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SPECIFICATION

ESD06012907

FSP271-4F02

Released Date:2008/5/15-21:39:59

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SPECIFICATION

271W AC power supply

FSP271-4F02

Apr. 13' 07

P.E.	R/D		Approved	Rev.
	M.E.	E.E.		
Larry	Matisse Huang	Jaron Lin	LJ Wei	02

表單編號：7000P-0105

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SPI Electronic Co., Ltd.

Electrical Specification

History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
00	SPEC. ISSUE	Mar. 27'06	Gigi Yu	Matisse Huang	Jaron Lin	LJ. Wei
01	Revise item4.9	Apr. 07'06	Gigi Yu	Matisse Huang	Jaron Lin	LJ. Wei
02	Revise item2.2	Apr. 13'07	JENNIE	Matisse Huang	Jaron Lin	LJ. Wei

MODEL NO. **FSP271-4F02**

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Electrical Specification

Electrical Requirements

1. Input Characteristics: ※Measured the output voltage at the PCB

ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage		100V / 240V
1.2 Input Voltage Range	Continuously	90VAC to 264VAC
1.3 Input Frequency Range	Continuously	47Hz to 63Hz
1.4 Efficiency:	115Vac / full load (warn up after 5 minutes) 230Vac / full load (warm up after 5 minutes)	≥ 84% ≥ 86%
1.5 No Load Power Consumption: (Power saving)	It must be measured in PSON signal is low condition at Vin=230Vac	Pin ≤0.5W
1.6 Input Current	115Vac, 230Vac / full load	≤ 3.4A
1.7 Control signals		
a. Power control signal (PSON)	The unit is controlled via a digital input: PSON at the secondary side to control the +5V, +12V and +24V output	
b. Signal Level	The control signals shall be driven by open collector / open drain type circuits (or equivalent). The drive requirements are: 5V Logic: Open Collector using 3k ohm pull-up resistor to +5 V	

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Electrical Specification

2. Output Characteristics:

※Measured the output voltage at the PCB

ITEM	CONDITION	SPECIFICATION

2.1 Output Rated Voltage :

a. PSON signal is L (standby mode)

No.	Symbol	Output Current			Ripple & Noise	Output voltage			Notes
		Min.(A)	Typ. (A)	Max.(A)		Min.(V)	Typ. (V)	Max.(V)	
1	5Vsb	0	<0.1	1.0	100mV	4.75	5.0	5.25	1,2,3

b. PSON signal is H (ON mode)

No.	Symbol	Output Current			Ripple & Noise	Output voltage			Notes
		Min.(A)	Max. (A)	Peak (A)		Min.(V)	Typ. (V)	Max.(V)	
1	+5Vsb	0.15	1.5		100mV	4.75	5.0	5.25	1,2,3
1	+5V	0.35	3.5		100mV	4.75	5.0	5.25	1,2,3
2	+18V	0.3	3.0	4.0	180mV	17.0	18	19.0	1,2,3,4
3	+24V	0.8	8.0	10.5	300mV	23.0	24	25.0	1,2,3,4

Notes:
1. The tolerances of output include line and load regulations measured in static state.
2. The ripple and noise is a peak-to-peak value measured in a bandwidth from 0 to 20 MHz.
   Tested by dc loading side parallel with a 47 µF Electrolytic Capacitor and a 0.1 µF Ceramic Capacitor.
3. The maximum current is the average current over any period.
4. The peak current is a transient behavior, allowed for a period of maximum 100ms.

2.2 Output Transient Response :

Load Change Condition:	Slew Rate	Voltage Tolerance Limit
Min. to 50% load and 50% to Max. load	2A/uS	±10% of Vo
Min. load to Max. load	2A/uS	±10%Vo

Note: Transient response measurements shall be made with a load changing repetition rate of 50Hz to 10kHz

2.3 PSON signal:	PSON signal is L (<0.6V)	Only +5.0Vsb output
	PSON signal is H (2.2V~5.0V)	+5.0Vsb, +5V,+18V,+24V output
2.4 +5Vs Turn-On Delay Time:	Applied the AC input voltage is 100Vac and output load is Full load, output voltage shall remain regulation.	≤ 2Sec.

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3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 Over Current Protection:	When an internal fault occurs, or an external fault is applied to the power supply, such that an overload or short circuit is applied to the output, the power supply shall shut down and enter auto-recovery or latch mode.	Shutdown and no damage
3.2 Over-Voltage Protection	The output voltage will enter into shut down that means no output on all output, while over voltage happened at output terminal that caused by internal fault. That will be return to normal state by AC reset.	Shutdown and no damage
3.3 Over Temperature Protection:	The AC power supply will enter into shut down while the abnormal thermal rise occurs. It will enter into normal condition if the fault condition is removed	No broken, no smoke.

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4. Environmental Characteristics:

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to IEC61000-4-4	Impulse: ±1KV applied to AC line, pulse duration 50nS period 5 min.	Normal operation shall be continued.
4.2 Lightning Surge: Refer to IEC61000-4-5	±2KV applied between L, N and PE, pulse rise time 1.2us and duty time 50uS	Normal operation shall be continued.
4.3 Electron Static Discharge: Refer to IEC61000-4-2	Air Discharge: ± 8KV. Contact Discharge: ±6KV. (Note: combine with customer's system.)	Normal operation shall be continued.
4.4 Cooling	Natural air cooling	
4.5 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
4.6 Safety conforming:	Regulated by customer	IEC60065
4.7 Leakage Current	240Vac / 50Hz 100Vac / 60Hz	≤0.5mA
4.8 Harmonics	230Vac / 50Hz (Note: Combine with customer's system)	IEC61000-3-2
4.9 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 1500Vac or 2121Vdc / test time 1 minute / cut off current shall be less than 10mA AC 1.5KV / test time 1 sec. for mass production	
4.10Temperature:	Operating Storage	0 to 40℃ -20 to +85℃
4.15 MTBF	110Vac/230Vac Ambient Temperature : 25±2C	≧50,000 hours

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5. Mechanical Characteristics:

ITEM	CONDITION	SPECIFICATION
5.1 Dimension (Length x Width x Height)	With Housing	267x141x45 mm
5.2 AC Inlet Type		C14

5.3 DC Output connector

CNS1

Pin assignment

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Function	**+5Vs**	**PS-ON**	**+5V**						**GND**			**BL-ON**	**GND**	**BRI**	**GND**

CNS2

Pin assignment

Pin No.	1	2	3	4	5	6	7	8	9	10	11
Function	**+18V**				**GND**						

CNS3, CNS4

Pin assignment

Pin No.	1	2	3	4	5	6	7	8	9	10	11	12
Function	**+24V**					**GND**					**BRI**	**BL-ON**