

# 部品 认可书

2010年5月21日

制作部门:	开发部	保存期限:	长期	档案编号	QTR10050028
制作人员:	陈大东	制作日期:	2010.5.12		
物料编码	211.216N42ToolR	适应机型	LED N41	供应商	奥源
物料名称	电源板	检验数量	1	产品类别/规格型号	
本体标识	Axp250008		认可原因: 新物料		

检验及测试项目		检验及测试项目						判定	
	NO.	试验标准/要求	样品实测尺寸(室温25±2℃)						
			SPL1	SPL2	SPL3	SPL4	SPL5		
外观检验	尺寸	1	100±0.5mm	110.9					OK
		2	135±0.5mm	135.2					OK
		3							
		4							
	外观	丝印清晰, 锡面良好 无损坏, 无刮伤						OK	
	可焊性	—							
电性能测试	电压	输出电压: 4.2 11.4~12.6V, 输入电压: 100~240AC						OK	
	电流	输出电流: 3.5A, 输入电流: 1.5A(90V), 0.6A(240V)						OK	
		Ripple & Noise 150mV Max						OK	
		装机老化 24小时无异常						OK	
认证	6、环保认证								
其它	样品后补								

\*测试所需设备仪器 数显卡尺、LCR电桥等

\*重点管理部分应在检验及测试项目前标记“\*”

\* 随附资料 规格书一份

判定		检验			
<input checked="" type="checkbox"/> 正式认可		测试	审核	品质部	批准
<input type="checkbox"/> 限量认可 件		陈大东	黄杰	郭昭	
<input type="checkbox"/> 不予认可		2010.5.12	12/5/10		
分发处	文控中心1份、开发部1份、IQC1份、供应商1份				

Document History

No.	Description	Modified By	Version	Date	Approved By
1	first released				

## **TABLE OF CONTENT**

### **1. Scope (范围)**

### **2. Feature (特征)**

### **3. Mechanical requirements (机械条件)**

3.1 Power supply Dimension Constraints(电源外形尺寸)

3.2 Power Supply Connectors(电源接口)

### **4. Electrical requirements (电气特性)**

4.1 Input voltage

4.2 Input frequency(输入频率)

4.3 Input Current(输入电流)

4.4 Inrush Current(浪涌电流)

4.5 Output voltages and loads (输出电压与负载)

4.6 Ripple and Noise(输出纹波与燥音规格)

4.7 Protection(保护)

4.8 Efficiency(效率)

4.9 Green mode function(环保模式)

4.10 Turn on delay time(开机延迟时间)

4.11 Hold-up time(保持时间)

4.12 Mean Time Between Failures (MTBF) (平均无故障时间)

### **5. Environmental requirements (环境要求)**

5.1 Operating temperature(环境温度)

5.2 Humidity (Non-condensing)(湿度)

5.3 Altitude(海拔高度)

5.4 Hi-pot test(高压测试)

### **6. International standards- (国际性认证)**

6.1 EMI standards(EMI规格)

6.2 EMS standards(EMS规格)

6.3 Safety Compliance (+CE) (安全认证)

### **7. Outline dimensions (结构图)**

## 1.Scope

The AYP250008 comprises a 50Watts multi-output open frame power supply

## 2. Feature

All products including samples delivered will meet all the requirements as outlined in the document. The basic requirements of the design features are listed below:

- \* Output Voltages: +12V.
- \* Short circuit protection / power limiting /
- \* High efficiency - to reduce temperature rise, The efficiency is greater than 80%.

## 3. Mechanical requirements

### 3.1 Power supply dimension constraints

135.0(L)\*100.0(W)\*13.0(H) mm.

### 3.2 Power Supply Connectors

Pin assignment of Connector on power Input CON1

Pin Number	Signal	
1	AC Line	
2	NC	
3	AC Neutral	

## Pin assignment of Connector on power output CON2

NO.	Pin connection	Function
1	+12V	1
2	+12V	2
3	GND	3
4	GND	4
5	GND	5
6	+5V	6
7	+5V	7
8	GND	8

#### 4. Electrical requirements(电气特性)

##### 4.1 Input voltage

Minimum	Nominal	Rating	Maximum	Unit
90	115/230	100~240	264	Vac

##### 4.2 Input frequency(输入频率)

Minimum	Nominal	Maximum	Unit
47	50/60	63	Hz

##### 4.3 Input Current(输入电流)

Input	Current(Max)
90Vac	1.5A
264Vac	0.6A

#### 4.4 Inrush Current(浪涌电流)

The inrush current is less than 60A at 230Vac max and the condition is 25 °C, Cold start for first turn on

#### 4.5 Output voltages and loads (输出电压与负载)

Measured at the load end of connected cables.

Table.8 SMPS load limits

Signal Name	Voltage (Volts)			Current (A)		
	Min	Typ	Max	Peak	Max	Min
+12V	11.4	12	12.6	4.2	3.5	0.1

Note : 1.The output voltage shall remain within the following the output regulation under min/max load.

2.The Peak surge duration is 60 Seconds at 25°C.

#### 4.6 Ripple and Noise(输出纹波与燥音规格)

##### 4.6.1 Ripple and Noise required specification(纹波与燥音)

Table.9 lists the Ripple and Noise limitations of switching power supply unit only under all operating conditions including the input line voltage range (100Vac-240Vac) and over all the max load range.

Table.9 Ripple and Noise Limitations

Signal Name	Ripple & Noise (mV)
+12V	150

Note:

1. The measuring is done by 20MHz band width limited oscilloscope and terminated each output with a 10uF electrolytic capacitor in parallel with a 0.1uF ceramic capacitor.

2. While test ripple noise of the output the probe shall avoid any coupling from other circuit or equipment .or the test result will not show power supply's actual ripple/noise .

## 4.7 Protection(保护)

### 4.7.1 DC Output Over current Protection. (输出过流保护)

Output Voltage	Over Current	Specification
+V2(+12V)	>4.5A	Shutdown

Note: The over current protection should be test at other of dc output at Rated load.

### 4.7.2 Table 12 DC Output Short Circuit Protection. (输出短路保护)

Output Voltage	Specification
+V2(+12V)	Shutdown

Note: The Short Circuit protection should be test at other of dc output at Rated load.

### 4.7.3 Fuse protection (保险丝保护)

The Fuse inside the power supply shall open when the AC input current is over the rated current of fuse. This Fuse protection will cause switching power supply to fail.

## 4.8 Efficiency(效率)

80% min. It will be measured at the maximum load and TYPICAL line (230VAC)

## 4.9 Green mode function(环保模式)

No load power consumption: input power should be under 0.3W at 230Vac

## 4.10 Turn on delay time(开机时间)

The turn on delay form application of AC input power to the establishment of rated DC power voltage should not exceed 3 seconds under at 115Vac full load.

#### 4.11 Hold-up time(关机时间)

The power supply shall maintain voltage regulation within the specified limits in table 1 for at least **10** milliseconds (one cycle drop) after losing of input voltage under the following conditions:

Input voltage:230Vac

Loading: max output load

That's mean the power supply shall cover the AC one cycle without any impairment to the power supply output's regulations.

#### 4.12 Mean Time Between Failures (MTBF) (平均无故障时间)

50,000 hrs at 25 Degrees centigrade when calculated using MIL-HDBK-217F. The VENDOR can use agreed upon F.I.T. (failure - in - time) number in place of MTBF.

### 5. Environmental Requirement （工作环境）

#### 5.1 Temperature （环境温度）

Operating: 0°C to +40°C.

Store: -20°C to +70°C.

#### 5.2 Humidity （环境湿度）

Operating: From 10%to90% relative humidity (non-condensing).

Store: From 5 to 95% relative humidity (non-condensing).

#### 5.3 Hi-pot test(耐压测试)

100% Hi-pot tested,Primary to second: 3KVAC 4 second

#### 5.4 Altitude （海拔高度）

Operating: to 10,000 ft.

Store: to 20,000ft.

### 6. International Standards(国际性认证)

#### 6.1 EMI standards(EMI 标准)

Designed to meet the following conducted & radiation limits: CISPR 22 Class B



## 6.2 EMS standards(EMS 标准)

6.2.1 Electrostatic Discharge Immunity Test: IEC-1000-4-2 8KV, Criteria B

6.2.2 EFT/Burst Immunity Test: IEC-1000-4-4 1KV, Criteria B

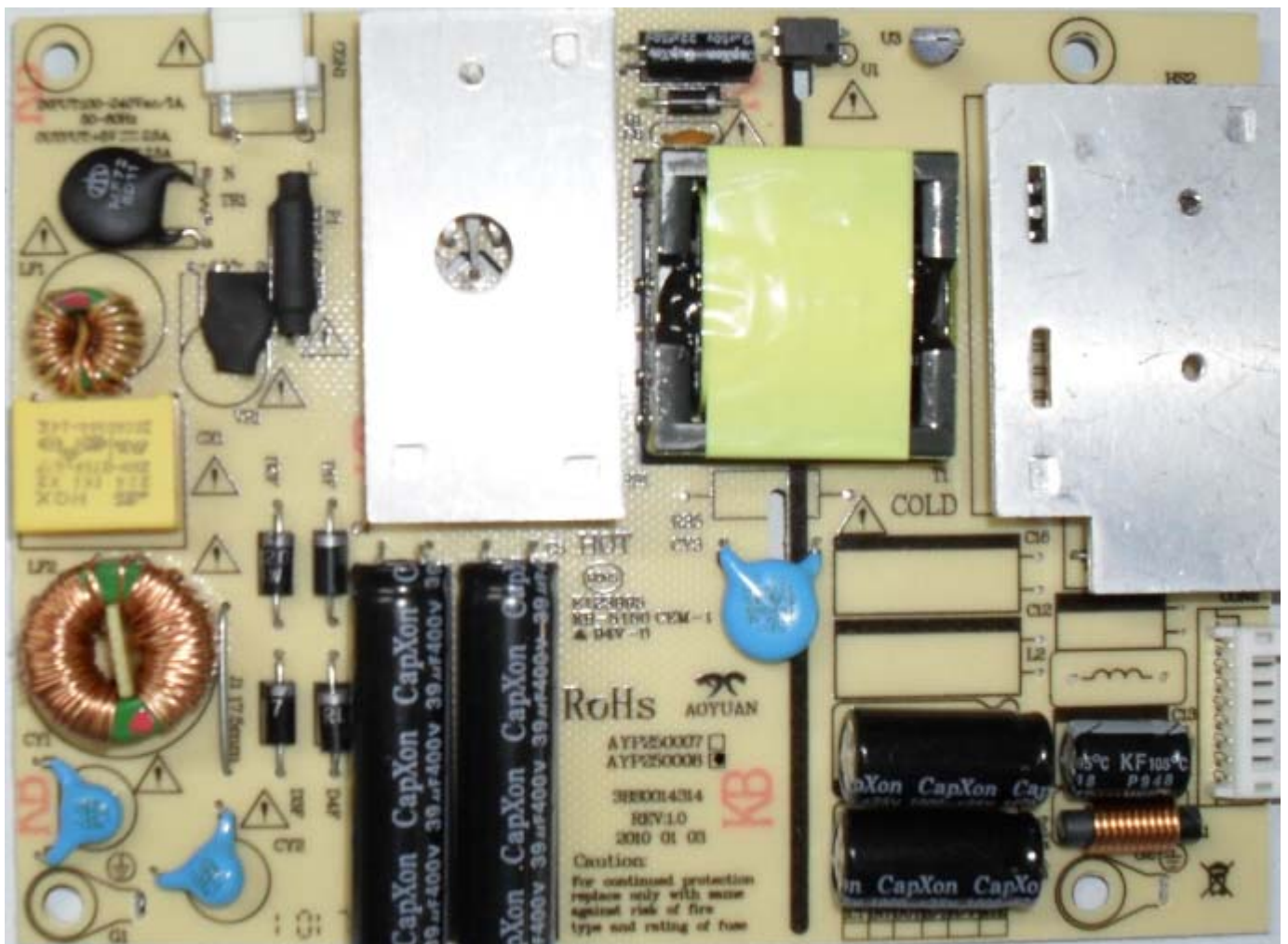
6.2.3 Surge Immunity Test: IEC-1000-4-5 2KV, Criteria B

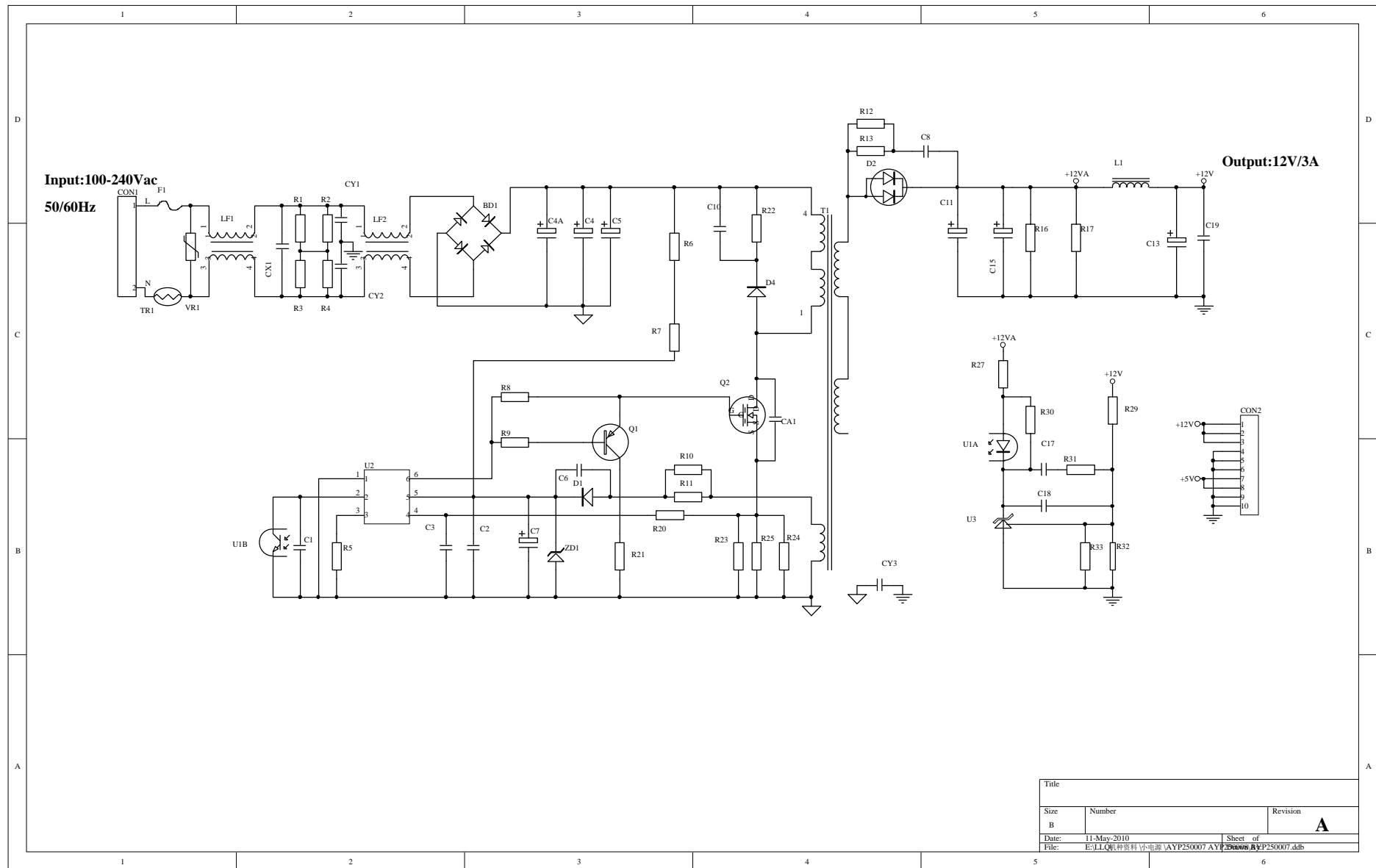
## 6.3 Safety Compliance (+CE)(安全规格)

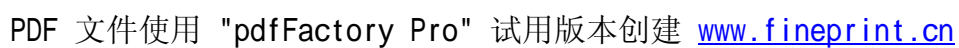
Design to meet : IEC60950 / 2002; IEC60065

## 7. Outline Dimensions(unit: mm)(结构图)

定位孔直径:Ø3.5mm,板上零件高度不超过 13mm Max.







# 关键性清单

机型名称 :**AYP250008**

序号	品名规格	板面位置	厂商	型号	规格	备注
1	AC端子	CON1	LAND WIN ELECTRONIC CORP	PH3.96mm	三缺一,直插	
2	电解电容	C4,C5	JIAYE ELECTRONICS CO LTD	CD81	39UF/400V 105℃	
			CAPXON ELECTRONICS CO LTD	KM	39UF/400V 105℃	
			SHENZHEN ZHONGYUAN ELECTRONICS CO;LTD	KM	39UF/400V 105℃	
			SAMXON ELECTRONICS CO LTD	KM	39UF/400V 105℃	
3	IC	U2	Leadtrend	LD7535BL	S0T-26	同等品可使用
			Leadtrend	LD7535MBL	S0T-26	同等品可使用
4	MOS 管	Q2	FAIRCHILD SEMICONDUCTOR	FQPF6N60C	6A/600V	同等品可使用
			NEC ELECTRONICS CORPORATION	K3115	6A/600V	同等品可使用
			MAGNACHIP SEMICONDUCTOR	MDF7N60	7A/600V	同等品可使用
5	基准稳压器	U3	WS	TL431AA	1% T0-92 36v	
6	基准稳压器	U3	FAIRCHILD	KA431AZ	1% T0-92 36v	
7	基准稳压器	U3	TI	TL431AC	1% T0-92 36v	
8	基准稳压器	U3	CYT	KA431AZ	1% T0-92 36v	

Safety Part List

机型名称 :AYP250008

序号	品名规格	板面位置	材料	厂商			CQC证书	UL文档号
				中文	英文			
1	Transformer (EFD-30 ) ( AYP250007-T1 )	T1	骨架	长春电木	CHANG CHUN PLASTICS CO LTD	东莞市奥源电子科技有限公司	N/A	E59481
			漆包线	台一国际控股有限公司	TAI-I ELECTRIC WIRE & CABLE CO LTD		N/A	E85640
			漆包线	汕头深港有限公司	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD		N/A	E239508
			漆包线	深圳成威电工器材有限公司	SHEN ZHEN CITY CHENGWEI INDUSTRY CO LTD		N/A	E227475
			漆包线	江西圣达威电工器材有限公司	JIANGXI SHENGDA WEI ELECTRONIC ENGINEERING MATERIAL CO LTD		N/A	E310612
			胶带	靖江精益粘制品有限公司	JINGJIANG JINGYI ADHESIVE PRODUCT CO LTD		N/A	E246950
			胶带	苏州市精益特种胶粘制品有限公司	SUZHOU MAILADUONA ELECTRIC MATERIAL CO LTD		N/A	E188295
			胶带	靖江亚华胶粘带有限公司	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD		N/A	E165111
			套管	深圳长园电子材料有限公司	CHANGYUAN ELECTRONICS (SHENZHEN) CO LTD		N/A	E180908
2	inductance (T10*6*5)	LF1	漆包线	台一国际控股有限公司	TAI-I ELECTRIC WIRE & CABLE CO LTD	东莞市奥源电子科技有限公司	N/A	E85640
			漆包线	汕头深港有限公司	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD		N/A	E239508
			漆包线	深圳成威电工器材有限公司	SHEN ZHEN CITY CHENGWEI INDUSTRY CO LTD		N/A	E227475
			漆包线	江西圣达威电工器材有限公司	JIANGXI SHENGDA WEI ELECTRONIC ENGINEERING MATERIAL CO LTD		N/A	E310612
			三层绝缘线	深圳长园电子材料有限公司	SHENZHEN CHANGYUAN ELECTRONIC MATERIAL CO LTD		N/A	E249037
2	inductance (T18*10*7)	LF2	漆包线	台一国际控股有限公司	TAI-I ELECTRIC WIRE & CABLE CO LTD	东莞市奥源电子科技有限公司	N/A	E85640
			漆包线	汕头深港有限公司	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD		N/A	E239508
			漆包线	深圳成威电工器材有限公司	SHEN ZHEN CITY CHENGWEI INDUSTRY CO LTD		N/A	E227475
			漆包线	江西圣达威电工器材有限公司	JIANGXI SHENGDA WEI ELECTRONIC ENGINEERING MATERIAL CO LTD		N/A	E310612
			PCB	深圳生溢快捷有限公司	SHENZHEN SYE QUICKPCB CO LTD		N/A	E305283

# Safety Part List

机型名称 :**AYP250008**

序号	品名规格	板面位置	材料	厂商			CQC证书	UL文档号
				中文	英文			
3	Y Capacitor	CY1;CY2	220PF/250VAC SEC SB/SE	宝安区公明下村成功电子厂	SUCCESS ELECTRONICS CO LTD		CQC02001001788 CQC02001001772	E114280
			220PF/250VAC AH	广州汇桥电子有限公司	WALSIN TECHNOLOGY CORP		CQC03001003673	E146544
			220PF/250VAC SHM	广东南方宏明电子科技有限公司	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD		CQC03001003160	E154899
			220PF/250VAC CY	东莞市荣泰电子有限公司	HSUAN TAI ELECTRONICS CO LTD		CQC03000005798	E199069
			220PF/250VAC CT7	鞍山奇发电子陶瓷科技有限公司	ANSHAN ELECTRONIC CERAMIC CO LTD		CQC08001024648 CQC08001024647	E232980
			220PF/250VAC (CT7) 2B	南京新玉跃电子有限公司	NAN JING YUYUE ELECTRONICS CO LTD		CQC03001008193 CQC03001008192	E237728
3	Y Capacitor	CY3	2200PF/250VAC SEC SB/SE	宝安区公明下村成功电子厂	SUCCESS ELECTRONICS CO LTD		CQC02001001788 CQC02001001772	E114280
			2200PF/250VAC AH	广州汇桥电子有限公司	WALSIN TECHNOLOGY CORP		CQC03001003673	E146544
			2200PF/250VAC SHM	广东南方宏明电子科技有限公司	GUANGDONG SOUTH HONGMING ELECTRONIC SCIENCE & TECHNOLOGY CO LTD		CQC03001003160	E154899
			2200PF/250VAC CY	东莞市荣泰电子有限公司	HSUAN TAI ELECTRONICS CO LTD		CQC03000005798	E199069
			2200PF/250VAC CT7	鞍山奇发电子陶瓷科技有限公司	ANSHAN ELECTRONIC CERAMIC CO LTD		CQC08001024648 CQC08001024647	E232980
			2200PF/250VAC (CT7) 2E	南京新玉跃电子有限公司	NAN JING YUYUE ELECTRONICS CO LTD		CQC03001008193 CQC03001008192	E237728

# Safety Part List

机型名称 :**AYP250008**

序号	品名规格	板面位置	材料	厂商			CQC证书	UL文档号
				中文	英文			
4	X2 Capacitor	CX1	224/275VAC HQX	东莞企石新显电容器厂	ULTRA TECH XIPHI ENTERPRISE CO LTD		CQC03001003067	E183780
			224/275VAC STE/MPX	汕头高新区松田实业有限公司	SHANTOU HIGH-NEW TECHNOLOGY DEVELOPMNT ZONE SONGTIAN ENTERPRISE CO LTD		CQC08001024360	E208107
			224/275VAC MPX	东莞东坑坑美凯励电子厂	CARLI ELECTRONICS CO LTD		CQC03001007996	E120045
			224/275VAC MPX	惠州市实全电子厂	STRONG CAPACITOR CO LTD		CQC04001010479	E230903
			224/275VAC MPX	威迪电子(东莞)有限公司	YUON YU ELECTRONICS CO LTD		CQC05001012269	E200119
			224/275VAC MPX	优普电子(苏州)有限公司	EUROPTRONIC (TAIWAN) INDUSTRIAL CORP		CQC03001003068	E211347 E307895
			224/275VAC MCY	东莞市荣泰电子有限公司	HSUAN TAI ELECTRONICS CO LTD		CQC03001005799	E199069
5	光耦	U1	EL817	亿光电子(苏州)有限公司	EVERLIGHT ELECTRONICS CO LTD		CQC08001022757	E214129
			PC817	P.T. Sharp Semiconductor Indonesia	SHARP CORP ELECTRONIC COMPONENTS AND DEVICES GROUP		CQC05001013694	E64380
			LTV-817	光宝电子(天津)有限公司	LITE-ON TECHNOLOGY CORP		CQC08001026788	E113898
			K1010	冠西电子企业股份有限公司龙德二厂	COSMO ELECTRONICS CORP		CQC04001010530	E169586
6	AC端子 PH3.96mm	CON1	3962P	新扬麟电子（深圳）有限公司	LAND WIN ELECTRONIC CORP		N/A	E159426
7	PCB	PCB	KB5150	深圳市宝安区石岩镇水田建滔制品厂	KINGBOARD LAMINATES (MACAO COMMERCIAL OFFSHORE) LTD		CQC03001005728	E123995
			ZD-95(G)F	山东金宝电子股份有限公司	SHANDONG JINBAO ELECTRONICS CO LTD		CQC03001006425	E141940

# Safety Part List

机型名称 :**AYP250008**

序号	品名规格	板面位置	材料	厂商			CQC证书	UL文档号
				中文	英文			
8	Fuse	F1	ICP T3.15A/250V	苏州华德电子有限公司	WALTER ELECTRONIC CO LTD		2003010207031251	E56092
			PTU T3.15A/250V	功得电子工业股份有限公司	CONQUER ELECTRONICS CO LTD		2003010207031945	E82636
9	热敏电阻	TR1	MF72 5D11	南京时恒敏感元件有限公司	NANJING SHIHENG ELECTRONICS CO LTD		CQC04001010556	E241319
			SCK-054	东莞为勤电子有限公司 兴勤（常州）电子有限公司	THINKING ELECTRONIC INDUSTRIAL CO.,LTD		CQC05001011993 CQC05001011989	E138827
10	压敏电阻	VR1	PVR7D471K	广州汇侨电子有限公司	WALSIN TECHNOLOGY CORP		N/A	E146544
			TVR07 471	东莞为勤电子有限公司	THINKING ELECTRONIC INDUSTRIAL CO.,LTD		CQC03001007654	E314979
			HEL7D471K	汕头市鸿志电子有限公司	HONGZHI ENTERPRISES LTD		CQC04001010847	E324904
			SVR 07D471K	宝安区公明下村成功电子厂	Success Electronics Co.,Ltd		CQC09001029675	E330256
			471 KD07	百圳君耀电子（深圳）有限公司	BRIGHTKING (SHENZHEN) CO LTD		CQC08001027207	E327997