

電氣規格書



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全漢企業股份有限公司
FSP TECHNOLOGY INC.

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SPECIFICATION

FSP040-RHAN3

P.E	R/D	APPROVED	REV.
HuYF	FangZC	ShiHX	00



Electrical Specification

History

[illegible]

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Electrical Specification

Electrical Requirements

1. Input Characteristics:

ITEM	CONDITION	SPECIFICATION
1.1 Rated Input Voltage:		100Vac~240Vac
1.2 Input Voltage Range:		90Vac to 264Vac
1.3 Input Frequency Range:		50Hz to 60Hz ($\pm 3\text{Hz}$)
1.4 Input Current:	100Vac, 240Vac at 3.33A load	$\leq 1.5\text{A}$
1.5 Power Saving:	115Vac/60HZ,230Vac / 50HZ No load	$\leq 0.075\text{W}$
1.6 Inrush Current:	115Vac, 230Vac at 3.33A load	Shall be less than the rating of adapter critical component (including rectifiers, fuse surge and current limiting device)
1.7 Meet CoC V5 (Tier 2)*:	(1)Warm Up The UUT shall be measured after operated At100% of rated current output for at least 30minutes. (2)Tested sequence Efficiency Tests shall be conducted in sequence: ① 100 maximun load ② 75% maximun load ③ 50% maximun load ④ 25% maximun load ⑤ 10% maximun load	Average efficiency of 25%,50%,75% and100% load shall be more than 88.60% test at 115V/230Vac. Minimum Efficiency in Active Mode at 10 % load shall be more than 78.97% at 115V/230Vac..

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Electrical Specification

2. Output Characteristics:

※Measured at the end of DC cable.

ITEM	CONDITION	SPECIFICATION
2.1 Output Rated Voltage:		12V
2.2 Output Current:	at constant voltage mode	0A to 3.33A
2.3 Output Voltage Setting:	at the output end of DC cable	12V \pm 5%
2.4 Output Voltage Ripple and Noise: (0.1uF Ceramic Cap. and 35V 47uF Aluminum Cap. Paralleled between the end of output cable, 20MHz BW)	100Vac, 240Vac / 0A~3.33A load	\leq 120mVp-p
2.5 Turn-On Delay Time:	At 100Vac / 3.33A load, output voltage shall remain regulation	\leq 3Sec
2.6 Hold Up Time:	At 115Vac or 230Vac / 3.33A load, output voltage shall remain regulation	\geq 5ms
2.7 Rise Time:	At 100Vac / 3.33A load, DC output rise time from 10% to 90% of Vo	\leq 100ms
2.8 Dynamic Load Change:	(1) Output load step is : 【1】 0 % ~50 % 【2】 50 % ~100 % (2) S/R=1A/us (3) Frequency is 100Hz and 1KHz	12V \pm 10%
2.9 Overshoot:	115Vac, 230Vac / 0A and 3.33A load	12V \pm 10%

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Electrical Specification

3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 Short Circuit 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 mode.	Shutdown and auto-recovery
3.2 Over Voltage Protection:	The adapter will enter into shut down that means no output while over voltage happened at output terminal that caused by internal fault, the output trip voltage shall not exceed 29 volts. That will be return to normal state by AC reset.	Shutdown and no damage
3.3 Over Power Protection:	The OCP shall limit the output current to 5.5 amperes by monotonically shutting down all voltage rails in the event of an over current condition. Auto recovery is required. The power supply shall be able to survive an OCP condition for an indefinite period of time without damage.	Auto recovery
3.4 Over Temperature Protection:	The power supply will enter into shut down while the abnormal thermal rise occurs. That will be return to normal state by AC reset.	No fire, no smoke

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4. Environmental Characteristics:

ITEM	CONDITION	SPECIFICATION
4.1 Electric Fast Transients: Refer to IEC61000-4-4	Impulse: $\pm 1\text{kV}$ applied to L,N,FG	Normal operation shall be continued
4.2 Lightning Surge: Refer to IEC61000-4-5	$\pm 1\text{kV}$ applied differential mode $\pm 2\text{kV}$ applied common mode	Normal operation shall be continued Normal operation shall be continued
4.3 Electron Static Discharge: (Refer to IEC61000-4-2 Energy Storage Capacitor 150pF; Discharge Resistor 330 Ω)	Air Discharge: $\pm 15\text{KV}$ Contact Discharge: $\pm 8\text{KV}$	Normal operation shall be continued
4.4 Cooling:	Natural air cooling	
4.5 EMI: Adapter comply with the following national standards: EMI Conducted Emission EMI Radiated Emission	1.Full Load 2. The power supply with internal filter can meet.	FCC PART 15J CLASS B CISPR22 EN55022 CLASS B VCCI LEVEL II
4.6 Safety conforming: Energy-related Products 【ErP】 Department of Energy 【DOE】		Regulated by customer Comply with ErP standard Comply with DOE standard
4.7 Leakage Current:	264Vac / 60Hz	$\leq 0.25\text{mA}$
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied AC 3.0KV / test time 1 minute / cut off current shall be less than 10mA	
4.9 Humidity:	Operating Storage	20% ~ 80% 10% ~ 90%
4.10 MTBF	(1) Full load (2) 230 Vac (3) 25 °C	100,000Hrs Min. SR-332 METHOD I CASE 3

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4.11 System Capacitive Load	The system load capacitance is 2200uF. And shall be capable of start up with a 2200uF load.	
4.12 Altitude	The Power Supply operates up to an altitude of 5000m above sea level.	

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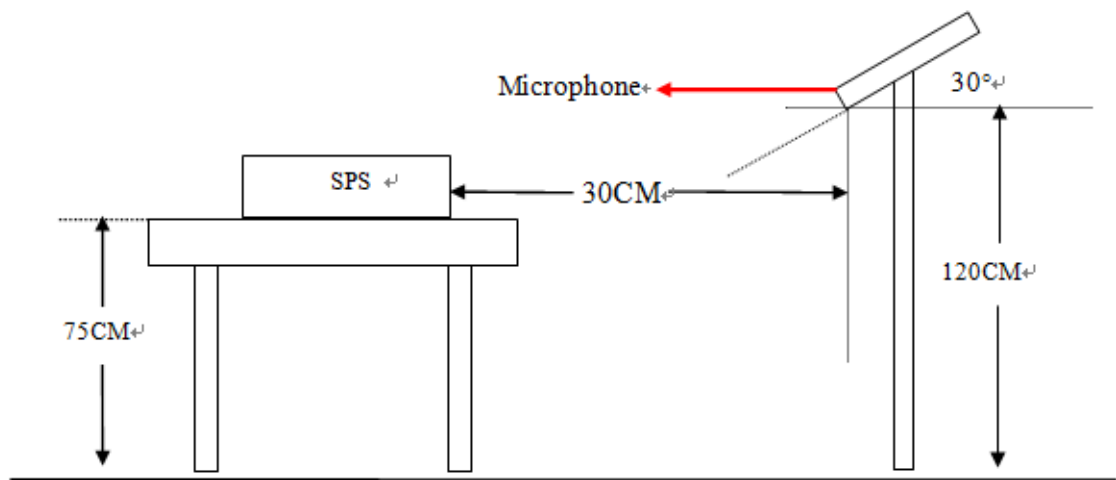
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5. Mechanical Characteristics:

ITEM	CONDITION	SPECIFICATION
5.1 Dimension (Length x Width x Height):		110.0X 50.0 X 32.0 mm
5.2 Input AC socket Type:		IEC 320-C14 Type
5.3 Vibration Test:	(1) Non-operating, 0.01g ² /Hz at 5Hz slopping to 0.02g ² /Hz at 20Hz, And maintain 0.02g ² /Hz from 20Hz ~ 500Hz (2) PSD=3.13grms, 15 minutes/axis (3) Vibration duration:15minutes (4) Vibration waveform:Random (5) Force Direction X,Y,Z	Normal operation shall be continued.
5.4 Acoustic Noise:	(1) Position the microphone 30 centimeters above the x-y center of the AC adapter (2) Input voltage:115Vac/60Hz 230Vac/50Hz	The EUT < 30dB

Note : Acoustic Noise



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