PRODUCT SPECIFICATION
产品确认书

PRODUCT/产品名称: **LED TV POWER SUPPLY**
LED TV 内置电源

TOSN P/N / 型号 : **TOSN-LD5500P**

CUSTOMER / 客户 :

CUSTOMER P/ N :
客户物料编码:

DATE /日期 : **2011 / 11 /15**

APPROVED BY/客户确认栏	NOTE / 备注
CUSTOMER SIGNATURE (S) 客户签章	环保品 RoHS Available

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Revision Record / 变更记录表

No. 序号	Date 变更日期	Version 版本	Reason of revision 变更原因	Content of revision 变更内容	Prepared by 变更人	Approved by 确认人

Content 目录:

1. Input Electrical Characteristics / 输入电气参数

No./ 序号	Description 描述	Specification 规格	Condition 测试条件
1.1	Input Voltage Range 输入电压范围	90-264V~	
1.2	Rated Input Voltage 规格输入电压	100V~ / 60Hz 240V~ /50Hz	
1.3	Input Frequency Range 输入频率范围	47- 63 Hz	
1.4	Inrush Current /涌入电流	100A Max.	Vin=230V~ Full load.Cold start 满载，冷机启动
1.5	Input Current / 输入电流	4.0A Max.	Vin=100-240V~, Full load /满载.
1.6	Power Factor / 功率因数	0.92Min	Vin=100V~, Full load/满载, Vin=240V~, Full load/满载
1.7	Efficiency / 效率	83%Min 85%Min	Vin=100V~, Full load/满载 Vin=240V~, Full load/满载
1.8	Standby Power Loss 待机功耗	≦1W	Vin=230V~, On/Off pin is disable and +5VSB is 50mA load Vin=230V~, On/Off 处于低电平，+5VSB 负载 50mA

2. Output Electrical Characteristics / 输出电气参数

2.1 Output Voltage, Load Current & Load Regulation / 输出电压,负载电流和负载调整率

Output Voltage 输出电压	Load Regulation 负载调整率	Min Load 最小负载	Rate Load 标称负载	Max current 最大负载
+V1(+24V)	±10%	0.2A	8.5A	12A*
+V2(+12V)	±10%	0.20A	5.0A	6.0A*
+V3(+5V)	±5%	0.1A	3.0A	4.0A*
+V4(+5VSB)	±5%	50mA	0.5A	2.0A*

* Remark/备注：

The peak current should be test at other of dc output at Rate current , And the peak current pulse width within 100mS.

峰值电流测试是在其它输出额定电流时测试，且脉宽小于 100 毫秒。

2.2 DC Output Voltage Ripple & Noise / 输出直流电压纹波和噪声

Output Voltage / 输出电压	Ripple & Noise (Max) / 最大纹波和噪声
+V1(+24V)	240mVp-p@25℃
+V2(+12V)	150mVp-p@25℃
+V3(+5V)	100mVp-p@25℃
+V4(+5VSB)	100mVp-p@25℃

Note: 1) Measurements shall be conducted with an oscilloscope with 20MHz bandwidth.
2) Output terminal shall be bypassed at the connector with a 0.1uF ceramic capacitor and a 10uF electrolytic capacitor to simulate system loading.

注： 1）测量使用的示波器的带宽为 20MHz
2）测量时各输出端应在模拟负载上并联 0.1uF 的瓷片电容和 10 uF 的电解电容

2.3 DC Output Hold-Up Time / 输出保持时间

Vout	Vin=AC100V	Vin=AC230V
+V1(+24V)	≥10 mS	≥10 mS
+V2(+12V)	≥10 mS	≥10 mS
+V3(+5V)	≥10 mS	≥10 mS
+V4(+5VSB)	≥10 mS	≥10 mS

2.4 DC Output Voltage Rise Time / 输出电压上升时间

Vout	Vin=AC100V	Vin=AC230V
+V1(+24V)	≤100 mS	≤100 mS
+V2(+12V)	≤100 mS	≤100 mS
+V3(+5V)	≤100 mS	≤100 mS
+V4(+5VSB)	≤100 mS	≤100 mS

2.5 On/Off Control (Remote control) 开关机控制（遥控）

2.5.1 The power supply DC outputs (exception:+5Vsb) shall be enable with an active-high TTL (≥2.6V/2.0mA) compatible signal(Ps-on). When Ps-on is pulled to TTL high, the DC outputs are to be enabled. When Ps-on is pulled to TTL low or open circuit, the DC outputs are to be disabled.

除+5Vsb 外，其余输出受控于一个 TTL 电平兼容的信号（Ps-on≥2.6V/2.0mA），Ps-on 高电平，打开输出，Ps-on 低电平，关闭输出.

2.5.2 The +5Vsb is on whenever the AC power is present.

只要 AC 电源开启，+5Vsb 就会有输出。

2.6 Output Transient Response / 输出动态响应.

Voltage Tolerance Limit 输出电压公差范围	Slew Rate 上升斜率	Load Change 负载变化范围
+V1(+24V) ±10%	0.2A/uS	Min. to 50% load and 50% to Max load 最小负载到 50%负载， 50%负载到标称负载
+V2(+12V) ±10%		
+V3(+5V) ±5%		
+V4(+5VSB) ±5%		

Note: Transient response measurements shall be made with a load changing repetition rate of 50Hz to 10kHz. 以 50-10KHz 的频率跳变负载来测试。

2.7 Protection / 保护功能

2.7.1 DC output Over Voltage Protection / 输出过压保护

Output Voltage 输出电压	Over Voltage 过压点	Comments 注释
+V1(+24V)	29-32V	Shutdown /关断输出
+V2(+12V)	15-16V	
+V3(+5V)	7-12V	Automatic recovery / 自动恢复
+V4(+5VSB)	7-12V	

2.7.2 DC output Over Current Protection / 输出过流保护

Output Voltage 输出电压	Max. Over current 最大过流点	Comments 注释
+V1(+24V)	15A	Shutdown /关断输出
+V2(+12V)	7.5A	
+V3(+5V)	5	Automatic recovery / 自动恢复
+V4(+5VSB)	2A	

All the way to protect, other way with full load.一路保护,其他路带满载.

2.7.3 DC Output Short Circuit Protection / 输出短路保护

Output Voltage / 输出电压	Comments/ 注释
+V1(+24V)	Shutdown / 关断输出
+V2(+12V)	
+V3(+5V)	Automatic recovery / 自动恢复
+V4(+5VSB)	

3. Terminal Assignment and Function / 输出端子针座功能定义

Terminal/端子	Function/功能
CON1 (PIN 距：3.96mm)	
Pin1	AC-N
Pin2	NC
Pin3	AC-L

Terminal/端子	Function/功能
CN1.CN2 (PIN 距：2.54mm)	
PIN1,2,3,4	+24V
PIN5,6,7,8	GND

Terminal/端子	Function/功能
CN3(PIN 距：2.54mm)	
PIN1,2	GND
PIN3,4	+24V
CN4(PIN 距：2.54mm)	
PIN1,2,	GND
PIN3,4	+12V

Terminal/端子	Function/功能
CN5(PIN 距：2.54mm)	
PIN12,13	+12V
PIN1,2,9,10,11	GND
PIN6	+5VSB
PIN3,4,7,8	+5V
PIN5	PS ON

4 . Reliability / 可靠性

MTBF / 平均无故障工作时间

When the power supply is operational within any of the limits of this specification the MTBF shall be at least 20,000 hours at 25℃. 在环境温度为 25℃条件下,该产品在规格书给定的范围内工作的最小的平均无故障工作时间为 20,000 小时

5. SAFETY / 安全

5.1 Leakage current less than 0.5mA /240VAC/ 50Hz. 泄露电流小于 0.5mA /240VAC/ 50Hz.

5.2 Dielectric Strength / 抗电强度

The unit is disconnection from the supply voltage, withstand 3000V AC /50Hz/10mA at 1 minutes tested for primary to secondary. The unit will not be breakdown.

在不通电条件下,初级对次级施加 3000VAC/50Hz/10mA，持续 1 分钟,无击穿

5.3 Insulation Resistance / 绝缘电阻:

The unit is disconnection from the supply voltage, the insulation resistance between Primary and Secondary is morn than 20 MΩ / 500VDC.

在不通电条件下,初级与次级之间的绝缘电阻大于 20MΩ/500VDC

6 . Safety Compliance Standard / 安规参照标准

IEC60950

IEC60065

7. EMC / 电磁兼容

7.1 EMI standards **/ EMI** 参照标准

Conducted & radiation limits/传导&幅射的设计标准依据: EN55022 & & EN55024 Class B

7.2 EMS standards **/ EMS** 参照标准

a) Electrostatic Discharge Immunity Test/防静电测试标准: IEC-61000-4-2，Criteria B

b) EFT/Burst Immunity Test/快速脉冲群测试标准: IEC-61000-4-4，Lever 3.

c) Surge Immunity Test/防雷击测试标准: IEC-61000-4-5 , Lever 3.

d) Voltage dips, short interruptions and voltage variations immunity test/电压跌落、短时中断和电压变化测试标准：IEC-61000-4-11，Criteria B

8. Environmental Conditions / 环境条件

8.1 No-Operating Conditions / 非工作条件

8.1.1 Ambient Temperature/ 环境温度: -20℃ to +85℃.

8.1.2 Relative Humidity / 相对湿度 : 5% to 95%.

8.2 perating Conditions / 工作条件

8.2.1 Ambient Temperature / 环境温度 : -10℃ to 45℃.

8.2.2 Relative Humidity / 相对湿度 : 10% to 90%.

8. 3 Altitude /海拔高度 Operating: to10,000ft.

storage: to20,000ft

8.4 COOling Method / 冷却方式 ： Ventilation cooling 风道自然冷却

8.5 Vibration Condition/ 振动条件 ：

f=10-55Hz, A=0.75cm, 3 minutes /per cycle,15 minutes each along X, Y and Z axis.

振动频率:10-55Hz，振幅:0.75cm，每个周期 3 分钟，X.,Y 和 Z 方向各运行 15 分钟。

9. Notice/注意事项

A: For continued protection against risk of electrical and fire. Please replacing the same type and rating of AC fuse only. 为防止产生电气危险及着火等危险，如需要替换 AC 保险丝，请务必使用相同类型及规格的保险丝进行替换。

B. China Galaxy products are not intended for use in systems in which failures of product could result in personal injury.

请勿将本产品使用在非适用范围的产品上，以免造成意外伤害。

C. For Safety Issue, please keep 4.0mm at least from the metal parts of the system to the inverter. Or put a suitable insulator between the inverter and the metal parts to avoid the situation of breakdown or arcing etc.

基于安全问题,请在组装本产品时,确保本产品和整机中的金属材料间保持至少 4mm

D.　Don’t twist , deform , drop or knock the inverter during assembly.请在组装本产品时,避免扭曲,弯折,大力碰撞及跌落产生损害。

E.　Due to the unit is usually designed without the enclosure. please take care about ESD at anytime . 因为该产品无外壳保护，请务必随时注意防静电措施。

10 . Weight　/重量

约 630g，About630g

11. Package / 包装

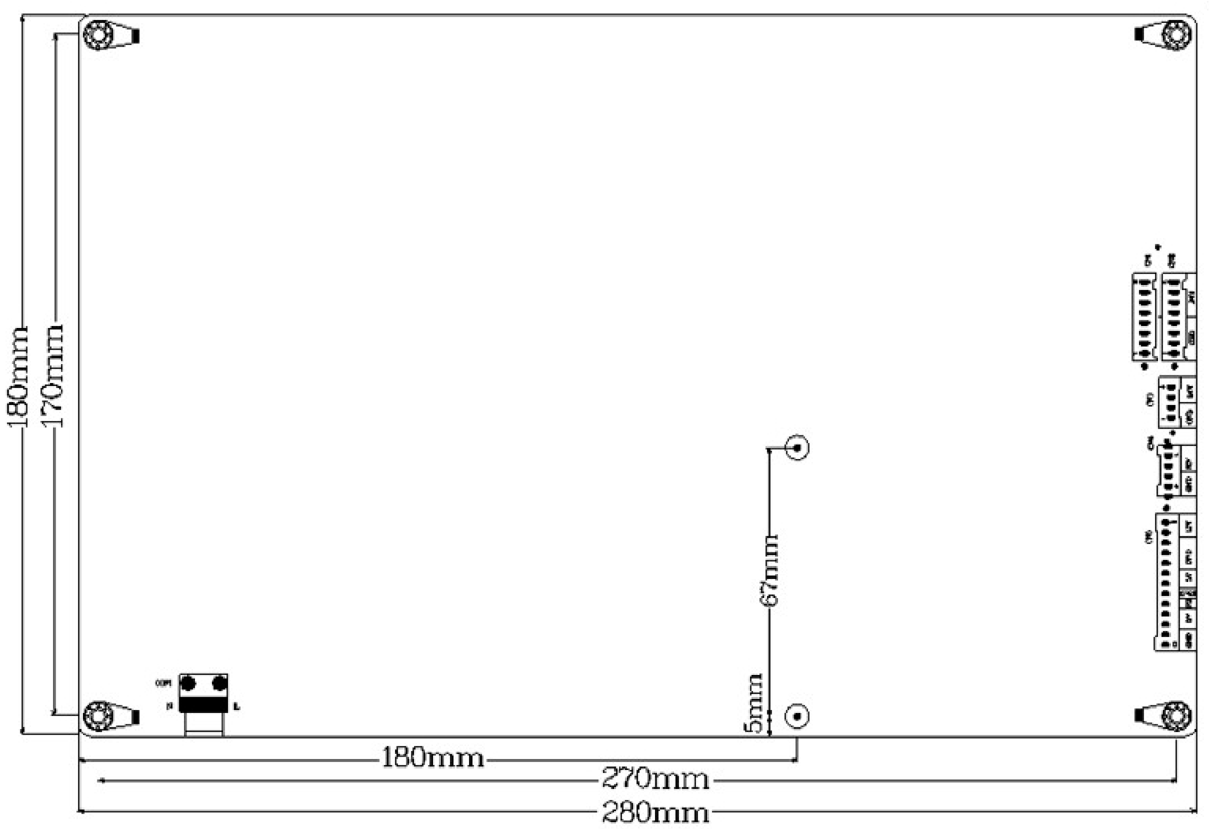
11.1　The unit is put into Anti-electrostatic bubble bag / 产品装入防静电气泡袋。

11.2　10pcs/per carton / 每个包装箱装 10PCS 产品。

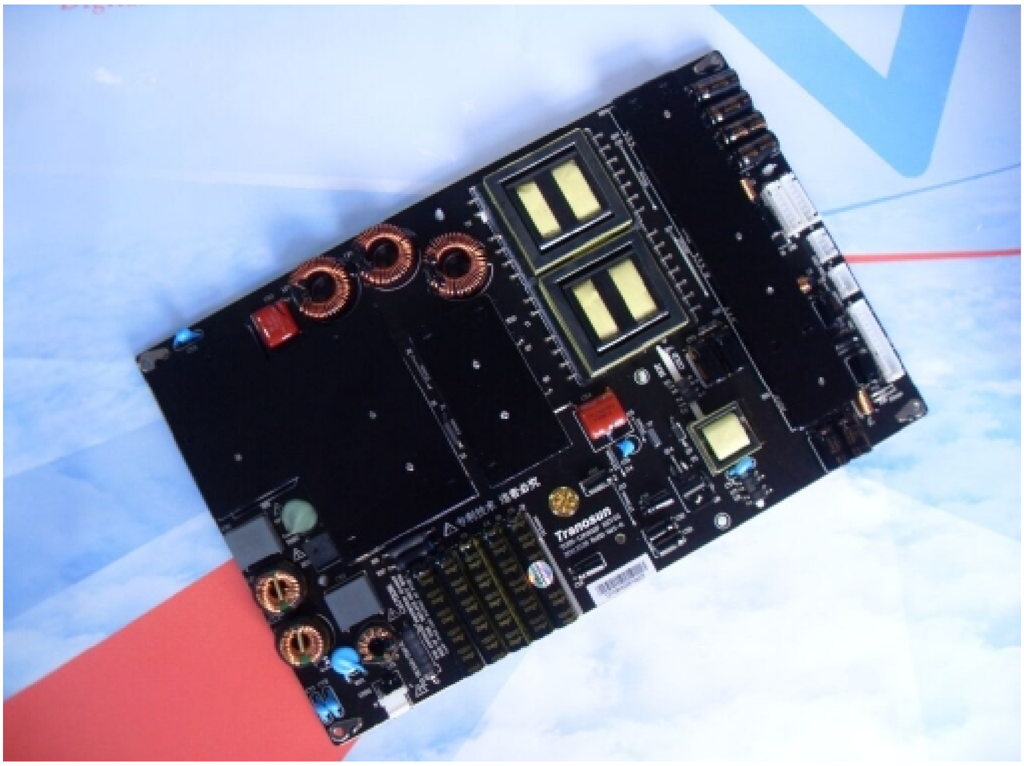
12.　PCB Dimension / PCB 尺寸

L*W / 长*宽: 280mm*180mmTolerance/公差: ±1.0mm(>5mm)　±0.5mm(≤5mm)

H 高：11.5mm±0.5mm，整机厚度≤13mm



13. Product Physical Picture / 产品实物图



Applicable to 55-65 inch LED advertising machine, liquid crystal display. The monitor, LCD/LED TV use, such as the thickness of ultra-thin, the whole plate height only 13 mm, and elegant appearance, reasonable design, is the best choice of make ultra-thin shape products!

适用于 55-65 英寸液晶广告机,液晶显示器.监视器，LCD/LED TV 等使用，其超薄厚度，整板高度仅 13MM, 且美观大方，设计合理，是做超薄外形产品的最佳选择！