

承认书

RoHS

SPECIFICATION FOR APPROVAL

Switching power Supply/开关电源

客户:

CUSTOMER:

产品描述:

DESCRIPTION: Input:100-240V ~ 50-60Hz Output: **52V DC 1.15A**

机种型号:

OUR MODEL NO: CS-5201150 CE/FCC 认证

样品编号:

日期:

SAMPLE NO:

DATE: **2020-4-7**

客户编码:

产品颜色/SAMPLE COLOR:

Customer part number:

Black White

APPROVAL SIGNATURE/客户确认

核准/APPROVED BY

审核/CHECKED BY

检测/TESTED BY

Manufacturer/制造商

核准/APPROVED BY

审核/CHECKED BY

制定/MAKER

晏宝利

JOHN

刘中奇

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页码: 1/11

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版本目录/Rev. List			
版本/Rev.	日期/Date	描述/ Description	制订/Design

目录/Table of contents

1、描述/ DESCRIPTION..... 3

2、输入特性/INPUT CHARACTERISTICS..... 3

3、输出特性/OUTPUT CHARACTERISTICS.....4

4、保护功能/PROTECTION FUNCTION..... 5

5、环境要求/ENVIRONMENTAL REQUIREMET.....5~6

6、安全要求/SAFETY REQUIREMENT.....6~7

7. 可靠性/Reliability..... 7

8、结构参数/MECHANICAL REQUIREMENT.....8

9、包装/PACKING.....9

10、外观图/OUTLOOK DRAWING.....10

11、样品测试报告/ SAMPLES ELECTRICAL TEST REPORT..... 11

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1、描述/ DESCRIPTION:

该开关式电源的连续输出功率为 60W.

The S.M.P.S should be capable of a total continuous DC power output of 60 W atts.

2、输入特性/INPUT CHARACTERISTICS:

2.1 输入电压/Input Voltage:

额定电压/Rated Voltage: 100-240 Vac

调整范围/Variation Range: 90-264 Vac

2.2 输入频率/Input Frequency:

额定频率/ Rated Frequency: 50-60 Hz.

调整频率/Variation Frequency: 47-63 Hz

2.3 输入电流/Input Current:

当输入交流电压为额定值的下限电压负载满载时,最大输入交流电流 2 A.

2 Amps max At any input voltage and rated, DC output rated load.

2.4 浪涌电流/Inrush Current:

冲击电流峰值在额定电压输入,冷启动(25°C)时,不大于 30A;且在任何负载和输入条件下,不导致永久性损坏或危险.

Impact current peak in the rated voltage input, cold start (25 °C), not more than 30 A; And in any load and input conditions, don't cause permanent damage or dangerous.

2.5 AC 漏电流/Ac Leakage Current:

当输入电压 240Vac 时,最大漏电流为 0.25mA./ 0.25mA Max.At240Vac input.

2.6 Stand-by power consumption \leq 0.3 Watts.

待机功耗 \leq 0.3 W.

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3、输出特性/OUTPUT CHARACTERISTICS:

3.1 输出功率/Power output

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	输出功率 Output power
52Vdc	1mA	1.15A	60W

3.2 输出特性/Output Characteristics

电压 Voltage	最小负载 Min. Load	额定负载 Rated. Load	电压范围 Voltage Range	
52Vdc	1mA	1.15A	空载电压 (V)	负载电压 (V)
			50-54	50-54

3.3 纹波和噪音 Ripple and Noise:

测试条件:在输入 115/230Vac 25°C和输出最小及最大负载时,使用示波器带宽为 20MHz 连接到适配器的输出端,同时输出端并联一个 47uF 的电解电容和一个 0.1uF 的瓷片电容.

At 115/230Vac 25°C input and output Min and Max.Load,the ripple and noise are as follows when measure with Max.Bandwidth of 20MHz and Parallel 47uF/0.1uF,crossed connected at testing point.

电压 Voltage	最大纹波/最大噪音 Ripple and Noise(Max.)
+52Vdc	150 mV p-p

3.4 启动延迟时间/Turn on delay time:

当输入 100Vac 和输出最大负载时,最大启动时间为 3 S.
3 Second Max.at 100Vac input and output Max.load.

3.5 保持时间/Hold up time:

当输入 115Vac 和输出最大负载时,最小保持时间为 5 mS .
5 mS Min.at 115Vac input and output Max.Load.

3.6 效率/Efficiency:

当 115/230Vac 输入电压时, 1/4, 1/2, 3/4 和满载计算平均效率, 最小 85%, 适配器满足能效 V
85% Min,At 115/230Vac input voltage,1/4, 1/2, 3/4 and full load calculation average efficiency.Adapter meet efficiency lever V

备注:在能效测试时,电源应先满载工作 30 分钟后再测试。

Remark:The efficiency of the Supply shall meet the following requirements (Warm up after 30 minutes test)

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4、保护功能/PROTECTION FUNCTION:

4.1 短路电路保护/Short circuit protection:

该电源供给器在短路解除时能正常工作恢复.

The power supply will be auto recovered when short circuit faults remove.

4.2 过流保护点 : 1.9~3.2A /Over current Protection: 1.9~3.2A

过流故障排除后,电源将自动恢复正常工作.

The power supply will be auto recovered when over current faults remove.

5、环境要求/ENVIRONMENTAL REQUIREMET:

5.1 工作温度/Operating Temperature:

-10°C-50°C,满载,正常工作.

-10°C to 50°C,Full load, Normal operation.

5.2 储藏温度/Storage Temperature:-20°C to 60°C

带外壳/With package

5.3 工作湿度/Relative Humidity:

5%(0°C)~90%(40°C),72 小时,满载,正常工作.

5%(0°C)~90%(40°C)RH,72Hrs,Full load, Normal operating.

5.4 振动/Vibration:

1. 测试标准:国际电工电子委员会

Operating: IEC 721-3-3 3M3

5~9Hz,A=1.5mm

加速度(9~200Hz,Acceleration 5m/S²)

2. 运输/Transportation:

IEC 721-3-2 2M2

5-9Hz,A=3.5mm

9~200Hz,加速度 Acceleration=5m/S²

200~500Hz,加速度 Acceleration=15m/S²

3. 轴向振动/Axes,10 cycles per axis.

在测试过程中不能出现永久性的损坏.

No permanent damage may occur during testing.

在电源开启和关闭后,样机能够恢复到最初条件.

The SAMPLE has to restore to its original situation after power off/on..

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5.5 跌落试验/Dropping Packed:

插墙式跌落高度为 1 米、桌面式跌落高度为 760mm、6 个面各跌一次

1M for wallmount type and 760mm for desktop type as above described , 6 surfaces or one
测试台面是厚 13mm 的夹木板 , 离地面高 19-20mm

The horizontal surface Consists of hardwood at least 13mm thick,mounted on two layers of plywood
each 19mm to 20mm thick,all supported on a concrete or equivalent non-resilient floor.

6、安全要求/SAFETY REQUIREMENT:

6.1 主熔断器/ MAIN FUSE

3.15A 保险丝 Safety Fuse is 3.15A

6.2 安全: 符合标准 Safety:accord standard with _____

电磁兼容标准 EMC-Specifcation :

1. 干扰噪声抑制标准 Noise-suppressed acc :

2. 2.谐波电流的抑制标准 Harmonic current measurement acc : _____

3. 抗静电的承受标准 Immunity to electrostatic discharge(ESD)acc: _____

4. 空气放电 Air discharge: _____ ; 接触放电 Contact discharge: _____

4.抗干扰抑制标准 Immunity to radiated electromagnetic field acc:

测试条件 Test characteristic: 80-1000MHz; 80%AM(1KHz) 检验条件 Test level 3V/m : A ;

5. 抗快速脉冲群标准 Immunity to fast electric transients(burst)acc:// ;

耦合方式 Coupling On power supplylines 测试条件 Test Level : / Assessment criteria 评估标准: B ;

6.浪涌测试标准 Surge capability acc: // ;

浪涌电压 Surge voltage : // Assessment criteria 评估标准: B ;

7. 抗骚扰测试 Injected currents susceptibility acc: // ;

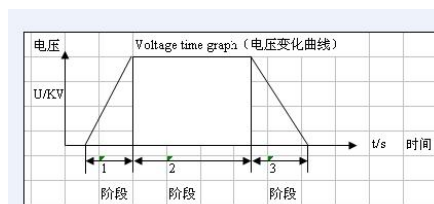
测试条件 Test Level : // Assessment criteria 评估标准: A ;

6.3 高压/DIELECTRIC STRENGTH Hi-Pot:

输入对输出/INPUT to OUTPUT :3000Vac/5mA/60S or 4242Vdc/5mA/60S for type test.

(批量生产时/Batch production : 3300Vac/5mA/3S)

1.Between input and output <输入 (2pin 脚短路) ---输出 (正 , 负极短路)



2.电压输出变化曲线 Voltage time graph

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6.4 绝缘抗阻/Insulation resistance:

输入对输出/INPUT to OUTPUT **100MΩ** min at **500V DC**.

6.5 安规标准/Safety Certification Standards

电源符合以下国际标准/The power supply shall complied the following international regulatory standards

Trademark	Country	Certified Status	Standard
CB	IEC/国际电工委	<input type="checkbox"/>	IEC 60950
FCC	USA/美国	<input checked="" type="checkbox"/>	PART15B
UL/CUL	USA 美国/ Canada 加拿大	<input type="checkbox"/>	UL 60950
TUV	Europe/欧洲	<input type="checkbox"/>	TUV/-EN60950
CE	Europe/欧洲	<input checked="" type="checkbox"/>	EN 60950
NOM	Mexico/墨西哥	<input type="checkbox"/>	UL 60950
SAA	Australia/澳洲	<input type="checkbox"/>	EN 60950
KC	Korea/韩国	<input type="checkbox"/>	K 60950
BS	British/英国	<input type="checkbox"/>	BS 60950
BIS	India/印度	<input type="checkbox"/>	IS 13252
BSMI	Taiwan/台湾	<input type="checkbox"/>	CNS15663,14336-1,13438

7. 可靠性/Reliability:

7.1 平均故障间隔时间/MTBF (Mean-Time-Between-Failures) Calculation

在 **20 度** 温度及额定负载条件下, 电源的使用寿命达 **60000** 小时以上/The calculated MTBF shall be 60000 hours of continuous operation at 20℃, maximum load and normal voltage.

7.2 老化/Burn-in

在 **40 度** 环境温度下, **220V** 输入, 电源满载老化 **4H/4hrs,40+/-5℃ 220Vac** ON/OFF cycling full load nominal line

8、 结构参数/MECHANICAL REQUIREMENT: (单位 : mm)

8.1 外壳/Enclosure:

外壳尺寸: **L114.5x W51x H31mm;**

The power supply size: **L114.5x W51x H31mm;**

8.2 输入插座/Input Connector:

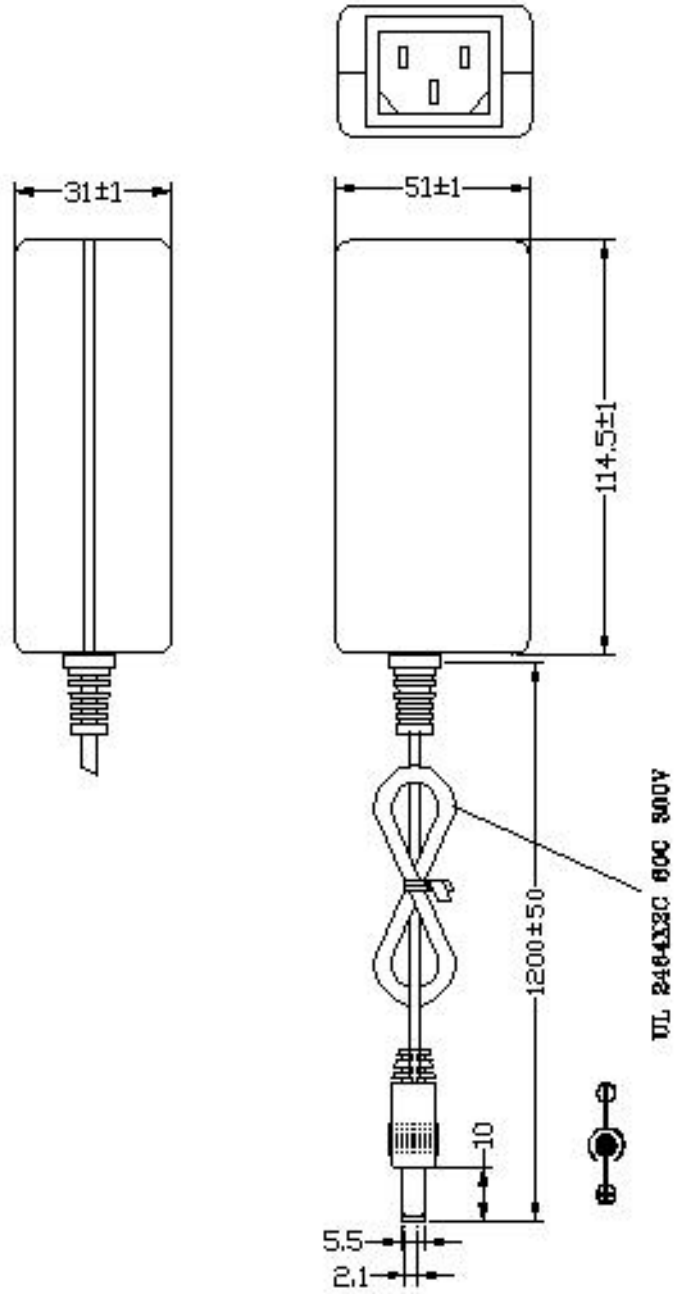
THree pin input plug

8.3 输出/Output

2464 AWG22 1.2M 2.1*5.5*10 DC Plug

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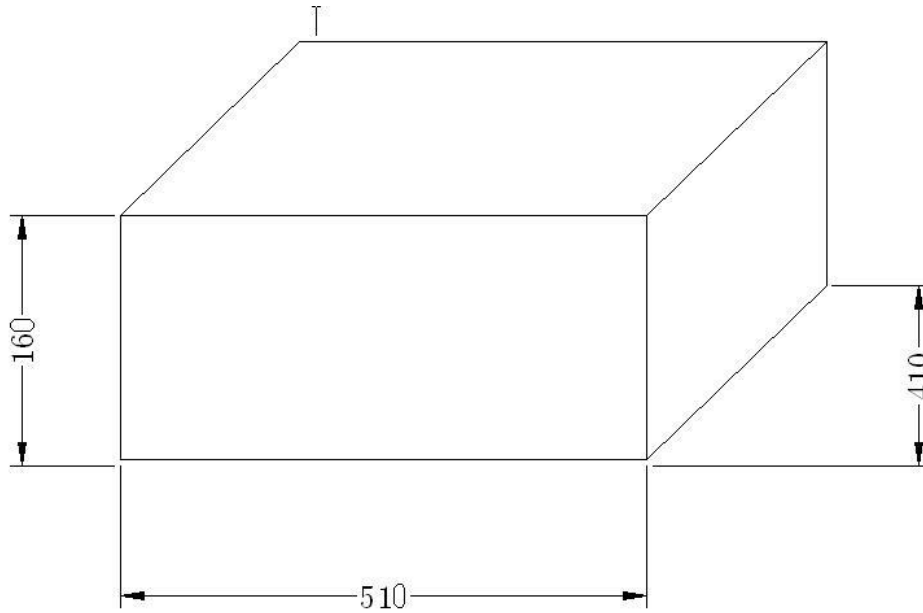
8.4、结构图/ DRAWING



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9、包装/PACKING: (单位 : mm)

9.1 产品净重:/Net Weight: 250 g



Carton Size/纸箱尺寸: L510XW410XH180mm

QTY : /数量 : 50 PCS

NT/净重 : 12.5KGS

GW/毛重 : 14KGS

装箱方法 : 长装 5 个 , 宽装 10 个 , 50PCS/箱 , 每个电源用刀卡隔开。

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10、外观图/OUTLOOK DRAWING(单位 : mm)



10.1 铭牌图:/Label:(黑底白字)



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11、样品测试报告/ SAMPLES ELECTRICAL TEST REPORT :

Sample form		sample (1)						
N O.	Test Items /测试项目	Unit /单位	Test condition & result				Spec. Limit	Pass/Fail
			90V	115V	230V	264V		
1	Unload input power 空载输入功率	W	0.10	0.12	0.16	0.17	≤0.21W	PASS
2	Power factor 功率因数	/						
3	Unload output voltage 空载输出电压	V	52.25	52.25	52.25	52.25	50-54	PASS
4	Rated load output voltage 额定负载输出电压 1.15A	V	52.07	52.	52.07	52.07	50-54	PASS
5	Output ripple&noise voltage 输出纹波及噪声电压	mV	90	90	90	90	≤ 150mV _{p-p}	PASS
6	Over current protection 过流保护点	A	2.5	2.6	3.0	3.0	1.9-3.2	PASS
7	Average Efficiency 平均效率	%		91.42%	91.16%		≥88%	PASS
8	Short-circuit Protection 短路保护	W	not damage and with auto recovery function					PASS
Sample form		sample (2)						
1	Unload input power 空载输入功率	W	0.10	0.12	0.16	0.17	≤0.21W	PASS
2	Power factor 功率因数	/						
3	Unload output voltage 空载输出电压	V	52.63	52.63	52.63	52.63	50-54	PASS
4	Rated load output voltage 额定负载输出电压	V	52.24	52.24	52.24	52.24	50-54	PASS
5	Output ripple&noise voltage 输出纹波及噪声电压	mV	90	90	90	90	≤ 150mV _{p-p}	PASS
6	Over current protection 过流保护点	A	2.5	2.6	3.0	3.0	1.9-3.2	PASS
7	Average Efficiency 平均效率	%		91.58%	91.42%		≥88%	PASS
8	Short-circuit Protection 短路保护	W	not damage and with auto recovery function					PASS
		sample (1)/sample (2)						
1	Drop test 跌落试验	the Dropping hight of wall mount type is 1M,6 surfaces Dropping respectively						PASS
2	appearance 外观	Content of the NP label is correct,the appearance is clear no spot,scratch color-difference,disconnection and gap						PASS
3	Burn-in test 老化试验	在 70 度烘炉内满载老化 4H OK/Input:230Vac/50Hz Full Load 4hrs Ambient temperature 70C)						PASS
4	Insualtion test 绝缘测试	INPUT TO OUTPUT:100MΩ min/DC500V,						PASS
5	Hi-pot test 介电强度	INPUT TO OUTPUT: 3000Vac/5mA/60S or 4242Vdc/5mA/60S						PASS
DATE/日期:2018-10-29		CHECK/审核 : JOHN			APPROVED BY/核准: 晏宝利			
TEST/测试员 : 刘中奇								