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SPECIFICATION

320W AC power supply

FSP320-6F01

Apr.014 '05

P.E	R/D	APPROVED	REV.
Larry Chang	Jaron Lin Paul Chu	LJ Wei	001

表單編號：7000P-0105



Electrical Specification

History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
<u>000</u>	SPEC. ISSUE	Jan.25 '05	Gigi Yu	Sum Chen	Jaron Lin Paul Chu	LJ. Wei
<u>001</u>	SPEC. REVISE	Apr.14'05	Gigi Yu	Sum Chen	Jaron Lin Paul Chu	LJ. Wei



2. Output Characteristics:

Measured the output voltage at the PCB

ITEM		CONDITION				SPECIFICATION				
2.1 Output Rated Voltage :										
a. PWR-ON signal is L										
No.	Symbol	Output Current	Output Ripple	Output Noise	Min.(V)	Typ. (V)	Max.(V)	Remark		
1	5Vsb	0.01A ~ 1.3A	50mV	100mV	4.75	5.0	5.25			
b. PWR-ON signal is H										
No.	Symbol	Output Current	Output Ripple	Output Noise	Min.(V)	Typ. (V)	Max.(V)	Remark		
1	5Vsb	0.01A ~ 1.3A	50mV	100mV	4.75	5.0	5.25			
2	5V	0.4A ~ 1.9A	50mV	100mV	4.75	5.0	5.25			
3	12V	0.04A ~ 3.5A	150mV	300mV	11.4	12.0	12.6	Note 3		
4	+16V	0.04A ~ 1.33A	160mV	320mV	15.2	16.0	16.8	Note 1		
5	-16V	0.04A ~ 1.33A	160mV	320mV	-15.2	-16.0	-16.8	Note 1		
6	24V	0.01A ~ 9A	300mV	600mV	22.8	24.0	25.2			
c. PWR-ON signal is H (surge power)										
1	+16V	2A	360mV	720mV	15.2	16.0	16.8	Note 1 , 2		
2	-16V	2A	360mV	720mV	-15.2	-16.0	-16.8	Note 1 , 2		
<p>Note 1 : +16V / -16V load regulations are the same at any moment.</p> <p>Note 2 : Peak current is defined by 200mS @ 0.1Hz.</p> <p>Note 3 : 12V load regulation is guaranteed less than +/-10% of rated output voltage . (combine with 24V)</p> <p>Note 4 : Output voltage ripple and noise: 0.1uF Ceramic Cap. and 35V/10uF Aluminum Cap. Paralleled between the end of output cable, BW=20M Hz .</p>										
2.2 5Vs Turn-On Delay Time:			Applied the AC input voltage is 100Vac and output load is Full load, output voltage shall remain regulation.				≤ 1Sec.			
2.3 Power ON/OFF signal (PWR-ON : CN704 pin 6)			Power ON/OFF signal is L (<0.7V)				Only 5Vsb output			
			Power ON/OFF signal is H (3.3V)				5Vsb , 5V , 16V , -16V , 12V , 24V output			
2.4 Dynamic Load Limitation:			Max. load to 50% load, min. load to 50% load, S/R=0.5A/us, 100Hz & 1KHz 50% duty.				5Vsb : 5Vsb+/-5% 5V : 5V+/-5% 12V : 12V+/-10% +16V : 16V+/-5% -16V : 16V+/-5% 24V : 24V +/-5%			
2.5 Hold Up Time :			At 100Vac / full load, output voltage shall remain regulation.				12V,24V : ≥2 mS 5Vsb,5V,+16V,-16V : ≥10mS			



2.6 Altitude	The power supply is capable to operate At 10,000 feet above seaclevel.	
2.7 LED Indication	No definition.	

3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 : Over Current Protection	12V	5 ~ 8A
	+16V	4 ~ 7A
	-16V	4 ~ 7A
	24V	12.5 ~ 15.5A
	When an internal fault occurs, or an external fault is applied to the power supply, such that overload is applied to the output, the power supply shall shut down and enter latch mode.	Shutdown and no damage (latch mode)
3.2 Over Power Protection	5Vsb	< 8A
	5V	< 8A
	When an internal fault occurs, or an external fault is applied to the adapter, such that an overload or short circuit is applied to the output, the adapter shall shut down. It will enter into normal condition if the fault condition is removed.	Shutdown and no damage (Auto recovery)
3.3 Short Circuit Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that short circuit is applied to the output, the power supply shall shut down and enter auto recovery or latch mode.	Shutdown and no damage 1. 5Vsb , 5V auto recovery 2. 12V,16V,-16V,24V latch mode



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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	$\pm 1\text{kV}$ applied differential mode, pulse rise time 1.2us and duty time 50uS $\pm 2\text{kV}$ applied common mode, pulse rise time 1.2us and duty time 50uS	Normal operation shall be continued.
4.3 Cooling	Natural air cooling	
4.4 EMI: AC power supply comply with the following national standards: EMI Conducted Emission EMI Radiated Emission	The AC power supply internal filter to meet, combine with customer's system.	FCC CLASS B CISPR 22 CLASS B
4.5 Safety conforming:	Regulated by customer	
4.6 Leakage Current	240Vac / 50Hz 100Vac / 60Hz	$\leq 0.5\text{mA}$ $\leq 0.25\text{mA}$
4.7 Harmonics	230Vac / 50Hz (Note: Combine with customer's system)	EN61000-3-2
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 3KV, test time 1 minute, and cut off current shall be less than 10mA. AC 3KV, test time 1 sec. for mass production. If FG connected with secondary ground , between AC input and FG applied AC 1.5KV, test time 1 minute, and cut off current shall be less than 10mA.	
4.9 Temperature:	Operating Storage	0 to 50°C -20 to +60°C
4.10 Humidity:	Operating Storage	20% ~ 80% 5% ~ 95%
4.11 MTBF	Maximum-output load & normal AC input voltage @ 25°C (compliant with MIL-217F)	> 100000 hours



Electrical Specification

5. Mechanical Characteristics:															
ITEM		CONDITION	SPECIFICATION												
5.1 Dimension (Length x Width x Height)			260x165x45.1 mm												
5.2 Input AC socket Type			JWT A3963WV2-3P or equivalent												
5.3 Output DC connector															
CN701															
Pin assignment															
Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Signal Name	24V					GND					LCD-BR	LCD-ON	E_PWM	---	
CN702 , CN705 , CN706															
Pin assignment															
Pin No.	1	2	3	4	5	6	7	8	9	10					
Signal Name	24V					GND									
CN703															
Pin assignment															
Pin No.	1		2		3		4		5						
Signal Name	-16V		GND						+16V						
CN704															
Pin No.	2	4	6	8	10	12	14	16	18	20	22				
Signal Name	LCD-ON	---	PWR-ON	GND	5V	5V	5Vsb	GND	12V	GND	GND				
Pin No.	1	3	5	7	9	11	13	15	17	19	21				
Signal Name	LCD-BR	E_PWM	GND	GND	GND	5V	GND	GND	12V	12V	5V				