份有限公司  
SPI Electronic Co. Ltd.

## 承認書

## APPROVAL SHEET

日期: 2008-01-09  
DATE: 2008-01-09

品名 Description	205W OPEN FRAME		
料號 Part No	90C2050600		
規格 Specification	FSP205-4E03		
內容 Content	規格書、外觀圖		
客戶名稱 Guest			
備註 Remark	205W For LCD TV		
客戶承認章 Client Approved	核准 Approval By	校對 Check By	主辦 Prepared By

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# SPECIFICATION

205W LCD-TV power supply (for 26"-32")

FSP205-4E03

90C2050600

Jul. 08 '07

P.E	R/D	APPROVED	REV.
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表單編號：

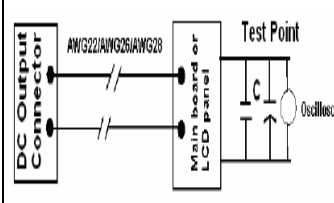


## Electrical Requirements

### 1. Input Characteristics:

ITEM	CONDITION	SPECIFICATION
1.1 Normal Rated Input Voltage		100Vac to 240Vac
1.2 Input Voltage Range		90Vac to 264Vac
1.3 Input Frequency Range		47Hz to 63Hz
1.4 Power Factor	DC output with nominal loading at 240Vac	≥ 0.90
1.5 Input Current	100Vac to 240Vac / maximum load	3Amax
1.6 Inrush Current	100Vac / nominal load / 25°C 240Vac / nominal load / 25°C	50Amax 100Amax
1.7 Standby mode Load Power Consumption (Power Saving)	Input ac Voltage at 240V and the loading of +5Vsb is 0.04A, When ON/OFF is low or open.	≤1.0W
1.8 Efficiency	100Vac / Nominal load 240Vac / Nominal load	≥ 80% ≥ 84%
1.9 Remote ON/OFF control	Low or open (<0.8V) High (>2.5V)	Standby mode On mode

## 2. Output Characteristics:

ITEM			CONDITION				SPECIFICATION
<b>2.1 Output Rated :( Standby mode)</b>							ON/OFF: Low or open
NO	Output	Output Voltage	Min.	Nom.	MAX.	Peak	Ripple & noise
1	5Vsb	4.75V – 5.25V	0.04A	0.5A	1A	>1A(inrush)	70mV
<b>2.2 Output Rated :(On mode)</b>							ON/OFF: High
NO	Output	Output Voltage	Min.	Nom.	MAX.	Peak	Ripple & noise
1	5Vsb	4.75V – 5.25V	0.04A	0.5A	1A	>1A(inrush)	100mV
2	5V	4.75V – 5.25V	0.1A	4A	5A	>6A(inrush)	100mV
3	12V_audio	10.8V ~ 13.2V	0.1A	1A	1.5A	>3A(inrush)	200mV
4	24V_Inverter	22.8V ~ 25.2V	0.1A	5.5A	6A	>7A(inrush)	400mV
<b>Note: Output Voltage Ripple and Noise</b>			<p>The ripple &amp; noise of each PSU DC output voltage is defined and also should be measured at the point-of-load on the LCD TV main boards, instead on the PSU. The test setup according to the LCD TV application is illustrated in Figure 2 Ripple &amp; noise test setup.</p> <p>The connection wires between the PSU and the LCD-TV main boards are AWG24 with a maximum length of 300mm.</p> <p>The capacitors used are aluminum low ESR.  <b>5Vsb:470uf//100nF;</b>  <b>5V:470uf*3//500nF;</b>  <b>12V_audio:470uF*3//300nF;</b>  <b>24V_inverter: 470uf//100nF.</b></p> <p>Paralleled between the test point of DC loading side ,  Measured Band-Width=20M Hz</p>				 <p>Figure 2 Ripple &amp; noise test setup</p>
<b>2.6 Dynamic Load Change</b>			I1=3A,I2=6A,Tset-max=10msec, S/R≥50mA/usec I1=3A,I2=6A,Tset-max=0.1msec, S/R≥50mA/usec				24V± 1.2V
			I1=1.5A,I2=3A,Tset-max=10msec, S/R≥50mA/usec I1=1.5A,I2=3A,Tset-max=0.1msec, S/R≥50mA/usec				12V± 1.2V
			I1=2A,I2=4A,Tset-max=10msec, S/R≥50mA/usec I1=2A,I2=4A,Tset-max=0.1msec, S/R≥50mA/usec				5V ± 0.25V
<b>2.7 Rise Time:</b>			At full load, DC output voltage rise from 10% to 90% .				5Vsb ≤ 20mS 5V ≤ 20mS 12V_audio ≤ 20mS 24V_inverter ≤ 100mS
<b>2.8 start-up Time</b>			Applied the AC input voltage is 100Vac and output load is nominal load, output voltage shall remain regulation.				≤ 2000mS
<b>2.9 Overshoot</b>			Turn on (all of dc output current from min. to max.) Turn off (all of dc output current from min. to max.)				10%



# Electrical Specification

3. Protection Characteristics: ITEM	CONDITION	SPECIFICATION
3.1 Short Circuit Protection (SCP):	+24V_inverter +12V_audio +5V +5Vsb	Auto-recovery or latch off
3.2 Over-Voltage Protection (OVP):	+24V_inverter ≤38.4V +12V_audio ≤19.2V +5V ≤9V +5Vsb ≤9V	latch mode
3.3 Over Circuit Protection(OCP):	Test condition: +24V_inverter ≥7A +12V_audio ≥4A +5V ≥5A +5Vsb ≥5A	Auto-recovery or latch off



# Electrical Specification

## 4. Environmental Characteristics:

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to EN61000-4-4	Impulse: $\pm 1\text{KV}$ applied to AC line , pulse Duration 50nS period 5 min	Normal operation shall be Continued.
4.2 Lightning Surge: Refer to EN61000-4-5	$\pm 2\text{KV}$ applied between L and FG, N and FG , L,N and FG ,pulse rise time 1.2us and duty time 50uS $\pm 1\text{KV}$ applied between L and N , pulse rise time 1.2us and duty time 50uS	Normal operation shall be Continued
4.3 Electron Static Discharge: (Refer to IEC1000-4-2 Energy Storage Capacitor 150pF;Discharge Resistor 330ohm)	Air Discharge: $\pm 8\text{KV}$ min.  Contact Discharge: $\pm 6\text{KV}$ min. (Note : combine with customer's system)	Normal operation shall be Continued
4.4 Cooling	Natural air cooling	
4.5 EMI:  EMI Conducted Emission  EMI Radiated Emission	CISPR22: Pub22. CLASS B (230Vac/50Hz) FCC CLASS B (120Vac/60Hz)	Test with system.
4.6 Safety conforming:	CE,TUV EN60065 IEC EN60065 UL 60065	
4.7 Leakage Current:	240Vac / 50Hz 100Vac / 60Hz	$\leq 0.75\text{mA}$ $\leq 0.375\text{mA}$
4.8 Insulation Resistance:	Between antenna terminal and AC line	$\geq 50\text{M}\Omega$
4.9 Dielectric Strength: (Hi-Pot)	3000Vac, 10mA, 1 minute sec between Primary to Secondary circuit and Chassis	
4.10 Temperature:	Operating (Nominal load) Storage	0 to 40°C -20 to +85°C
4.11 Humidity	Operating Storage	20% ~ 90% 5% ~ 95%

## 5. Mechanical Characteristics:

ITEM	CONDITION	SPECIFICATION
5.1 Dimension (Length x Width x Height)		210x110x29 mm
5.2 Input AC connector		A3963WV2-3P-D 2PIN

### 5.3 Output DC connector

#### CNS1 (A2501WV2-10P or EQU)

- pin 1: ON/OFF
- pin 2: GND\_MAIN
- pin 3: GND\_MAIN
- pin 4: 5V
- pin 5: 5V
- pin 6: 5Vsb
- pin 7: GND\_MAIN
- pin 8: GND\_MAIN
- pin 9: 12V\_audio
- pin 10: 12V\_audio

#### CNS3 (A2501WV2-6P or EQU)

- pin 1: GND\_24V
- pin 2: GND\_24V
- pin 3: GND\_24V
- pin 4: 24V\_inverter
- pin 5: 24V\_inverter
- pin 6: 24V\_inverter

#### CNS2 (A2001WV2-8P or EQU)

- pin 1: 12V\_audio
- pin 2: 12V\_audio
- pin 3: GND\_MAIN
- pin 4: GND\_MAIN
- pin 5: GND\_24V
- pin 6: GND\_24V
- pin 7: 24V\_inverter
- pin 8: 24V\_inverter



UNIT:mm

版本	修改内容
2	散热片更改由型材改为板材

