MEGMEET®

SPECIFICATION

产品规格书

Revision: 1.2

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Model : MLT840-LG

Description: LCD-TV POWER SUPPLY SPECIFICATION

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Revision History

修订履历

Revision 版本/次	Change Item (修改项次)	Date (修改日期)
1. 0	Initial Release (初版发行)	2013-06-05
1.1	增加安装孔定义图，修改输出端子定义等。	2014-2-18
1.2	**修改了输入端子，改为插片式**	2014-04-04

1. Electrical Specification 电气规格

1.1 Table 1 Input Electrical Characteristics（输入特性）

Input voltage range 输入电压	AC90V to AC264V
Normal voltage range 标称输入	AC100V to AC240V
Frequency range 频率范围	(50Hz or 60Hz)±5%
Max input ac current 最大输入电流	Max. 8.5A at full load and AC90V input
Inrush current (cold start) 冷启浪涌电流	80A (TYP. peak) at 120Vac; 120A (TYP. peak) at 220Vac
Efficiency 效率	82%min at AC100V input and full load
Harmonic current 谐波电流	Meet GB17625.1or IEC61000-3-2 Class D
Touch Currents 接触电流	Less than 0.35mA (peak) at AC240V input
Standby Power Consumption 待机功耗	≦0.5W at AC240V 50Hz input and STB output current≤20mA
Input Fuse 输入保险	T15.0AH 250V~

1.2 Output Electrical Characteristics（输出特性）

1.2.1 Table 2 Constant Voltage Output Specification（恒压输出规格）

Output Channel 输出通道	Output Rated Voltage 输出额定电压	Voltage Regulation 电压调整率	Min. current 最小电流	Rated current 额定电流	Peak current 峰值电流
STB	+5.2V	±5%	0.02A	0.5A	1.0A
V5	+5.2V	±5%	0.1A	5.5A	7.0A
V12	+12V	±10%	0.1A	14.0A	16.0A
V24	+24V	±10%	0.1A	18.0A	20.0A

Total：630W

Note: The testing of peak current shall be performed under other dc output load rating and the peak current pulse width within 50ms conditions.峰值电流的测试条件是其它负载为额定负载时测试，且脉宽小于 20 毫秒。

1.2.2 Table 4 DC Output Ripple & Noise. （输出纹波和噪声）

Output Channel	Output Rated Voltage	Ripple & Noise (Peak-peak, 峰-峰值)			
		Ta:25℃	Normal Input and Full Load	Ta: -10℃	Normal Input and Full Load
STB	+5.2V	60mV		150mV	
V5	+5.2V	60mV		150mV	
V12	+12V	120mV		200mV	
V24	+24V	240mV		350mV	

Note: Ripple & Noise test 纹波和噪声测试

1)the Bandwidth of oscilloscope is set to 20MHz.
示波器带宽设置在 20 兆赫兹。

2)Use a 0.1uF ceramic capacitor in parallel with a 100uF electrolytic capacitor at output connector terminals for ripple & noise measurements.
输出端并联一个 0.1uF 的陶瓷电容和一个 100uF 的电解电容来测试纹波和噪声。

1.2.3 Table 5 Dynamic Response Of Output. （输出动态响应）

Output Channel	Output Rated Voltage	Response Regulation of Output Voltage 输出电压响应调整率					
		Step Load 阶跃负载	Slew Rate	Frequency Rang	Step Load 阶跃负载	Slew Rate	Frequency Rang
		Min. to 50% or 50% to Max.	0.2A/us	50Hz~ 100Hz	Min. to Max.	0.2A/us	50Hz~ 100Hz
STB	+5.2V	±5%			±10%		
V5	+5.2V	±5%			±10%		
V12	+12V	±10%			±10%		
V24	+24V	±10%			±10%		

1.2.4 Table 6 Hold-Up Time（输出保持时间）

Output Channel	Output Rated Voltage	Hold-Up Time			
		120Vac input	Full Load	220Vac input	Full Load
STB	+5.2V	≥10 ms		≥10 ms	
V5	+5.2V	≥10 ms		≥10 ms	
V12	+12V	≥10 ms		≥10 ms	
V24	+24V	≥10 ms		≥10 ms	

1.2.5 Table 7 DC Output Overshoot During Turn-On/Off（输出超调）

Output Channel	Output Rated Voltage	Overshoot voltage(V)超调电压	
		Turn-on 开机	Turn-off 关机
STB	+5.2V	≤10%	≤10%
V5	+5.2V	≤10%	≤10%
V12	+12V	≤10%	≤10%
V24	+24V	≤10%	≤10%

Note: All of dc output current from Min. to Max. 测试时负载范围：最小到最大。

1.2.6 Table 8 DC Output Voltage Rise Time（输出上升时间）

Output Channel	Output Rated Voltage	Rise time	
		120Vac input and Full Load	220Vac input and Full Load
STB	+5.2V	≤50 ms	≤50 ms
V5	+5.2V	≤100 ms	≤100 ms
V12	+12V	≤100 ms	≤100 ms
V24	+24V	≤100 ms	≤100 ms

Note: The rise time measured is when the output voltages rise from10% to 90% of specified output voltage Vout observed on the channel waveform.
上升时间为输出电压从 10%上升到 90%的时间。

1.3 Protection（保护功能）

1.3.1 Table 9 DC Output Over Current Protection（输出过流保护）

Output Channel	Over Current	Comments
STB	≥1.5A (TYP.)	Hiccup 保护后重启
V5	≥8.0A (TYP.)	Hiccup 保护后重启
V12	≥17.0A (TYP.)	Hiccup 保护后重启
V24	≥21.0A (TYP.)	Hiccup 保护后重启

Note: The over current protection should be tested at other load rating.
过流保护测试是在其它各路额定负载时测试。

1.3.2 Table 10 DC Output Short Circuit Protection（输出短路保护）

Output Channel	Comments
STB	Hiccup 保护后重启
V5	Hiccup 保护后重启
V12	Shutdown 关机
V24	Shutdown 关机

Note: The Short Circuit protection should be tested at other load rating.
短路保护测试是在其它各路额定负载时测试。

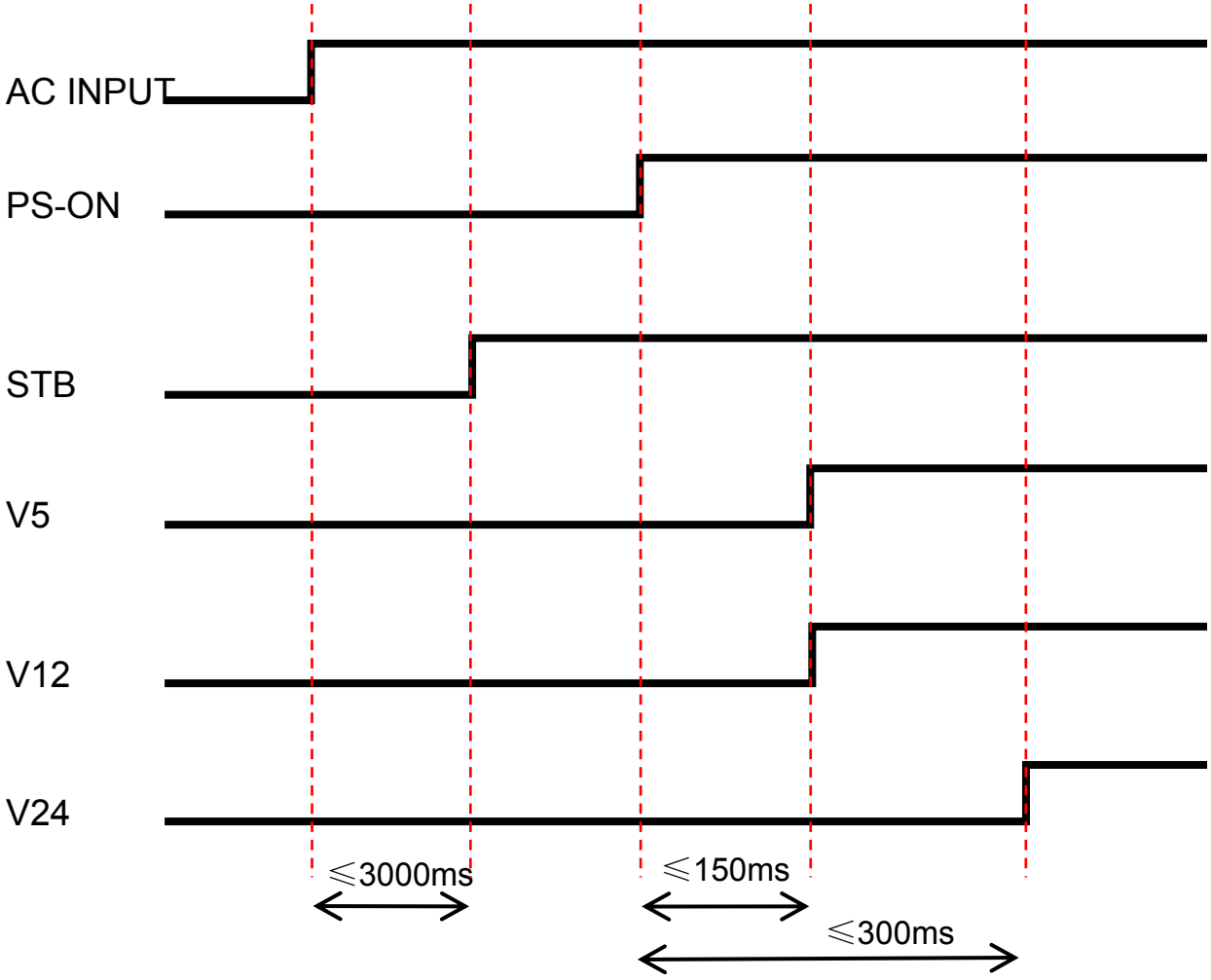
1.4 Table 12 Remote On/Off Control（遥控功能）

PS-ON Signal	Comments	Outputs
PS-ON - High	≥2.5V&2.0mA	Output
PS-ON - Low	≤0.5V	X
PS-ON -Open	--	X

The power supply DC outputs (without STB) shall be enable with an active-TTL-compatible signal(PS-ON). The STB is on whenever the AC power is present. The signal level must be between 0-5V.
除 STB 输出路外，其余输出受控于一个 TTL 电平兼容的信号（PS-ON）。STB 路输出电压 AC 上电后就建立了。此信号电平需在 0-5V 之间。

* When PS-ON is pulled to TTL high, the DC outputs are to be enabled.
  PS-ON 高电平，打开输出。
* When PS-ON is pulled to TTL low or open circuit, the DC outputs are to be disabled.
  PS-ON 低电平或悬空，关闭输出。

1.5 Table 13 Sequence(时序)



2. Safety （安全）

2.1 Standards（标准）

The power supply shall comply with the following Standards:
电源安全满足下列标准：

Safety Standards to be applied : Design to meet the requirements as follows (UL60950, IEC60950, IEC60065 and 60950)

EMI/RFI Standards to be applied : Design to meet the requirements as follows (FCC and EN55020, EN55013 Class B) with 6dB minimum margin.

2.2 Precaution Class for protection against electric shock （防电击保护措施类别）

Class II

2.3 Insulation（绝缘性能）

2.3.1 Table 15 Insulation Resistance（绝缘阻抗）

Input To Output	≥10MΩ (with DC500V at room temperature)

2.3.2 Table 16 Dielectric strength（绝缘强度）

Input To Output	AC3000V 50Hz 1minute ≤10mA

3. EMC （电磁兼容性）

3.1 EMI （电磁干扰）

The power supply shall comply with the following Standards:
电源电磁干扰满足下列标准：

1) Conduction Emission : （传导干扰度）

*CISPR13(55013)
*EN55013
*GB13837
*FCC PART13

2) Radiated Emission : （辐射干扰度）
*CISPR13(55013)
*EN55013
*GB13837
*FCC PART13

Note：The power board should be assembled in customer product to test for passing the above criterion.需配合用户电路整机通过上述标准。

3.2 EMS （电磁抗扰）

The power supply shall comply with the following Standards:
电源电磁抗扰满足下列标准：

1) ESD （静电抗扰度）
*GB17626.2
*IEC/EN61000-4-2

2) EFT （脉冲群抗扰度）
*GB17626.4
*IEC/EN61000-4-4 3KV

3) SURGE （雷击浪涌）
*GB17626.5
*IEC/EN61000-4-5 1.5KV/2KV

4） DIP (电压跌落)
*GB17626.11
*IEC/EN61000-4-11

4. Environmental Requirement （工作环境）

4.1 Temperature （环境温度）

* Operating 工作温度: -10℃ to +40℃.
* Storage 存储温度: -20℃ to +80℃.

4.2 Humidity （环境湿度）

* Operating 工作: From 10%to90% relative humidity (non-condensing).
* Storage 存储: From 5% to95% relative humidity (non-condensing).

4.3 Altitude （海拔高度）

* Operating: to 10,000ft.
* Storage: to 10,000ft.

4.4 Climates （气候要求）

* For tropical climates（适用于热带气候）

4.5 Cooling Method （冷却方式）

* Ventilation cooling . 风道自然冷却

4.6 Vibration （振动耐受）

* 10-55Hz, 19.6m/s²(2G), 3minutes period, 60minutes each along X, Y and Z axis.

4.7 Shock（冲击耐受）

* 49m/s²(5G),11ms, once each X, Y and Z axis.

5. Dimension （物理尺寸）

*310 mm X 200mm X 35mm(元件面高) (长 L *宽 W * 高 H).

6. Weight （重量）

* TBD±10 g

7. Pin Connection (连接器脚位定义)

Table 17 CN1,CN2(1Pin and 1Pin)

NO.	Pin Connection	Function
CN1	N	AC INPUT NUTURE
	---	NC
CN2	L	AC INPUT LINE

宽 W * 高 H = 6.3mm*17mm

Table 18 CON2(16Pin)

NO.	Function	Description
1	SMPS ON/OFF Control	Control by system A/D Mainboard
2	STB V5	Standby DC 5V Output
3	GND	Ground
4	GND	Ground
5	V5	DC 5V Output
6	V5	DC 5V Output
7	V5	DC 5V Output
8	GND	Ground
9	GND	Ground
10	V12	DC 12V Output
11	V12	DC 12V Output
12	Ground	Ground
13	Ground	Ground
14	Backlight status input	Bypass (Backlight →System A/D Mainboard)
15	Backlight ON/OFF control Output	Bypass(system Mainboard →Backlight)
16	External PWM Output	Bypass(system Mainboard →Backlight)

Pin pitch :2.5mm

Table 19 CON3/CON4/CON5/CON6(13Pin)

NO.	Function	Description
1	V24	DC 24V Output
2	V24	DC 24V Output
3	V24	DC 24V Output
4	V24	DC 24V Output
5	V24	DC 24V Output
6	GND	Ground
7	GND	Ground
8	GND	Ground
9	GND	Ground
10	GND	Ground
11	Backlight status input	Bypass (Backlight →System A/D Mainboard)
12	Backlight ON/OFF control Output	Bypass(system Mainboard →Backlight)
13	External PWM Output	Bypass(system Mainboard →Backlight)

Pin pitch :2.5mm

Table 20 CON7,CON8(14Pin)

NO.	Function	Description
1	V12	DC 12V Output
2	V12	DC 12V Output
3	V12	DC 12V Output
4	V12	DC 12V Output
5	V12	DC 12V Output
6	V12	DC 12V Output
7	V12	DC 12V Output
8	GND	Ground
9	GND	Ground
10	GND	Ground
11	GND	Ground
12	GND	Ground
13	GND	Ground
14	GND	Ground

Pin pitch :2.5mm

Table 21 CON9 (8Pin)

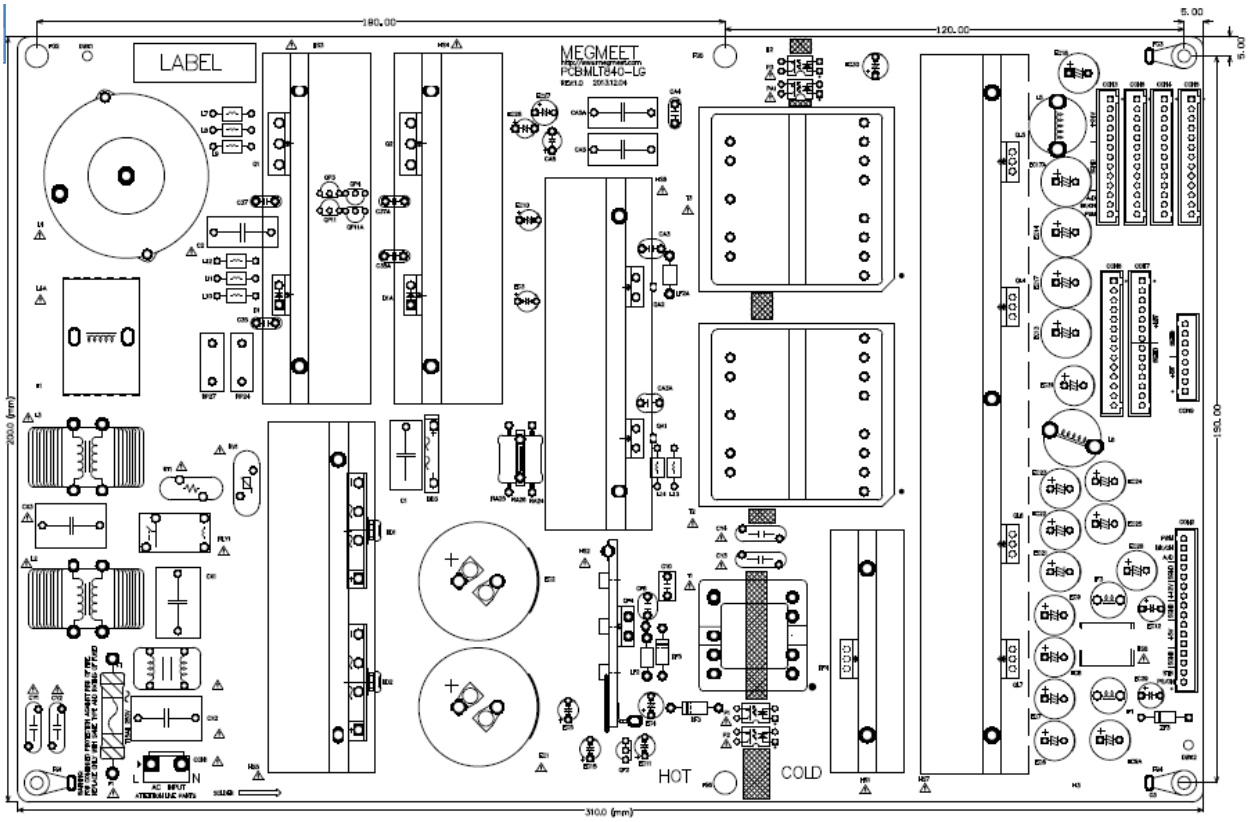
NO.	Function	Description
1	V5	DC 5V Output
2	V5	DC 5V Output
3	V5	DC 5V Output
4	V5	DC 5V Output
5	GND	Ground
6	GND	Ground
7	GND	Ground
8	GND	Ground

Pin pitch :2.5mm

8. Power Supply Mounting （装配）

8.1 Power Supply Mounting（装配结构）

安装孔定义：



8.2 Mount Method（装配事项 ）

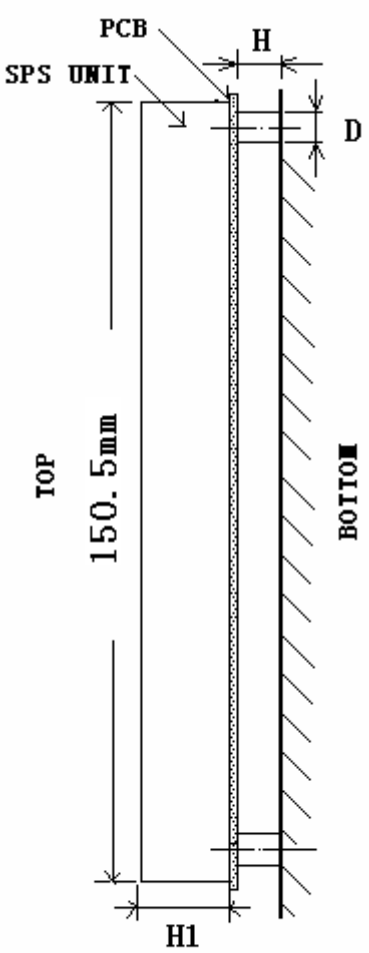
Table 23

D(1*)	≤5.5mm
H(2*)	≥3.0mm
	≤6.0mm
H1	≤35mm

Note:

1*. Mount the unit to the mounting board using M3 screw. The maximum value of the tightening torque is 0.4N-M. The insertion depth of the screw should be less 5.5mm.

2*. Add 310mm×200mm× 0.43mm (W*-H*T)Mylar under PCB bottom.



9. Mylar（绝缘麦拉片）

TO BE CONTINUED

10. Package（包装）

TO BE CONTINUED

11.测试及检验标准

按 MEGMEET 公司企业标准执行