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SPECIFICATION



Released Date:2010/5/20-12:36:30



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SPECIFICATION

150W AC power supply

FSP150-1H01

P.E	R/D	APPROVED	REV.
	Liuz	Tonyhsieh	04

表單編號：



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Electrical Specification

History

REV.	Description	Date	Drawn	Mechanical	Electrical	Approved
<u>01</u>	Specification issue	Sep.04.'08	Xiongc	Huyf	Baigc	Tonyhsieh
<u>02</u>	修改 1.9 项 Power Consumption 由 $\leq 0.5W$ 改为 $\leq 0.75W$ 2.4 项 Output Voltage Ripple and Noise 由 $\leq 120mVp-p(ripple)$ 改为 $\leq 150mVp-p(ripple)$ 4.6 项 Leakage Current 由 $\leq 750uA$ 改为 $\leq 3.5mA$ 5.1 项 Length x Width x Height 由 76.2*127*34.6mm 改为 76.2*127*31.6mm 删除 5.5 项	Jan.14.'09	Xiongc	Huyf	Baigc	Tonyhsieh
<u>03</u>	修改 5.6 项 更新 outline	Mar.19.'09	Xiongc	Huyf	Baigc	Tonyhsieh
<u>04</u>	Add spec of Output Voltage Ripple and Noise for burst mode operation at light load;	May.18'10	Xiongc	Huyf	Liuz	Tonyhsieh

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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		47Hz to 63Hz (± 1 Hz)
1.4 Input Current	100Vac/240Vac@Full Load	≤ 3.0 A
1.5 Input Current Harmonic		IEC61000-3-2 Class A and D
1.6 Efficiency: (Warm up 10minutes later)	115Vac@Full Load 230Vac@ Full Load	$\geq 85\%$ $\geq 88\%$
1.7 Inrush Current	115Vac@Full Load 230Vac@Full Load	50A MAX 100A MAX
1.8 Power Factor Circuitry	AC input 100Vac~240Vac and full load.	≥ 0.9
1.9 Power Consumption	115Vac/230Vac@No Load	$\cong 0.75$ W

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2. Output Characteristics:

2.1 Output Rated Voltage		12V
2.2 Output Current	at constant voltage mode	0A to 12.5A
2.3 Output Voltage Setting	at the output end of DC cable	12V ± 5%
2.4 Output Voltage Ripple and Noise: 1) 0.1uF Ceramic Cap. and 47uF Aluminum Cap. Paralleled between the end of output cable. 2) Measurements shall be made with an oscilloscope with 20MHz bandwidth.	115Vac/230Vac@Full Load Burst mode operation @ light load	≤150mVp-p(ripple); ≤300mVp-p(ripple);
2.5 Turn-On Delay Time:	Time required for initial output voltage stabilization.	≤ 3Sec.
2.6 Hold Up Time:	At 115Vac @Full Load At 230Vac @Full Load output voltage shall remain regulation	≥ 16mS ≥ 18ms
2.7 Rise Time:	At 115Vac / Full Load, DC output rise time from 5% to 95% of Vo	≤ 40mS
2.8 Dynamic Load Change	(1) Output load step is: a 25%-50% b 50%-75% c 75%-100% (2) S/R=0.5A/uS (3) Frequency is 100Hz and 1KHz	12V ± 5%
2.9 Overshoot	115Vac/230Vac@0A and 12.5A Load	12V ± 5%

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3. Protection Characteristics:

ITEM	CONDITION	SPECIFICATION
3.1 Over Voltage Protection	The power supply 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 will be less than 18V. That might be return to normal state by AC reset	Shutdown and no damage..
3.2 Over Current Protection:	When an internal fault occurs, or an external fault is applied to the power, such that an overload or short circuit is applied to the output, the power supply shall shut down. It will enter into normal condition if the fault condition is removed.	Auto recovery .and OCP point will be less than 160% of Rated.
3.3 Over Temperature Protection:	No deformation and no discoloration on case and will be shut down. That will be return to normal state by AC reset.	No broken, no smoke.

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4. Environmental Characteristics:

4.1 Electric Fast Transients: Refer to IEC61000-4-4 level 3	Impulse: $\pm 1\text{kV}$ applied to L, N and chassis, pulse duration 50nS period 5 minutes. Max. load. Impulse: $\pm 2\text{kV}$ applied to L, N and chassis, pulse duration 50nS period 5 minutes. Max. load.	Normal operation shall be continued
4.2 Lightning Surge: Refer to IEC61000-4-5 level 3	$\pm 1\text{kV}$ applied between line and line, pulse rise time 1.2us and duty time 50uS, 10 times test each one. $\pm 2\text{kV}$ applied between line and power ground (signal ground), pulse rise time 1.2us and duty time 50uS, 10 times test each one.	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: $\pm 15\text{KV}$ min. Contact Discharge: $\pm 8\text{KV}$ min. (Note: Combine with customer's system.)	Normal operation shall be continued
4.4 EMI: The power supply comply with the following national standards: EMI Conducted Emission EMI Radiated Emission	Max. Load. The power supply internal filter to meet, Combine with customer's system.	FCC CLASS B EN55022 CLASS B
4.5 Safety conforming:		Meet : UL60950 ,EN60950,IEC60950
4.6 Leakage Current	115Vac@60Hz/230Vac @50Hz	$\leq 3.5\text{mA}$
4.7 Insulation Resistance:	Between AC input and secondary applied 500Vdc for 1 minute.	$\geq 30\text{M}\Omega$
4.8 Dielectric Strength: (Hi-Pot)	Between AC input and secondary applied 1500Vac/ test time 1 minute (secondary and FG are connected), and cut off current shall be less than 10 m A. 1800Vac/ test time 3 sec, For mass production	
4.9 Cooling	Natural air cooling	

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4.10 Operation Temperature:	0 to 50°C no derating .	At 100% load: 0 to 50°C.
4.11 Storage Temperature		-20 to +80°C
4.12 Humidity:	Operating Storage	20% ~ 80% 5% ~ 95%
4.13 MTBF	By count method	> 100000 hours

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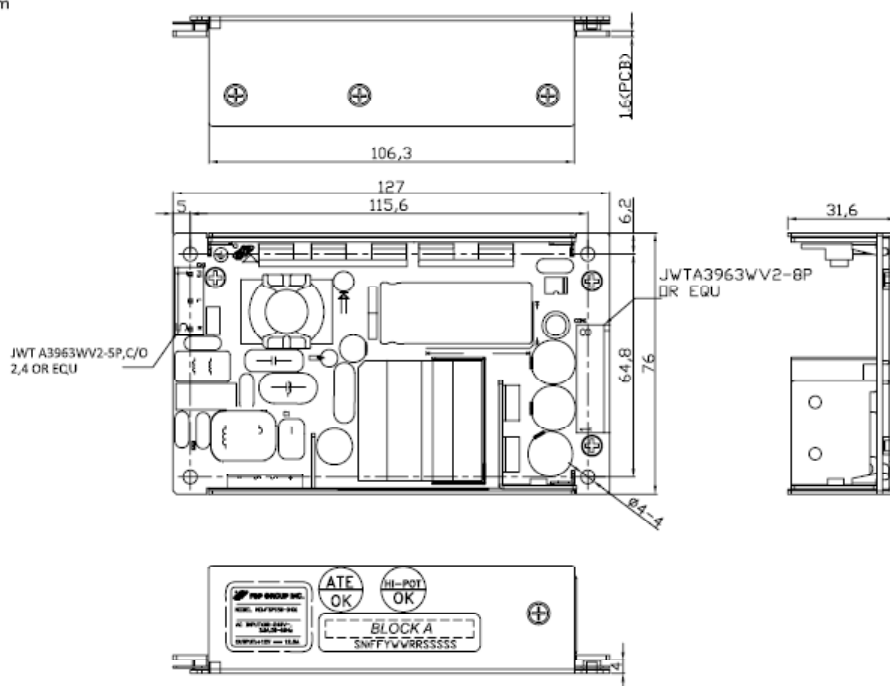
Electrical Specification

5. Mechanical Characteristics:

5.1 Dimension (Length x Width x Height)		3*5*1.25 " (76.2*127*31.6mm)
5.2 Power weight		500g (typical)
5.3 Input AC Connector	JWT A3963WV2-5P or equivalent	3.96mm.3PIN,5N2,4.
5.4 Output DC Connector	JWT A3963WV2-8P or equivalent	3.96mm.8PIN,

5.6 Outline

SCALE: 1:1
UNIT:mm



版本	修改內容	日期
02	修改MYLAR尺寸	08-08-08
03	增加HIPOT_ATE 标签	08-10-13
04	修改外形高度 (由33.6mm改為31.6mm)	08-11-26
05	删除標註LABEL尺寸	09-03-04

Pin assignment of CN1:

Pin No.	Signal Name	Feature
1	FG	FG
2,4	NC	NC
3	L	L
5	N	N

Pin assignment of COM1:

Pin No.	Signal Name	Feature
1,2,3,4	+12V	+12V/12.5A
5,6,7,8	GND	GND

Notes:

P/N.: 90C1500800

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