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RoHS

SPECIFICATION FOR APPROVAL

• CUSTOMER : LG Electronics inc.

• ITEM : Power Supply Unit.

• P/NO

Model Name	Customer	Supplier
LGP4750-13PL2	EAY62810801	OPVP-0178

• DATE : 2013.08.20

• Revision : 2.5

• Remark : MP (PCB REV 2.0)

Producing District : CSG (CHINA SUZHOU GENMAO)

생산지 : CSG (중국 소주 겐마오)

★ Safety Standard Parts [안전규격부품 List]

Power Cord, Power Plug, X/Y-Capacitor, Power Switch, Fuse, SMPS Trans, Stand-By Trans, Photo coupler, Insulation(절연) Resistor, Discharge(방전) Resistor, Fusing Resistor, FBT.CPT, CPT Socket, DY, D-Coil, Line Filter, PCB Material, Front / Back-cover Material Relay(1-2차간), Varistor, Adapter

★ EMC Standard Parts [전자규격 부품 List]

Power Plug, Line Filter, X-Capacitor, Y-Capacitor, SMPS Trans, Tuner, Saw-Filter, Shield Case, Oscillator, Pattern Change

★ Green [유해물질 확인사항]

This item must meet the standards of LG Electronics for six major substances as designated by RoHS for control.

(Cd: 10ppm under, Pb/Hg/Cr+6/PBB/PBDE: 100 ppm under)



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Documentation For

Approval

Model Name	Customer	Supplier
LGP4750-13PL2	EAY62810801	OPVP-0178

Written	Checked	Approved
Miki	Peter	C.T



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Revision History

Rev No.	Contents	Date of Approval	Checked	Remark
0.1	Apply to PV (PCB REV 0.2) PCB P/No : EAX64905501(1.7) PV 1st Edition.	12.10.19	Peter	
0.2	Apply to PV (PCB REV 0.21) PCB P/No : EAX64905501(1.8) Temperature improvement : change to H/S1 direction(180°) in order to improve workmanship, PV 2nd Edition	12.11.13	Peter	
0.3	Apply to PV (PCB REV 0.22) PCB P/No : EAX64905501(1.9) PV 3rd Edition	12.11.26	Peter	
1.0	Apply to MP (PCB REV 1.0) PCB P/No : EAX64905501(2.0) MP 1 st Edition - Add UL Mark	12.12.07	Peter	
1.1	Apply to MP (PCB REV 1.0) PCB P/No : EAX64905501(2.0) FEELUX TRAN`S 13S-LM05 /13S-DD05 Field smell 不良, 刪除 Trans tape maker	13.02.08	Peter	
2.0	Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2) 1. PCB is modified (It will be applied from 5/15) 2. AC Socket is modified	13.04.17	Peter	
2.1	Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2) 1. no use vendor delete, and remain actual vendor	13.05.14	Peter	
2.2	Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2) 1. Add WANSHENG CERAMIC CAP 4M	13.05.21	Peter	



Revision History

Rev No.	Contents	Date of Approval	Checked	Remark
2.3	<p>Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2)</p> <p>LGE RQA test is finished and the result is passed. 1.adding a aluminum cap supplier : SUSCON</p> <p>SG 2.2uF 50V 5x11 SE 33uF 200V 10x20</p>	13.05.23	Peter	
2.4	<p>Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2)</p> <p>1.ION FLUX Model : ILF714 → ILF710 2.13Y LPB & 直下 Low Model Renesas PFC IC defect solution 4M : D607 1N4148 → (ZD602) Zener 3.6V 變更 3. DCDC Bonding point change : Silicon bond 2Point + Three Bond 6Point</p>	13.07.14	Peter	
2.5	<p>Apply to MP (PCB REV 2.0) PCB P/No : EAX64905501(2.2)</p> <p>< DONGIL > AC Socket modify : add cover , DAC-18C3M1 → DAC-18C3M1c (It will be applied from 9/23)</p>	13.08.20	Peter	



CTQ Management

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3	2.2.1. Stand by Power Consumption	8

Specification



LGP4750-13PL2 LCD TV Power specification

1. INTRODUCTION

1.1 Scope

This approval is the description related to every electrical and structural specifications and reliability For Power Supply Unit used on 47/50 inch LGE LED TV.

1.2 Customers product related items

Product : Power Supply Unit

Part code : EAY62810801

1.3 Product name

Product name : LGP4750-13PL2

Revision code : 2.5

2. SPECIFICATION

2.1 Input Requirements

Nominal Input Voltage	AC 100V to AC 240V
Input Voltage Variation	AC 90V to AC 264V
Input Current	Under 2.5Arms . (at 100Vac & Nominal Load) Under 1.2Arms . (at 240Vac & Nominal Load)
Nominal Frequency	50 / 60 Hz
Frequency Variation Range	47 Hz to 63 Hz
Phase	Single
Leakage Current	0.35mA_peak. (100Vac ~ 240Vac)
Surge Immunity	± 4kV / 1000ns / 0° to 360°
Hold-up Time	More than 20ms at 100Vac and maximum output load ※When it doesn't meet 20ms hold up time, 1. PSU restarts. 2. No hardware failure.(All components)
Lightning Surge	2kA Normal, Common Mode
Inrush Current	80A zero-peak max at cold start and any specified line, load, temperature conditions.

2.1.1 Power Factor

over than 0.90 at 90 – 264Vac & max load condition

LGP4750-13PL2 LCD TV Power specification**2.2 Power Output Characteristics**

Output	Voltage Variable range [V]	Rated Current (Min, Max) [Amean]	Voltage Regulation [V]	Ripple Voltage [mVp_p]
3.5V (STBY)	3.325V ~ 3.675V	0.3W Under (15mA)	-	-
		1.4A (0.2~1.4A) (ON condition)	± 5%	250 mVp_p
12V	11.4V ~ 12.6V	1.4A (0.2~1.4A)	± 5%	350 mVp_p
24V	22.8V ~ 25.2V	0.6A (0.1~0.6A)	± 5%	500 mVp_p
LED B+	93.2~118.5V	0.4A (0.380~0.420A)	± 5%	-
	93.2~118.5V	0.4A (0.380~0.420A)		

* On Condition : In a moment of Power_ON Signal activated, the current of 3.5V output should be limited within 40mA(Max) at LCD TV condition for stability.

Do not turn "Power_ON" Signal on at the load condition of 3.5V output, more than 40mA.

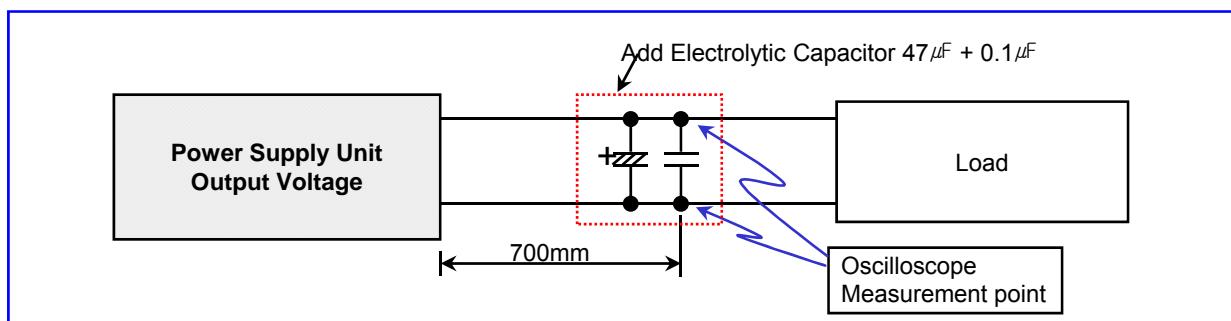
* Total regulation for each output circuit includes the results of input voltage variation, load variation, warm-up drift and temperature change.

* The following instruments shall be used for measuring ripple noise.

1. Probe having impedance ratio of 1:1.

2. Oscilloscope having frequency characteristic of 100MHz or more.

Test Point : power output each pin



* Ripple and noise are measured at the end of output cable which are added a 0.1uF ceramic capacitor and 47uF electrolytic capacitor. (connected parallel)

2.2.1 Stand By Power Consumption

Output Voltage	3.5V (STBY)	12V	24V
Load [A]	0.015	Don't Care (Power-Off)	
Wattage [W]	Less than 0.3W Under (230Vac / 50Hz)		



LGP4750-13PL2 LCD TV Power specification

2.3 Environment Requirement

Operating Temperature Range	-10°C to 40°C (60°C:No Hardware Failure, TV SET Condition)
Operating Humidity Range	30 to 85 %
Storage Temperature Range	-25 to 85 deg.
Storage humidity Range	5 to 90 %
Power board Storage Condition	Temperature 40°C, Humidity 90%
MTBF (Mean Time Between Failure)	50,000 hour
Cooling Condition	Natural Air
Shock	98 m/s Shock test consists of pivoting the power supply, from one edge of its bottom side, on a flat surface (such as wood having thickness of 10mm or more) and allowing the opposite edge to fall from a height of 50mm to this surface. The test is performed three times on each edge of the bottom side of the power supply

2.4 Dielectric Strength Voltage and Insulation Resistance

Dielectric Strength Voltage	AC 1.5KV or DC 2,121V 1 Min 10 mA (Test SPEC) AC 1.8KV 1 Sec 10 mA (PSU Mass Production) Between Primary and All Secondary Circuits.
Insulation Resistance	Insulation resistance shall be more than 8M ohm (at DC 500V) Between Primary Live, Neutral line and Secondary.

* Above tests are performed at room temperature in non-condensing atmospheric conditions

* Frame grounds are connected to secondary circuits.

2.5 Burn-in

More than 2 hours at 45°C(±5°C), Normal input voltage.

AC on/off must be test 1 time after burn-in.

80% Load of specification.



LGP4750-13PL2 LCD TV Power specification

2.6 Interface

Appellation	Explanation	Signal Direction	Action
POWER ON	Vcc Circuit ON/OFF	Input	High : Vcc ON Low : Vcc OFF

2.7 Product Safety



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 4dB minimum margin.

2.8 Construction

Weight	Less than 400g
Unit Size (typ.)	159(W) X 240(D) X 26.1(H)

2.9 Function of protection

Protection	Output Circuit	Trip point		Notes
		Min	Max	
Over Current	STBY 3.5V	1.8A	5.0A	Auto Re-start
	12V	4.0A	15.0A	Latch
	24V	2.5A	8.0A	Latch
Short Circuit	STBY 3.5V	-	-	Auto Re-start
	12V	-	-	Latch
	24V	-	-	Latch

- * This Power Supply has above-mentioned protections.
- * Short circuit protection between different output terminals is not considered.
- * Trip point for over voltage indicates the operating point when the output voltage slowly increases.
- * The conditions of Over Current measurement
Multi output(3.5V,12V,24V) is nominal load state except an over current measurement.

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2.10 Sound Noise Characteristics.

PSU Noise Specification

22.5 dB(a) / 20.u Pa 2.0E-5 Pa

(1/1 octave, A-weighting, to 1khz ~ 16khz Total overall)

Measure Location : Anechoic Room

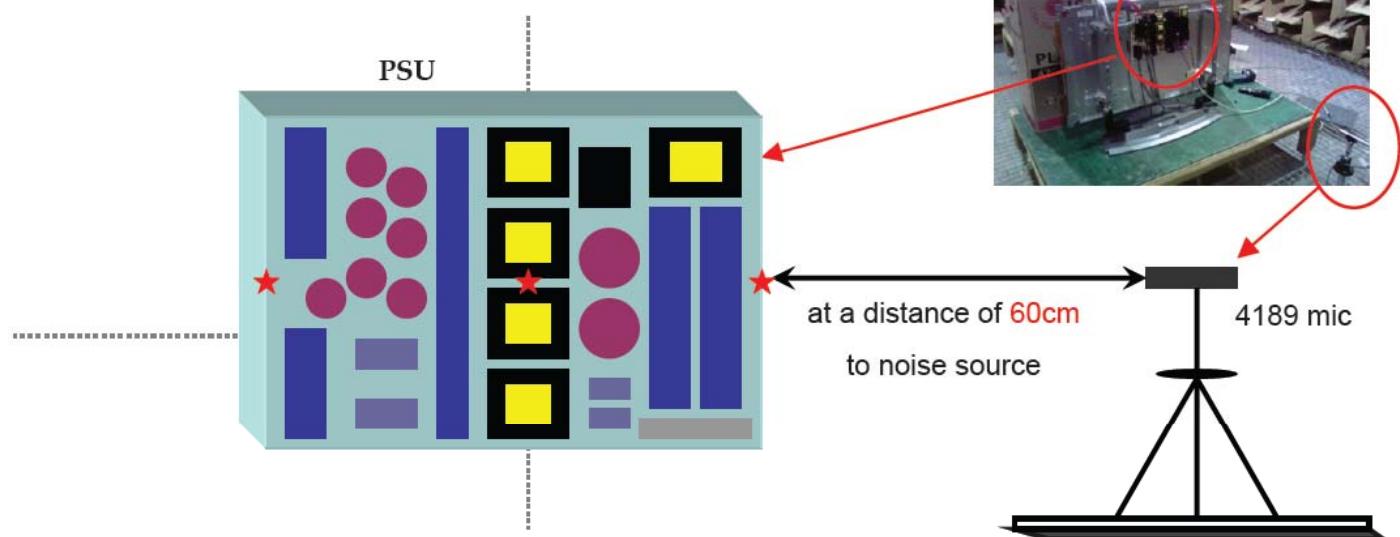
Measure Condition : At a distance of 60cm mic

Full white pattern, at AC 110V/220V

The max specification

(measure 3 points, at PSU center and left & right on the side)

PSU NOISE MEASURE POINT

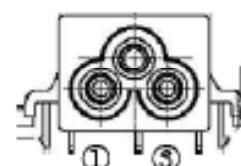




2.11 Connector Specification

2.11.1 Connectors Usage

SK100 DONGIL TECH (DAC-18C3M1 c)	
Pin No.	Assignment
1	LIVE
2	GND
3	NEUTRAL



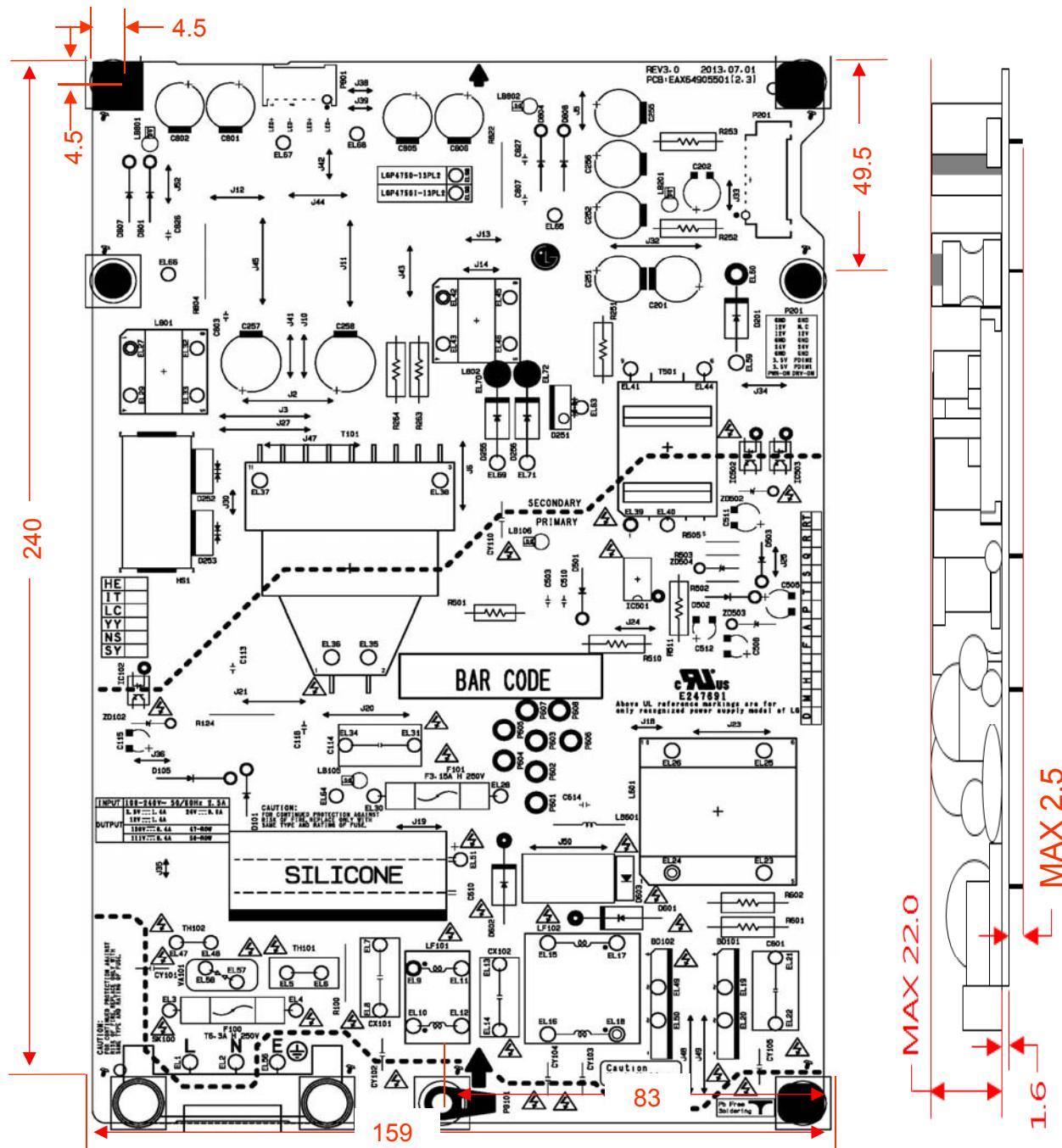
P801 YEONHO (SMAW200A-H07AA2)	
Pin No.	Assignment
1	LED-
2	Remove
3	LED+
4	Remove
5	LED-
6	Remove
7	LED+

P201 YEONHO (SMAW200-H18S2)			
Pin No.	Assignment	Pin No.	Assignment
1	Power on	2	DRV-ON
3	3.5V	4	PDIM1
5	3.5V	6	PDIM2
7	GND	8	GND
9	24V	10	24V
11	GND	12	GND
13	12V	14	12V
15	12V	16	N.C
17	GND	18	GND

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2.12 PCB Dimension.

- 1) Power board PCB : 159mm × 240mm × 1.6(T)mm
2) Component height : Max 22.0mm (Except LF101,LF102 : Max 23.0mm)
3) Lead Cutting : Max 2.5mm
4) PCB Material : FR-1 KB,DS,L,R-8700 CTI-600



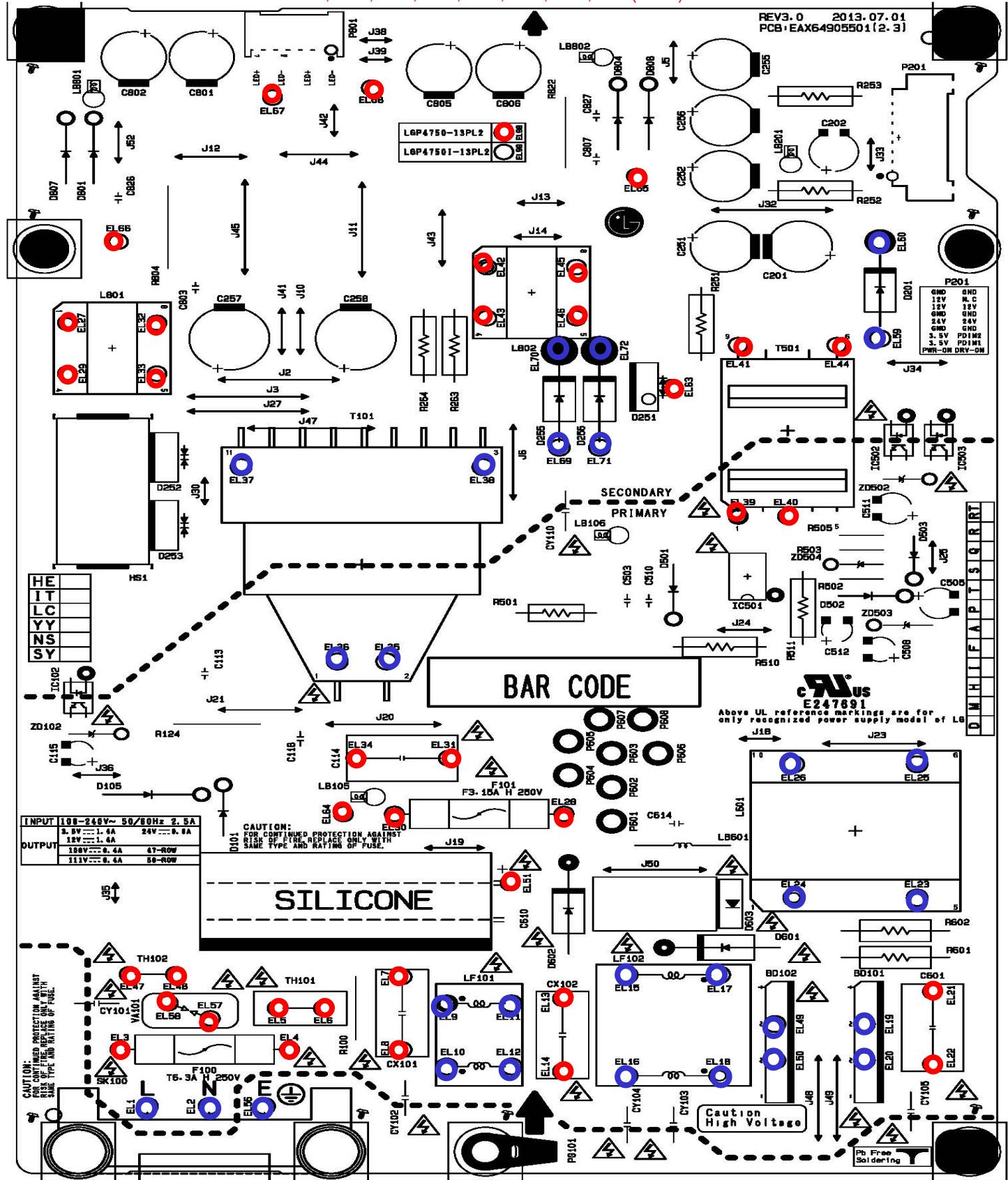


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2.13 Apply to the Eyelet point.

Apply to the Eyelet point 2.0Φ : EL1,EL2,EL9,EL10,EL11,EL12,EL15,EL16,EL17,EL18,EL19,EL20,EL23,EL24,EL25,
EL26,EL35,EL36,EL37,EL38,EL49,EL50,EL56,EL59,EL60,EL69,EL70,EL71,EL72(29EA)

Apply to the small Eyelet point 1.6Φ : EL3,EL4,EL5,EL6,EL7,EL8,EL13,EL14,EL21,EL22,EL27,EL28,EL29,EL30,EL31,
EL32,EL33,EL34,EL39,EL40,EL41,EL42,EL43,EL44,EL45,EL46,EL47,EL48,EL51,EL57,
EL58,EL63,EL64,EL65,EL66,EL67,EL68,EL98(38EA)





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2.14 Electrical Characteristics

No.	Test Item	Test method																		
1	Intermittent Operation stability Test	The switching regulator shall ON/OFF for 20,000 time at an Interval of 10 sec at maximum load, after that electrical Characteristics shall be satisfied.																		
2	Low temperature operation	The switching regulator is left at the operating guarantee Minimum temperature for 2 hours without applying electricity. After that power shall be turned on, and then the electrical Characteristics shall be satisfied.																		
3	Low temperature Storage test Leave At low temperature	The switching regulator is left at minimum storage Temperature for 96 hours or more. Then the switching regulator is left at a room temperature and humidity for 1 hour or more, after that electrical characteristics shall be satisfied.																		
4	Heat cycle storage test	<p>The switching regulator is 10 consecutive temperature cycle that shown below is performed and then leave them at room temperature and humidity for 1 hour or more.</p> <p>After that, electrical characteristics shall be satisfied.</p> <table border="1"><thead><tr><th>Time</th><th>Temperature</th></tr></thead><tbody><tr><td>30 minutes</td><td>25°C</td></tr><tr><td>30 minutes</td><td>25°C -> -20°C</td></tr><tr><td>60 minutes</td><td>Minimum storage temperature (-20°C)</td></tr><tr><td>30 minutes</td><td>-20°C -> 25°C</td></tr><tr><td>30 minutes</td><td>25°C</td></tr><tr><td>30 minutes</td><td>25°C -> 70°C</td></tr><tr><td>60 minutes</td><td>Maximum storage temperature (70°C)</td></tr><tr><td>30 minutes</td><td>70°C -> 25°C</td></tr></tbody></table>	Time	Temperature	30 minutes	25°C	30 minutes	25°C -> -20°C	60 minutes	Minimum storage temperature (-20°C)	30 minutes	-20°C -> 25°C	30 minutes	25°C	30 minutes	25°C -> 70°C	60 minutes	Maximum storage temperature (70°C)	30 minutes	70°C -> 25°C
Time	Temperature																			
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30 minutes	-20°C -> 25°C																			
30 minutes	25°C																			
30 minutes	25°C -> 70°C																			
60 minutes	Maximum storage temperature (70°C)																			
30 minutes	70°C -> 25°C																			
5	Heat shock test	<p>Heat shock test performed under following conditions without applying electricity and then leave them at room temperature and humidity for 1 hour or more.</p> <p>After that, electrical characteristics shall be satisfied.</p> <p>Condition : -45°C(30minutes), 120°C(30minutes),</p> <p>Switching time : Less than 5 minutes, 200 cycles.</p>																		



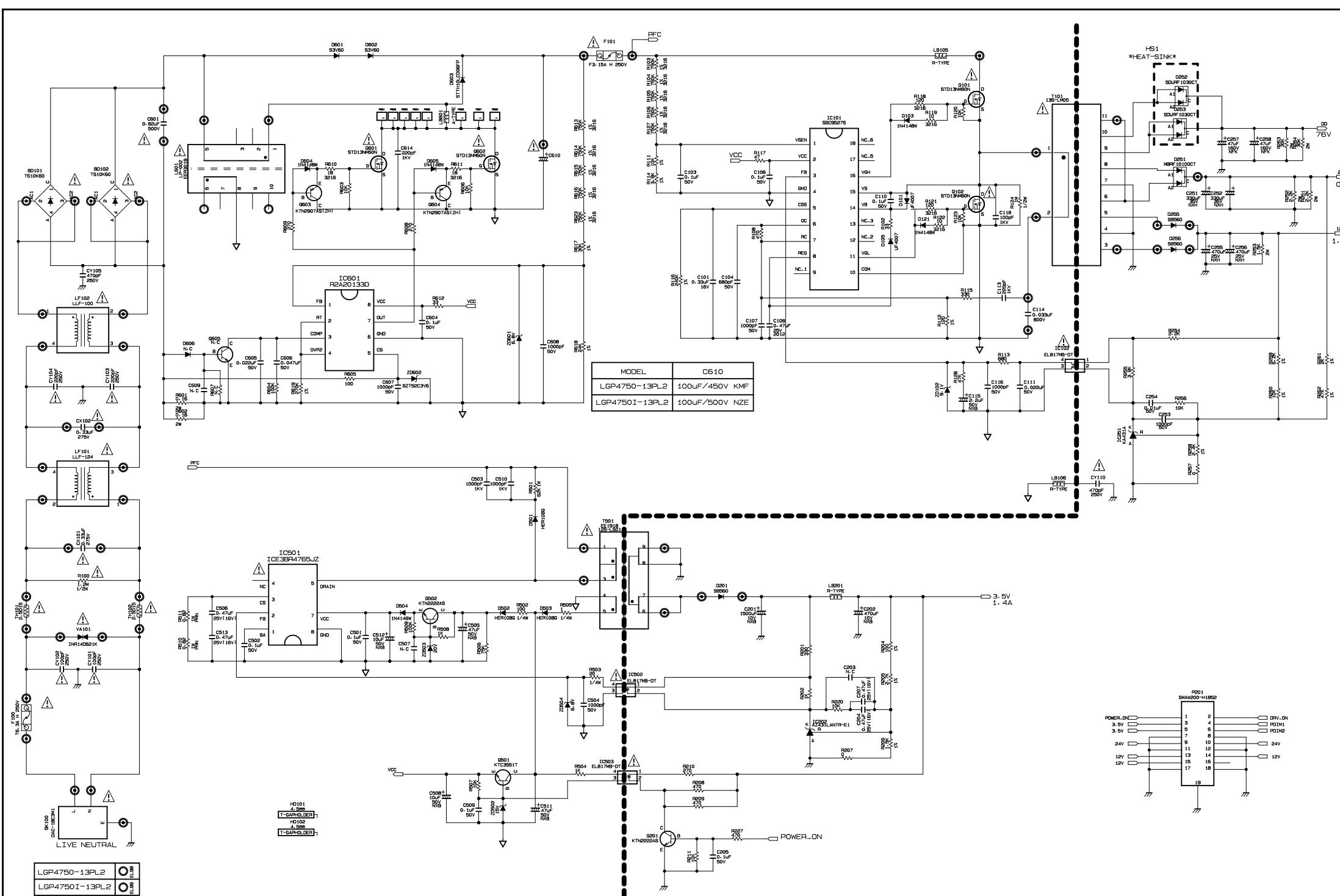
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2.15 Mechanical Characteristics

No.	Test Item	Test method
1	Appearance	<p>There shall be no contaminant or dirt on the switching regulator which has adverse effect on electrical characteristics.</p> <p>There shall be no excessive unevenness or scratches on the plated or painted surface.</p>
2	Vibration	<p>While applying electricity :</p> <p>Vibration frequency : 5 ~ 100Hz</p> <p>Acceleration : 4.9 m/s²</p> <p>Vibration in X,Y,Z direction for 30 minutes</p> <p>While applying electricity :</p> <p>Vibration frequency : 5 ~ 100Hz</p> <p>Acceleration : 14.7 m/s²</p> <p>Vibration in X,Y,Z direction for 30 minutes</p> <p>After that electrical characteristics shall be satisfied.</p> <p>There shall be no damage to appearance and construction.</p>
3	Shock	<p>Shock : 98 m/s²</p> <p>On the oak more than 10mm thickness with the flat face, raise the one side for 50mm, and it carries out each side free fall for three sides.</p> <p>There shall be no damage to appearance and construction.</p>



Schematic Diagram

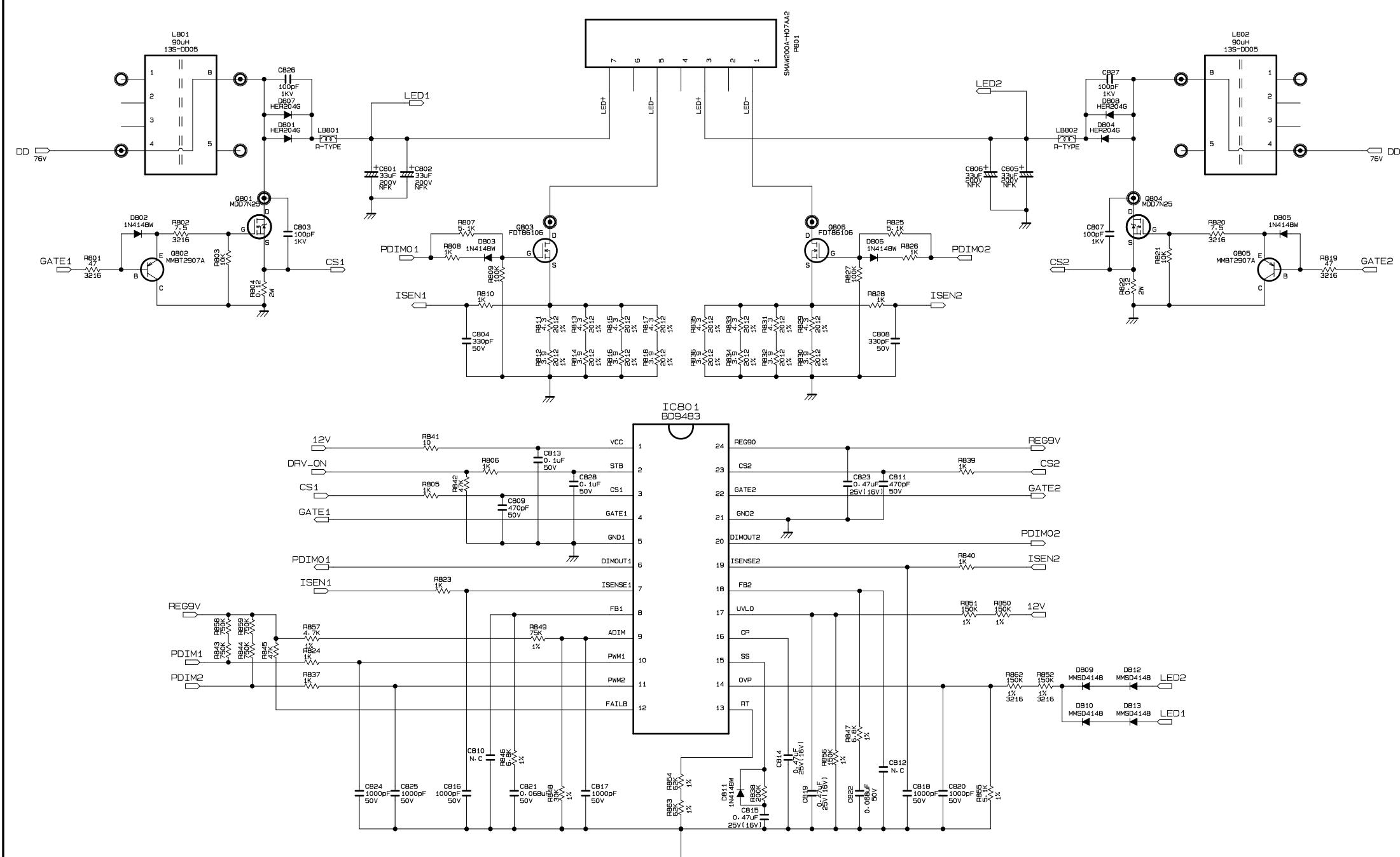


THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

LG ELECTRONICS

MODEL	LGP4750-13PL2	DATE	'13.07.01
BLOCK	PFC STBY MULTI	SHEET	1 / 2

47-ROW: 100V/0.4A
50-ROW: 111V/0.4A



THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

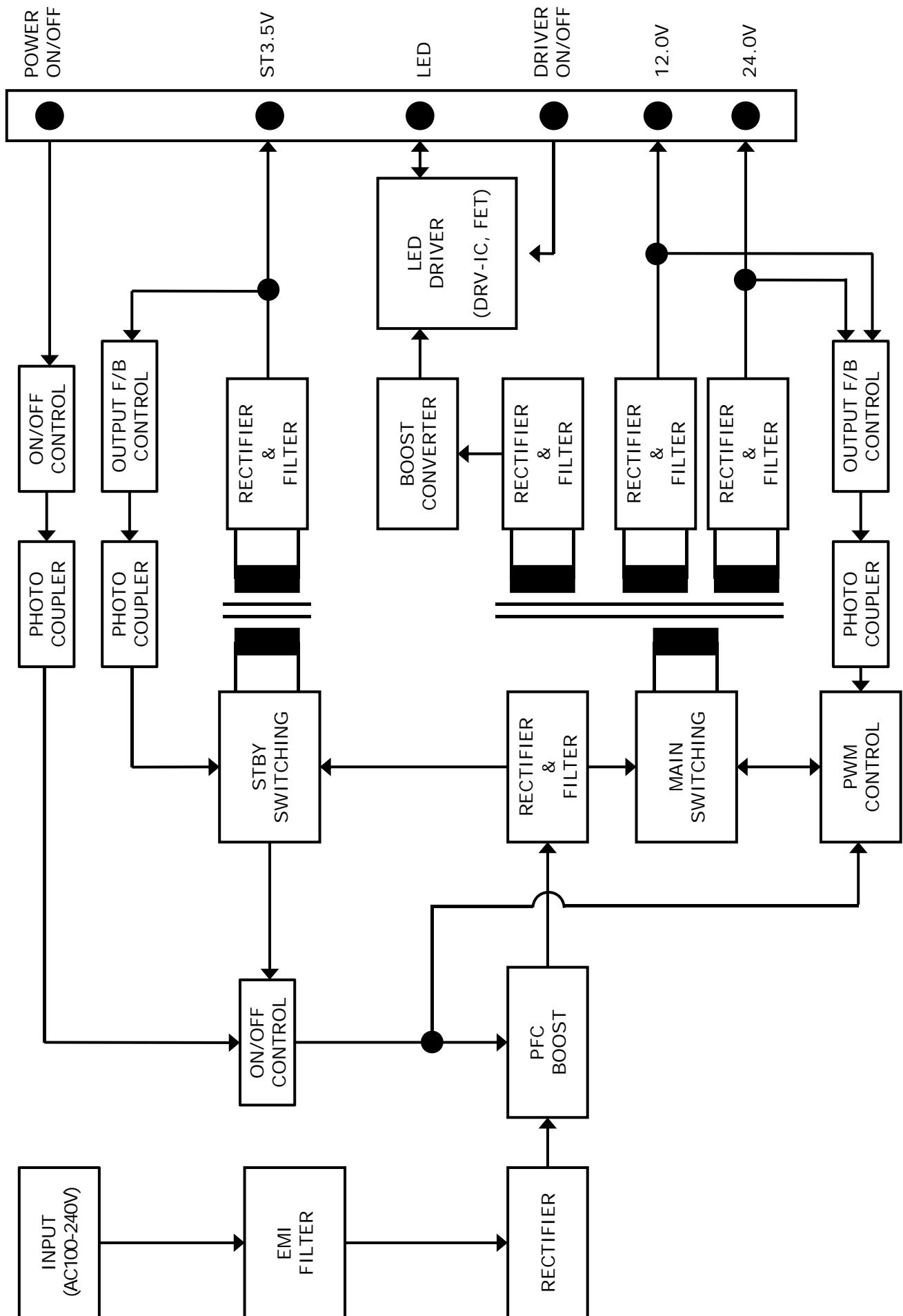
SECRET
LG Electronics

LG ELECTRONICS

MODEL	LGP4750-13PL2	DATE	'13.07.01
BLOCK	PFC\STBY\MULTI	SHEET	2 / 2

Block Diagram

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Parts List



LGP4750-13PL2 LCD TV Power specification

NO.	L/V	Q'ty	UNIT	LOCATION	SPECIFICATION	DESCRIPTION	MAKER
	M				DIODE ASS'Y	HEAT SINK ASS'Y	
1	M	1	EA	HS1	LGP4750-13PL2 HS1(30X15X18.3)	HEAT SINK	MINGXUE HUAPENG YAOFENG
2	M	2	EA	D252,D253	SDURF1030CT 300V 10A ITO-220AB U10A3CIC 300V 10A TO-220IS SFF1005G 300V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
3	M	2	EA	FOR D252,D253	M/S S/W + Φ3.0 7L SILVER PLATE HEAD M/S S/W + Φ3.0 8L PAN HEAD BHM Screw , M3.0 * 6.0L, with Clamfix, Cr3+WH Plating	SCREW	RUI YOU ROEN
4	M	0.02	GR	FOR D252,D253	KD-3 H-SC-7	SILICON GREASE	SANCHEN XUNWEI
	M				LGP4750-13PL2 M1 COMPONENTS	M1 ASS'Y	
5	M	2	EA	BD101,BD102	TS10K60 600V 10A KBJ1006G 600V 10A D10XB60 600V 10A	DIODE	TSC LITEON DACHANG
6	M	1	EA	C610	KMF 100uF 450V M RB P7.5 Φ18X35.5 SK 100uF 450V M RB P7.5 Φ18X35.5	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
7	M	2	EA	CX101,CX102	PCX2 337 0.33uF 275V P15 CTX 0.33uF 275V P15 MPX 0.33uF 275V P15	CAPACITOR, FILM	PILKOR CHENG TUNG EUROPTRONIC
8	M	1	EA	C601	PCMP 372 0.82uF 500V J P15 MPHB 0.82uF 500V J P15 CTH 0.82uF 500V J P15	CAPACITOR, FILM	PILKOR EUROPTRONIC CHENG TUNG
9	M	1	EA	C114	PCMP 384 0.033uF 800V J P15 MPLB 0.033uF 1000V J P15	CAPACITOR, FILM	PILKOR EUROPTRONIC
10	M	2	EA	D601,D602	1N5408G 1KV 3A P20	DIODE	TSC
11	M	1	EA	D603	STTH10LCD06 600V 10A TO-220F BYV29FX-600 600V 9A TO-220F	DIODE	STM NXP
12	M	1	EA	D251	MBRF10100CT 100V 10A ITO-220AB MBRF10U100CT 100V 10A TO-220IS MBRF10100CT 100V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
13	M	3	EA	D201,D255,D256	SB560 60V 5A P20 SB560 60V 5A P20	DIODE	DACHANG LITEON
14	M	1	EA	F100	T6.3A H 250V 215 BROWN(1-LINE) T6.3A H 250V 50CT BROWN(1-LINE)	FUSE, TIME LAG	LITTELFUSE Dainfuse
15	M	1	EA	F101	F3.15A H 250V 216 VIOLET(2-LINE) F3.15A H 250V 50CF VIOLET(2-LINE)	FUSE, FAST ACTING	LITTELFUSE Dainfuse
16	M	3	EA	IC102,IC502,IC503	EL817MB(DT) LTV817M-BN	IC, PHOTO COUPLER	EVERLIGHT LITEON
17	M	1	EA	IC501	ICE3BR4765JZ DIP-8	IC	INFINEON
18	M	1	EA	PG101	YF-002-00131 SPCC 0.4T GND PIN JS-12-75-04 SPCC 0.4T GND PIN	GND REINFORCE	YAOFENG DIHUA
19	M	2	EA	TH101,TH102	MF72-5D15 5Ω 7A Φ15 OUT FORMING WTR15D5 5Ω 8A Φ15 OUT FORMING	THERMISTOR	NSE Xiamen Wanming
20	M	1	EA	L601	LP-002(EER3019)	TRANSFORMER	FEELUX SOOJUNG ZHONGTAI
21	M	2	EA	L801,L802	13S-DD05(90uH)	CHOKE	FEELUX ZHONGTAI
22	M	1	EA	LF101	LLF-124, 28mH	LINE FILTER	FEELUX ZHONGTAI
23	M	1	EA	LF102	LLF-100, 7.7mH SQ2424	LINE FILTER	FEELUX ZHONGTAI
24	M	1	EA	T101	13S-LM05, 440uH (SRV3820)	TRANSFORMER	FEELUX ZHONGTAI
25	M	1	EA	T501	12S-LS01 (EE1918 1.1mH)	TRANSFORMER	FEELUX ZHONGTAI



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26	MI	1	EA	VA101	INR14D621K-CAP 620V Φ14 TUBE WMR14D621K 620V Φ14 TUBE SVC621D-14ATW7 620V Φ14 TUBE NFC14D621KO037WC 620V Φ14 TUBE	VARISTOR	AMOTECH Xiamen Wanming SAMWHA NFC
27	MI	1	EA	SK100	DAC-18C3M1 c	AC SOCKET	DONG IL TECH
28	MI	1	EA	P201	SMAW200-H18S2 18PIN	WAFER	YEONHO
29	MI	1	EA	P801	SMAW200A-H07AA2 4PIN	WAFER	YEONHO
	SMT				LGP4750-13PL2 SMD COMPONENT	SMT ASS'Y	
30	SMT	2	EA	C804,C808	330pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
31	SMT	2	EA	C809,C811	470pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
32	SMT	1	EA	C104	680pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
33	SMT	12	EA	C107,C116,C253,C504,C607, C608,C816,C817,C818,C820, C824,C825	1000pF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
34	SMT	1	EA	C254	0.01uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
35	SMT	2	EA	C111,C605	0.022uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
37	SMT	1	EA	C606	0.047uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
38	SMT	2	EA	C821,C822	0.068uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
39	SMT	10	EA	C103,C106,C110,C205,C501, C502,C509,C604,C813,C828	0.1uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
40	SMT	1	EA	C101	0.33uF 16V K 1608 X7R / 0.33uF 25V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
41	SMT	8	EA	C204,C207,C506,C513,C814, C815,C819,C823	0.47uF 16V K 1608 X7R / 0.47uF 25V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
42	SMT	1	EA	C108	0.47uF 25V K 2012 X7R	CAPACITOR, CHIP	YAGEO HEC
43	SMT	14	EA	D103,D121,D504,D604,D605, D802,D803,D805,D806, D809,D810,D811,D812,D813	1N4148W 100V 150mA SOD-123 1N4148W 100V 150mA SOD-123	DIODE	TSC DIODES
44	SMT	1	EA	ZD602	MMSZ5227B 3.6V SOD-123 BZT52C3V6 3.6V SOD-123 SDZ3V6G 3.6V SOD-123 MMSZ3V6T1G 3.6V SOD-123	DIODE, ZENER	Rectron DIODES AUK ONSEMI
45	SMT	1	EA	ZD601	BZT52C6V8S 6.8V SOD-323 BZT52C6V8S 6.8V SOD-323	DIODE, ZENER	DIODES TSC
46	SMT	4	EA	Q101,Q102,Q601,Q602	STD13NM60N 600V 11A D-PAK FCD380N60E 600V 10.2A D-PAK TK10P60W 600V 9.8A D-PAK	FET	STM FAIRCHILD TOSHIBA
47	SMT	2	EA	Q801,Q804	MDD7N25 250V 6.2A D-PAK KF9N25D 250V 7.5A D-PAK TK8P25DA 250V 7.5A D-PAK	FET	MAGNACHIP KEC TOSHIBA
48	SMT	2	EA	Q803,Q806	FDT86106LZ 100V 3.2A SOT-223 PF610BL 100V 0.9A SOT-223 STN4NF20L 200V 1A SOT-223 MDHT4N20Y 200V 0.85A SOT-223	FET	FAIRCHILD NIKO-SEM STM MAGNACHIP
49	SMT	1	EA	Q501	BCW66GLT SOT-23 NPN 2SC5865 SOT-23 NPN	TRANSISTOR	ONSEMI ROHM
50	SMT	2	EA	Q201,Q502	MMBT2222A 40V 600mA SOT-23 NPN KTN2222AS 40V 600mA SOT-23 NPN SBT2222A 40V 600mA SOT-23 NPN	TRANSISTOR	ONSEMI KEC AUK
51	SMT	4	EA	Q603,Q604,Q802,Q805	MMBT2907A -60V -600mA SOT-23 PNP KTN2907AS -60V -600mA SOT-23 PNP SBT2907A -60V -600mA SOT-23 PNP	TRANSISTOR	ONSEMI KEC AUK
52	SMT	1	EA	IC601	R2A20133D, SOIC-8	IC	RENESAS
53	SMT	1	EA	IC101	SSC9527S, SOIC-18	IC	SANKEN



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54	SMT	1	EA	IC801	BD9483F, SOP-24	IC	ROHM
55	SMT	1	EA	IC202	SJ432BS 1.24V ±0.5% SOT-23 AZ431LANTR-E1 1.24V±0.5% SOT-23	IC	AUK BCD
56	SMT	1	EA	IC251	SNF431BS 2.5V ±0.5% SOT-23 AS431ANTR-E1 2.5V ±0.5% SOT-23 KIA431BM 2.5V ±0.5% SOT-23	IC	AUK BCD KEC
57	SMT	2	EA	R207,R257	0Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
58	SMT	1	EA	R841	10Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
59	SMT	2	EA	R102,R612	33Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
60	SMT	1	EA	R117	47Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
61	SMT	1	EA	R605	100Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
62	SMT	3	EA	R210,R608,R609	270Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
63	SMT	2	EA	R115,R201	330Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
64	SMT	4	EA	R108,R208,R209,R227	470Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
65	SMT	1	EA	R113	680Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
66	SMT	14	EA	R202,R504,R508,R805,R806, R808,R810,R823,R824,R826, R828,R837,R839,R840	1KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
67	SMT	1	EA	R254	2.2KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
68	SMT	1	EA	R255	3.9KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
69	SMT	2	EA	R807,R825	5.1KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
70	SMT	10	EA	R120,R123,R211,R220,R256, R507,R603,R606,R803,R821	10KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
71	SMT	3	EA	R128,R842,R845	47KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
72	SMT	1	EA	R506	75KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
73	SMT	4	EA	R509,R604,R809,R827	100KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
74	SMT	4	EA	R843,R844,R858,R859	750KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
75	SMT	1	EA	R838	200KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
76	SMT	1	EA	R204	100Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
77	SMT	1	EA	R112	120Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
78	SMT	1	EA	R206	1.5KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN



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79	SMT	1	EA	R261	2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
80	SMT	1	EA	R258	2.4KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
81	SMT	1	EA	R205	2.7KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
82	SMT	1	EA	R114	3.9KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
83	SMT	1	EA	R857	4.7KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
84	SMT	1	EA	R855	5.1KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
85	SMT	1	EA	R259	6.2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
86	SMT	2	EA	R846,R847	6.8KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
87	SMT	2	EA	R111,R260	10KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
88	SMT	1	EA	R618	24KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
89	SMT	2	EA	R617,R848	30KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
90	SMT	1	EA	R262	47KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
91	SMT	2	EA	R854,R863	62KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
92	SMT	1	EA	R849	75KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
93	SMT	3	EA	R850,R851,R856	150KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
94	SMT	1	EA	R619	270KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
95	SMT	1	EA	R116	240KΩ F 1608	RESISTOR, CHIP	YAGEO TZAIIYUAN
96	SMT	8	EA	R812,R814,R816,R818,R830, R832,R834,R836	3.9Ω F 2012	RESISTOR, CHIP	YAGEO TZAIIYUAN
97	SMT	8	EA	R811,R813,R815,R817,R829, R831,R833,R835	4.3Ω F 2012	RESISTOR, CHIP	YAGEO TZAIIYUAN
98	SMT	2	EA	J29,J46	0Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
99	SMT	2	EA	R802,R820	7.5Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
100	SMT	2	EA	R119,R122	10Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
101	SMT	2	EA	R610,R611	18Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
102	SMT	2	EA	R801,R819	47Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
103	SMT	2	EA	R118,R121	120Ω J 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
104	SMT	2	EA	R852,R862	150KΩ F 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN
105	SMT	10	EA	R103,R104,R105,R106,R127, R613,R614,R615,R616,R623	750KΩ F 3216	RESISTOR, CHIP	YAGEO TZAIIYUAN



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106	SMT	0.5	GR		NE8800T	BOND	FUJI
	AI				LGP4750-13PL2 AI COMPONENTS	AI ASSY	
107	AI	2	EA	CY101,CY102	CD 100pF 250V K P10, Y1 CT81 100pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
108	AI	2	EA	CY103,CY104	CD 220pF 250V K P10, Y1 CT81 220pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
109	AI	2	EA	CY105,CY110	CD 470pF 250V K P10, Y1 CT81 470pF 250V K P10, Y1	CAPACITOR, CERAMIC	TDK YINANDON
110	AI	1	EA	C115	NXB 2.2uF 50V MP5 Φ 5X11 SG 2.2uF 50V MP5 Φ 5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
111	AI	2	EA	C508,C512	NXB 10uF 50V MP5 Φ 5X11 SG 10uF 50V MP5 Φ 5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
112	AI	2	EA	C505,C511	NXB 47uF 50V MP5 Φ 6.3X11 SG 47uF 50V MP5 Φ 6.3X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
113	AI	1	EA	C201	NXB 1500uF 10V MP5 Φ 10X20 SG 1500uF 10V MP5 Φ 10X20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
114	AI	1	EA	C202	NXB 470uF 10V MP5 Φ 8X11.5 SG 470uF 10V MP5 Φ 8X12	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
115	AI	2	EA	C251,C252	NXH 330uF 35V MP5 Φ 10X12.5 MG 330uF 35V MP5 Φ 10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
116	AI	2	EA	C255,C256	NXH 470uF 25V MP5 Φ 10X12.5 MG 470uF 25V MP5 Φ 10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
117	AI	2	EA	C257,C258	NFK 47uF 160V MP5 Φ 12.5X20 SE 47uF/160V MP5 Φ 12.5*20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
118	AI	4	EA	C801,C802,C805,C806	NFK 33uF 200V MP5 Φ 10X20 SE 33uF 200V MP5 Φ 10X20	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
119	AI	5	EA	C118,C803,C807,C826,C827	CK45 100pF 1KV K P5 125°C CT81 100pF 1KV K P5 125°C CT81 100pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
120	AI	2	EA	C113,C614	CK45 220pF 1KV K P5 125°C CT81 220pF 1KV K P5 125°C CT81 220pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
121	AI	2	EA	C503,C510	CK45 1000pF 1KV K P5 125°C CT81 1000pF 1KV K P5 125°C CT81 1000pF 1KV K P5 125°C	CAPACITOR, CERAMIC	TDK YINANDON Kunshan Wansheng
122	AI	5	EA	D101,D105,D501,D502,D503	UF4007 1KV 1A DO-41 UF4007 1KV 1A DO-41	DIODE	TSC DACHANG
123	AI	4	EA	D801,D804,D807,D808	HER204G 300V 2A DO-41 HER204G 300V 2A DO-41	DIODE	TSC DACHANG
124	AI	1	EA	ZD504	1N5235B 6.8V DO-35	DIODE, ZENER	TSC
125	AI	1	EA	ZD102	1N5239B 9.1V DO-35	DIODE, ZENER	TSC
126	AI	1	EA	ZD502	1N5245B 15V DO-35	DIODE, ZENER	TSC
127	AI	1	EA	ZD503	1N5250B 20V DO-35	DIODE, ZENER	TSC
128	AI	38	EA	EL3,EL4,EL5,EL6,EL7, EL8,EL13,EL14,EL21,EL22, EL27,EL28,EL29,EL30,EL31, EL32,EL33,EL34,EL39,EL40, EL41,EL42,EL43,EL44,EL45, EL46,EL47,EL48,EL51,EL57, EL58,EL63,EL64,EL65,EL66, EL67,EL68,EL98	1.6X3.0	EYELET	YAOFENG DELIKANG
129	AI	29	EA	EL1,EL2,EL9,EL10,EL11, EL12,EL15,EL16,EL17,EL18, EL19,EL20,EL23,EL24,EL25, EL26,EL35,EL36,EL37,EL38, EL49,EL50,EL56,EL59,EL60, EL69,EL70,EL71,EL72	2.0X3.0	EYELET	YAOFENG DELIKANG
130	AI	8	EA	P601,P602,P603,P604,P605, P606,P607,P608	SSJS236-6-3 (6mm Under)	GT PIN	YAOFENG DELIKANG
131	AI	1	EA	LB601	BFS3550A0L SINGLE AXIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA
132	AI	5	EA	LB105,LB106,LB201,LB801, LB802	BFS3550R2F SINGLE RADIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA
133	AI	35	EA	J2,J3,J5,J6,J10, J11,J12,J13,J14,J18, J19,J20,J21,J23,J24, J25,J27,J30,J32,J33, J34,J35,J36,J38,J39, J41,J42,J43,J44,J45, J47,J48,J49,J50,J52	Φ0.6	JUMPER WIRE	TZAI YUAN HUIHUA
134	AI	1	EA	R505	CF 1Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN
135	AI	1	EA	R503	CF 20Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN
136	AI	1	EA	R502	CF 100Ω 1/4W J SMALL	RESISTOR, CARBON FILM	TZAI YUAN



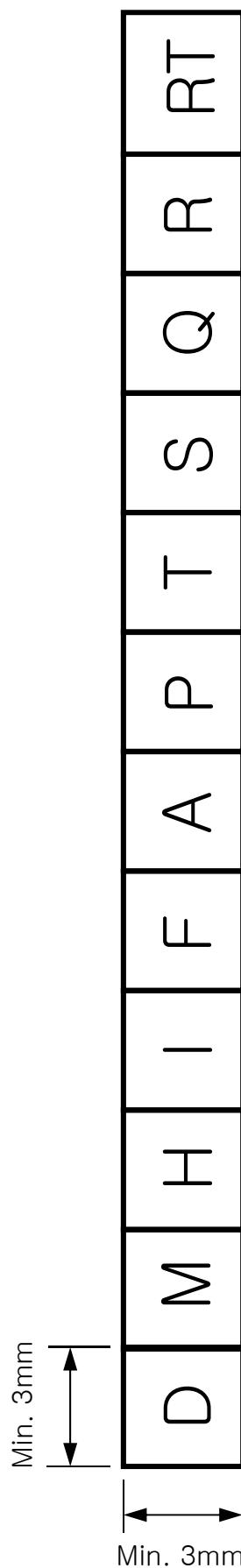
LGP4750-13PL2 LCD TV Power specification

137	AI	1	EA	R501	MOF 62KΩ 1W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
138	AI	1	EA	R253	MOF 1.5KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
139	AI	2	EA	R251,R252	MOF 2.2KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
140	AI	2	EA	R263,R264	MOF 30KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	TZAI YUAN
141	AI	1	EA	R124	MSR37 1MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	PILKOR
142	AI	1	EA	R100	MSR37 1.2MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	PILKOR
143	AI	2	EA	R510,R511	WNPS 0.82Ω 1W J SMALL	RESISTOR, WIRE WOUND	ABCO
144	AI	2	EA	R804,R822	WNPS 0.12Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO
145	AI	2	EA	R601,R602	WNPS 0.16Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO
146	AI	1	EA	PCB	LGP4750-13PL2(159X240X1.6T) FR-1 KB,DS,L, 1oz CTI-600	PCB	SHANGHAI WANZHENG NEW TRIUNION WYT
	ETC				LGP4750-13PL2 SUBSIDIARY MATERIALS		
147	ETC	1	EA		40X8 NY WHITE 93CODE 19DIGIT	BAR CODE	QIUJING
148	ETC	15.00	GR		ES2044H & ES2482W SD-5 UB-5601	BOND (RTV)	CANADA SANCHEN U-BOND
149	ETC	0.05	EA		630 x 425 x 205 x 18	BOX CARTON	WUJIANG ZHENLONG SUZHOU JIADELONG
150	ETC	0.10	EA		615 x 410 x t8	BOX PAD	WUJIANG ZHENLONG SUZHOU JIADELONG
151	ETC	0.55	EA		620 x 165 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
152	ETC	0.20	EA		415 x 165 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
153	ETC	0.20	EA		145 x 250 x t25	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
154	ETC	1.00	EA		260 x 440	BUBBLE SHEET	LIYUAN WINWORLD
155	ETC	25	GR		ILF-710(kg)	FLUX	ION ELEC
156	ETC	15	GR		SAC0307 A+ SN:99%, AG:0.3%, CU:0.7%	SOLDER BAR	DYFENCO
157	ETC	5	GR		SAC0307 A+ SN:99%, AG:0.3%, CU:0.7%	SOLDER WIRE	DYFENCO
158	ETC	3.00	GR		OKE-1257 1-2577LV / 1-2577 LCD2577D	BOND (RTV) Apply to PFC IC601 (Apply Bottom of PCB)	OKONG DOW CORNING DOW CORNING

Process Marking



공정표시 MARK (PCB SILK)



D : 자삽

M : SMD

H : 수삽 최종

I : ICT

F : 1차 성능

A : AGING

P : HI-POT

T : 최종 검사 (ATE)

S : SET 검사

Q : QC 검사

R : 불량 수리

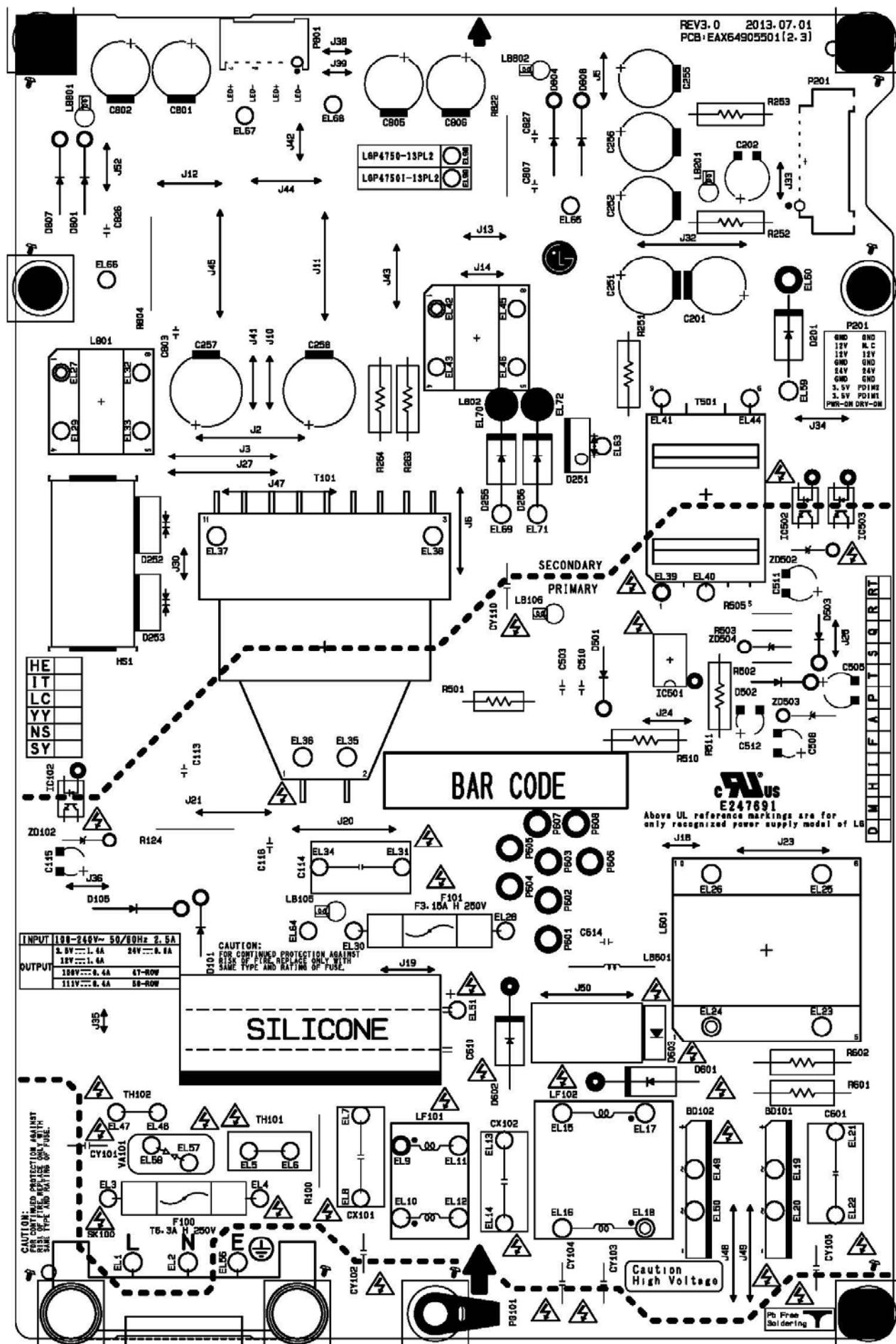
RT : 양산 보증 시험



PCB Layout

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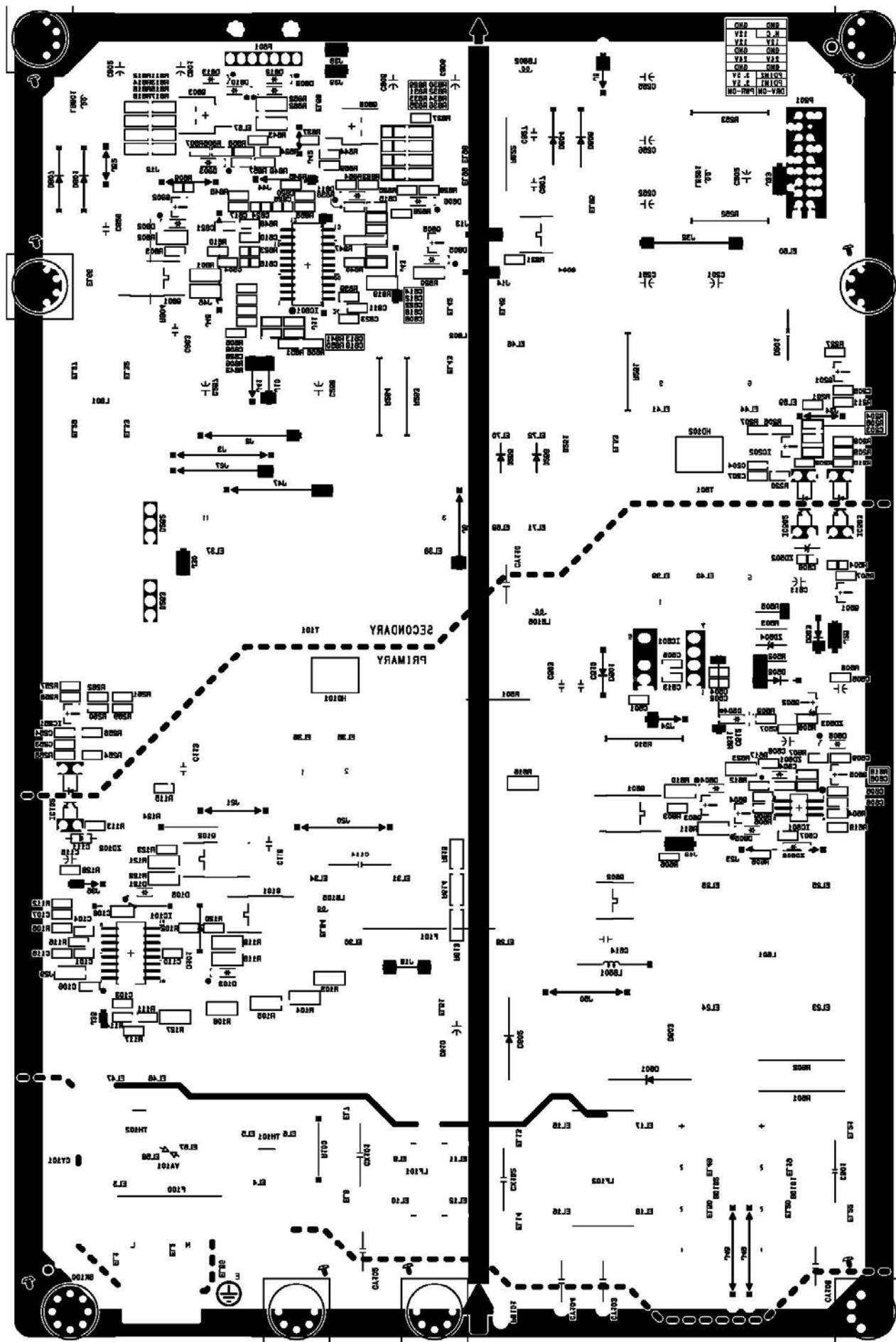
Top Silk





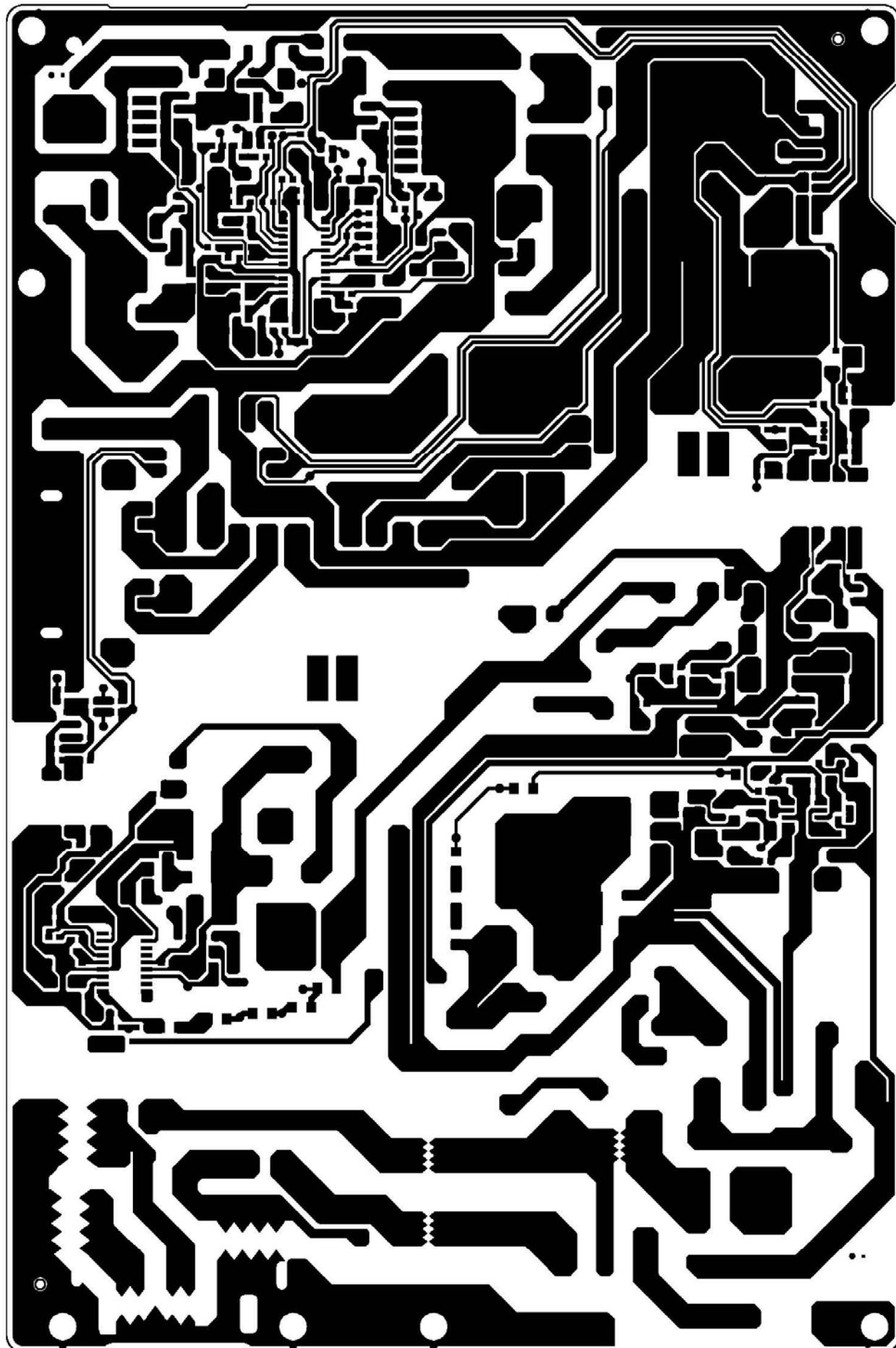
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Bottom Silk :



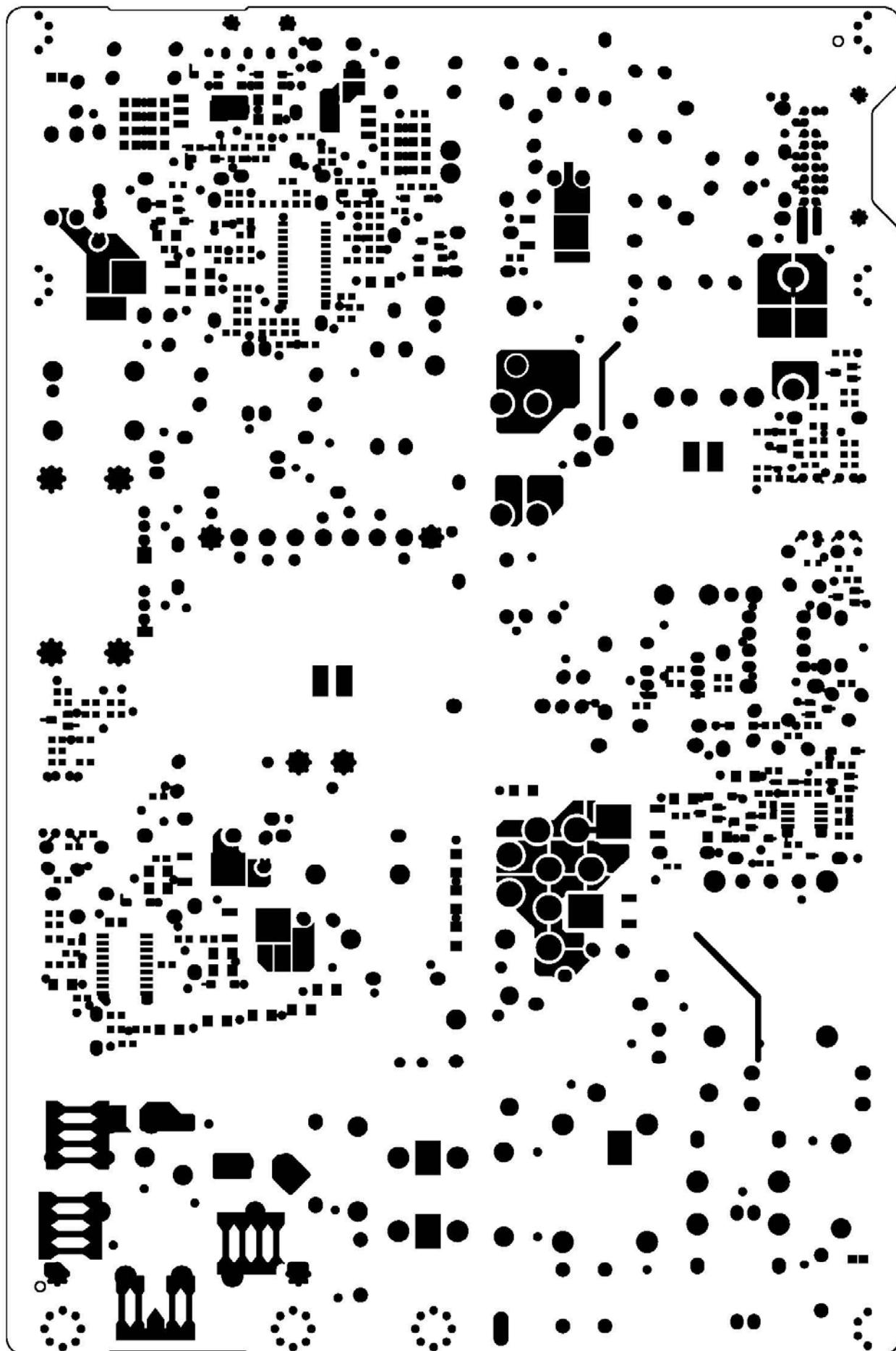


Bottom Pattern :





Bottom Solder mask :



Safety Parts



LGP4750-13PL2 LCD TV Power specification

Object/part No.	Manufacturer / Trademark	Type / Model	Value / Rating	Parts Marking (實物)	standard	mark(s) of conformity1)
AC input connector, (SK100)	Dongil Tech	DAC-18C3M1	250V / 2.5A	DAC-18C3M1	IEC 60320-1	
Fuse, (F100)	Littelfuse Inc.	215 Series	T6.3A H / 250V	LF.T6.3AH250VP	IEC 60127-2	
	WALTER FUSE	TSC		TSC6.3A250V(P)	IEC 60127	
	BUSSMANN	S505		T6.3AH250V	IEC 60127-2	
	Dainfuse	50CT		T6.3AH 250V	IEC 60127	
	CONURE	UDA-A		UDA-A T6.3A H 250V	IEC 60127-3-5	
Fuse, (F101)	Littelfuse Inc.	216.XXXX	F3.15A H / 250V	LF.F3.15AH250VP	IEC 60127-2	
	WALTER FUSE	FSC		FSC3.15A250V(P)	IEC 60127	
	Dainfuse	50CF		F3.15AH250V	IEC 60127	
	CONURE	UBM-A		UBM-A 3.15A 250V	IEC 60127-2-1	
Line Filter, (LF101)	TNC	CV620280SHCHF	Rated 130°C	620280 S3	IEC 60065	Test in appliance
	Dongil Tech	LSD00280		620280		
	FEELUX					
	ZHONGTAI					
	JIANGSU CHANNELON ELECTRONIC GROUP	LLF-124		LLF-124		
	SOOTUNG					
Base material of Linefilter (LF101)	MOMENTIVE SPECIALTY CHEMICALS GMBH	PF 2736	V-0, 150°C	UL, E61040 UL, E59481 UL, E67171 UL, E130155 UL, E121254 UL, E44716 UL, E45587 UL, E41797 UL, E109088 UL, E215991	UL	Test in appliance
Alt	Chang Chun Plastics Co., Ltd	T375HF, T375J	V-0, 150°C			
Alt	LG CHEMICAL LTD	LITPOX GP-2306F	V-0, 140°C			
Alt	NAN YA PLASTICS CORP PLASTICS 4TH DIV	1403G3, 1403G6	V-0, 130°C			
Alt	SAMYANG CORPORATION	1500GN-30	V-0, 130°C			
Alt	Rhodia Engineering plastics	A 50H1	V-0, 130°C			
Alt	Sabic Innovative Plastics Japan LLC	420SE0	V-0, 130°C			
Alt	TORAY INDUSTRIES INC	A604 E604	V-0, 130°C			
Alt	POLY PLASTICS CO., LTD	1140486	V-0, 130°C			
Alt	SK CHEMICALS CO., LTD	Ecotran 1040G	V-0, 130°C			
Line Filter, (LF102)	FEELUX		Rated 130°C	LLF-100	IEC 60065	Test in appliance
	JIANGSU CHANNELON ELECTRONIC GROUP					
	SOOTUNG					
	JIANGSU TAICHANG ELECTRONICS CO., LTD.	LLF-100				
	ZHONGTAI					
Base material of Linefilter (LF102)	MOMENTIVE SPECIALTY CHEMICALS GMBH	PF 2736	V-0, 150°C	UL, E61040 UL, E59481 UL, E67171 UL, E130155 UL, E121254 UL, E41797	UL	Test in appliance
Alt	Chang Chun Plastics Co., Ltd	T375HF, T375J	V-0, 150°C			
Alt	LG CHEMICAL LTD	LITPOX GP-2306F	V-0, 140°C			
Alt	NAN YA PLASTICS CORP PLASTICS 4TH DIV	1403G3, 1403G6	V-0, 130°C			
Alt	SAMYANG CORPORATION	1500GN-30	V-0, 130°C			
Alt	Toray Industrial INC	A604 E604	V-0, 200°C			
Varistor, (VA101)	Samwha	SVC621D-14A	Climatic category: 40/085/21 Maximum continuous voltage: 385V _{a.c.} Current pulse rating: 6 kV/3 kA	SVC 621-14	CECC 42000/1 A1 CECC 42200/1 A1 CECC 42201 IEC 60065 Clause 14.12 and IEC 60950-1 Annex Q	
	Amotech Co., Ltd.	INR 14D621K				
	Xiamen Wanming Electronics Co.,Ltd	WMR14D621K				
	Guangxi New Future Information Industry Co.,Ltd	NFC 14D621K				
Bridge Diode, (BD101,BD102)	Lite-on	KBJ1006G	Min 600V / 10A	KBJ1006G	IEC 60065	Test in appliance
	DACHANG	D10XB60		D10XB60		
	TSC	TS10R60		TS10R60		
	GULF	G10XB60		G10XB60		
	RECTRON	RS1007M		RS1007M		
	SHINDENGEN	D10XB60		D10XB60		
X-cap, (CX101,CX102)	Pilkor	PCX2 337	Min 275V~ / (CX101= Max 0.33uF, CX102= Max 0.33uF)	PCX2 337 MKP	IEC 60384-14 UL1414	
	Okaya	LE		LE		
	EUROPTRONIC	MPX		MPX		
	CHENG TUNG	CTX		CTX		
Thermistor, (TH101,TH102)	DSC	DSC 2.5D-15	2.5ohm at 25°C	DSC 2.5D-15	IEC 60065	
	Xiamen Wanming Electronics Co.,Ltd	WTR15D2R5		WTR15D2R5		
	JIANGSU XINGSHUN ELECTRONICS CO., LTD	2.5D2-15		2.5D2-15		
	Smart	ICL-5W		ICL-05 2.5ROOMSMT		
	NANJING SHIHENG ELECTRONICS CO., LTD	MF72 2.5D15		MF72 2.5D15		
Elec.Cap,(C610)	SAMYOUNG	KMF	450V / Max 100uF / 105°C	KMF450V100uF	IEC 60950-1	Test in appliance
	SUSCON	SK		SK450V100uF		
	SAMYOUNG	NZE		NZE500V100uF		
Switching TR, (Q601,Q602,Q101,Q102)	SUSCON	SK	500V / Max 100uF / 105°C	SK500V100uF	IEC 60950-1	Test in appliance
	STMICRO	STD13NM60N		I3NM60N		
	FAIRCHILD	FCD380N60E		FCD380N60E		
INFINEON	TOSHIBA	TK10A60W	Min. 600V / Min. 8A	K10A60W	IEC 60950-1	Test in appliance
	INFINEON	IPM90R450E6		GR450E6		
Flyback IC, (IC501)	INFINEON	ICE3BR4765JZ	Min. 650 V / Min. 1.67A	SBR4765JZ	IEC 60950-1	Test in appliance

LGP4750-13PL2 LCD TV Power specification

1) an asterisk indicates a mark which assures the agreed level of surveillance
Remarks: *) Large volume capacitors exceeding volume 1750nm³

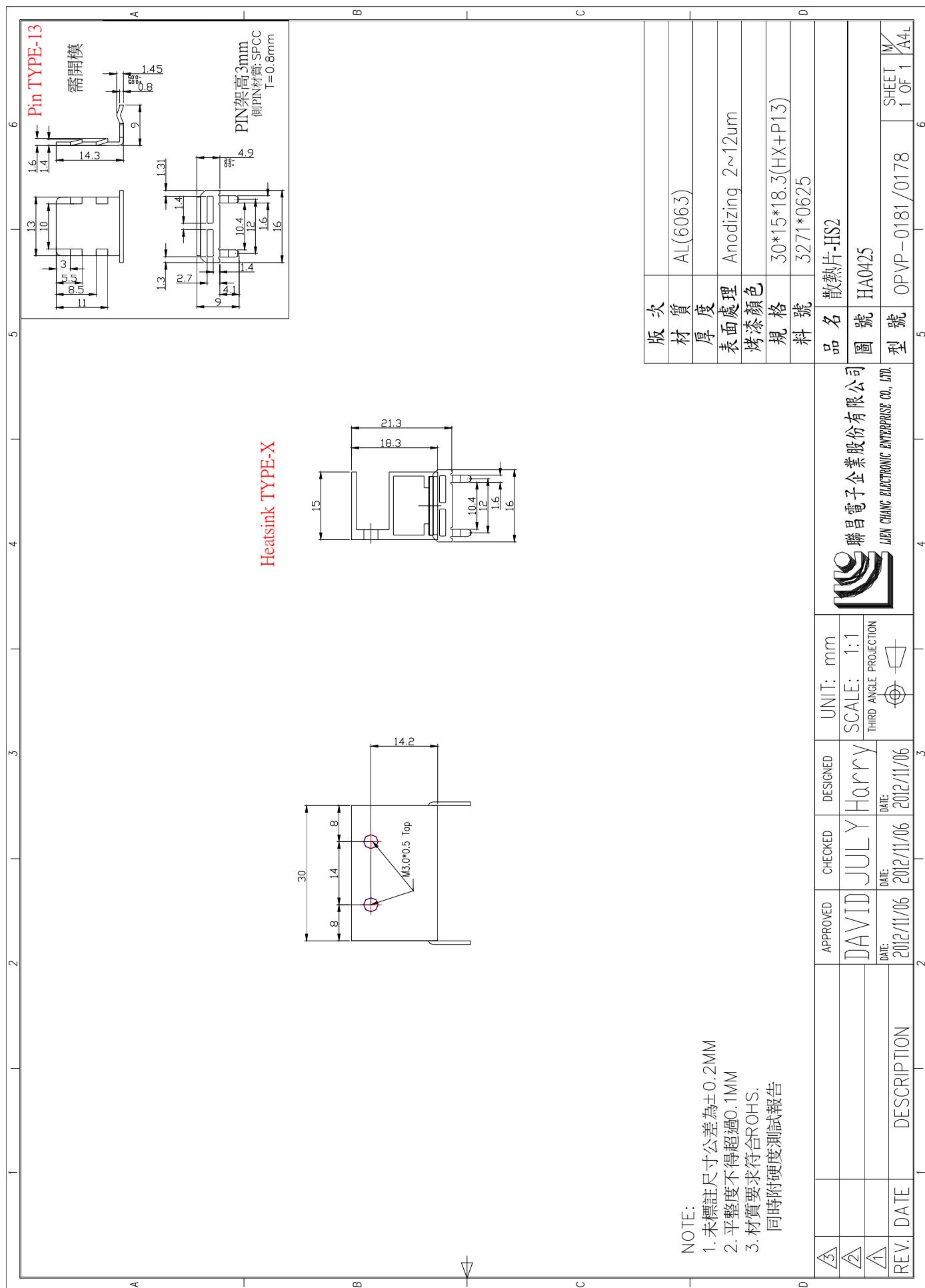
Remarks. *) Large volume capacitors exceeding v.



Mechanical Drawing



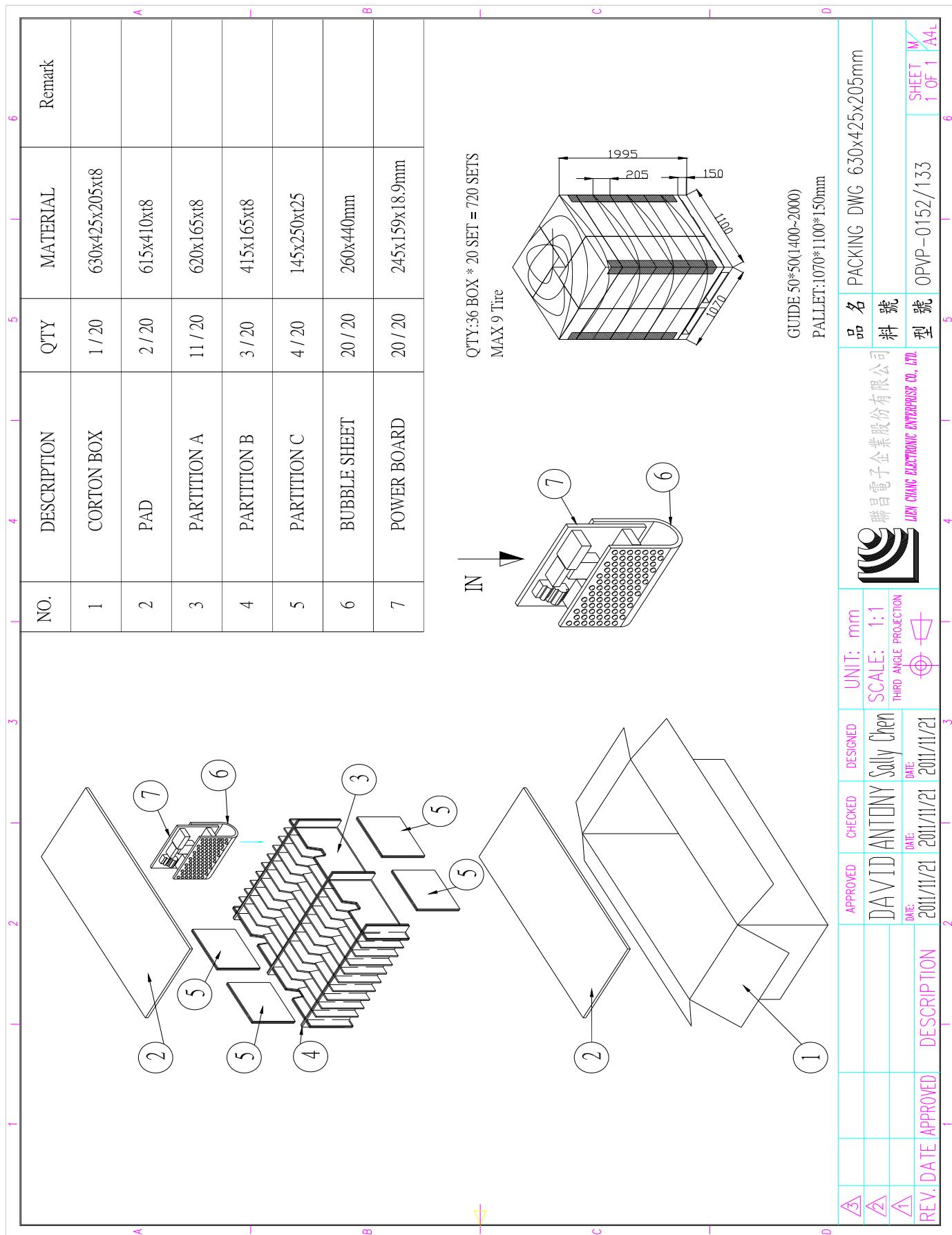
LGP4750-13PL2 LCD TV Power specification





Packing Drawing

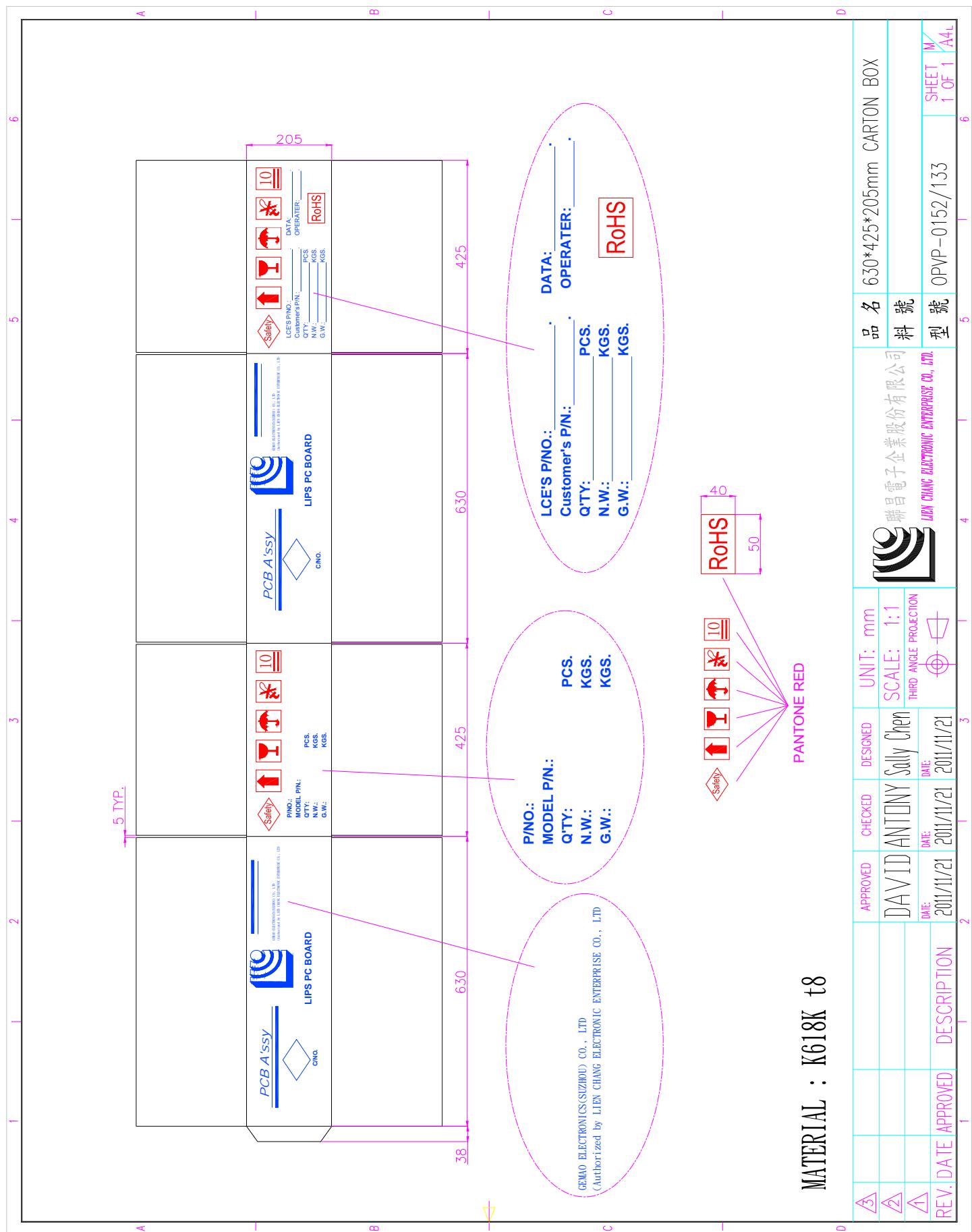
LGP4750-13PL2 LCD TV Power specification



APPROVED	CHECKED	DESIGNED	UNIT: mm	1:1	PACKING DWG 630x425x205mm
DAVID ANTHONY	Sally Chen			THIRD ANGLE PROJECTION	
DATE: 2011/11/21	DATE: 2011/11/21	DATE: 2011/11/21			
REV. DATE APPROVED	DESCRIPTION				

OPVP-0152/133	1 OF 1	Sheet M A4L

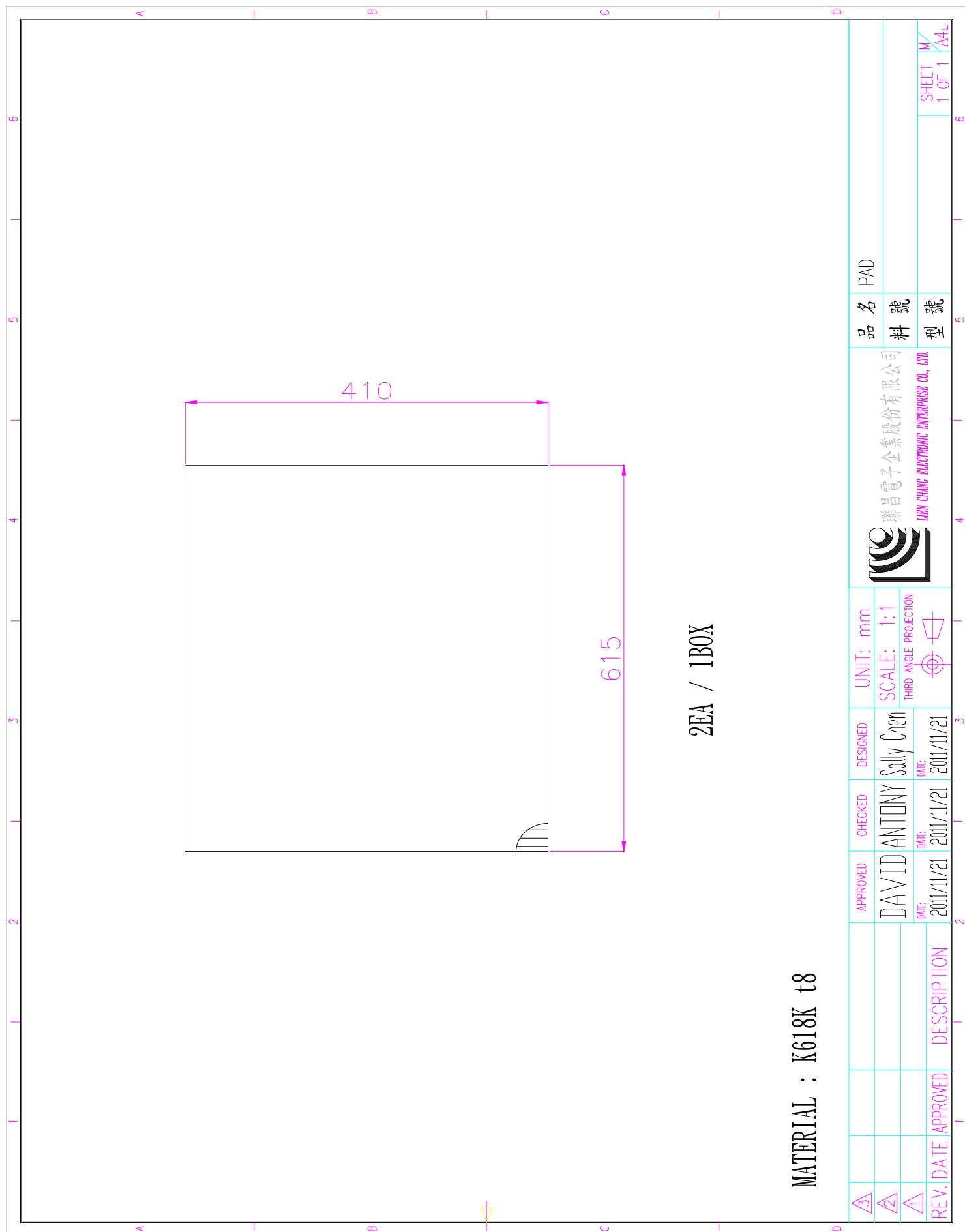
LGP4750-13PL2 LCD TV Power specification



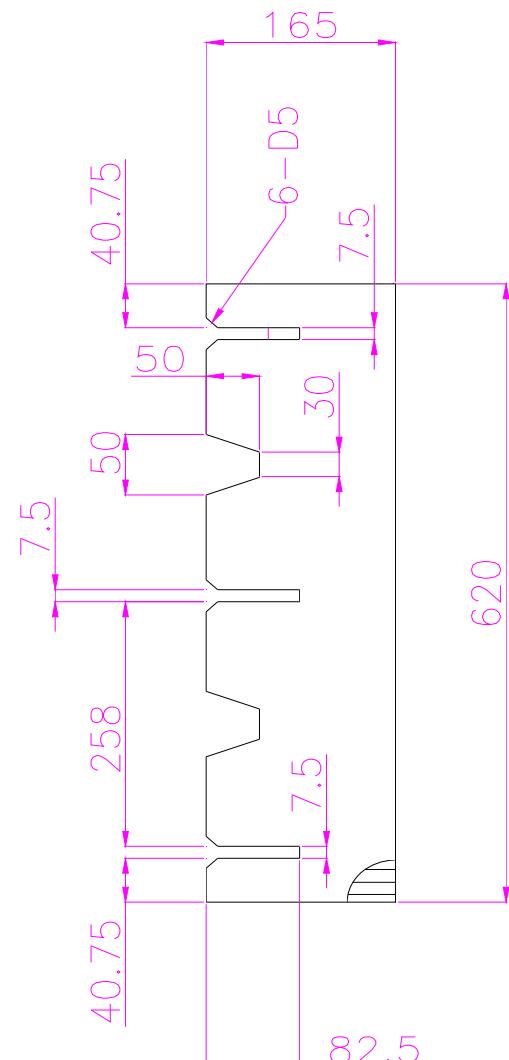
MATERIAL : K618K t8



LGP4750-13PL2 LCD TV Power specification



LGP4750-13PL2 LCD TV Power specification



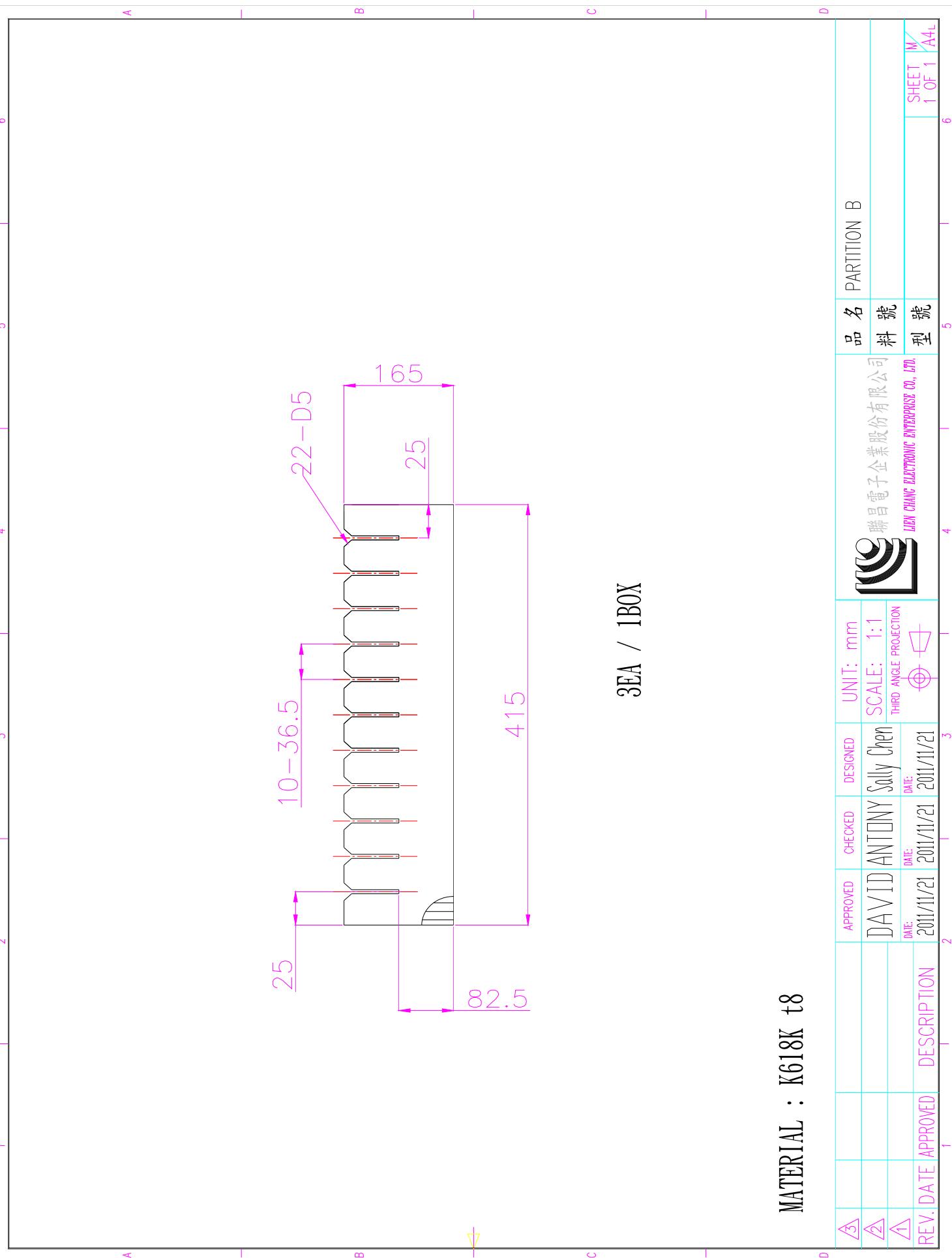
11EA / 1BOX

MATERIAL : K618K t8

△	APPROVED	CHECKED	DESIGNED	UNIT: mm	PARTITION A
△	DAVID ANTHONY	Sally Chen	SCALE: 1:1	聯昌電子企業股份有限公司	品名
△	DATE: 2011/11/21	DATE: 2011/11/21	THIRD ANGLE PROJECTION	LLEN CHANG ELECTRONIC ENTERPRISE CO., LTD.	料號
△	REV. DATE APPROVED	DESCRIPTION	DATE: 2011/11/21	2011/11/21	型號
				SHEET N 1 OF 1 A4L	

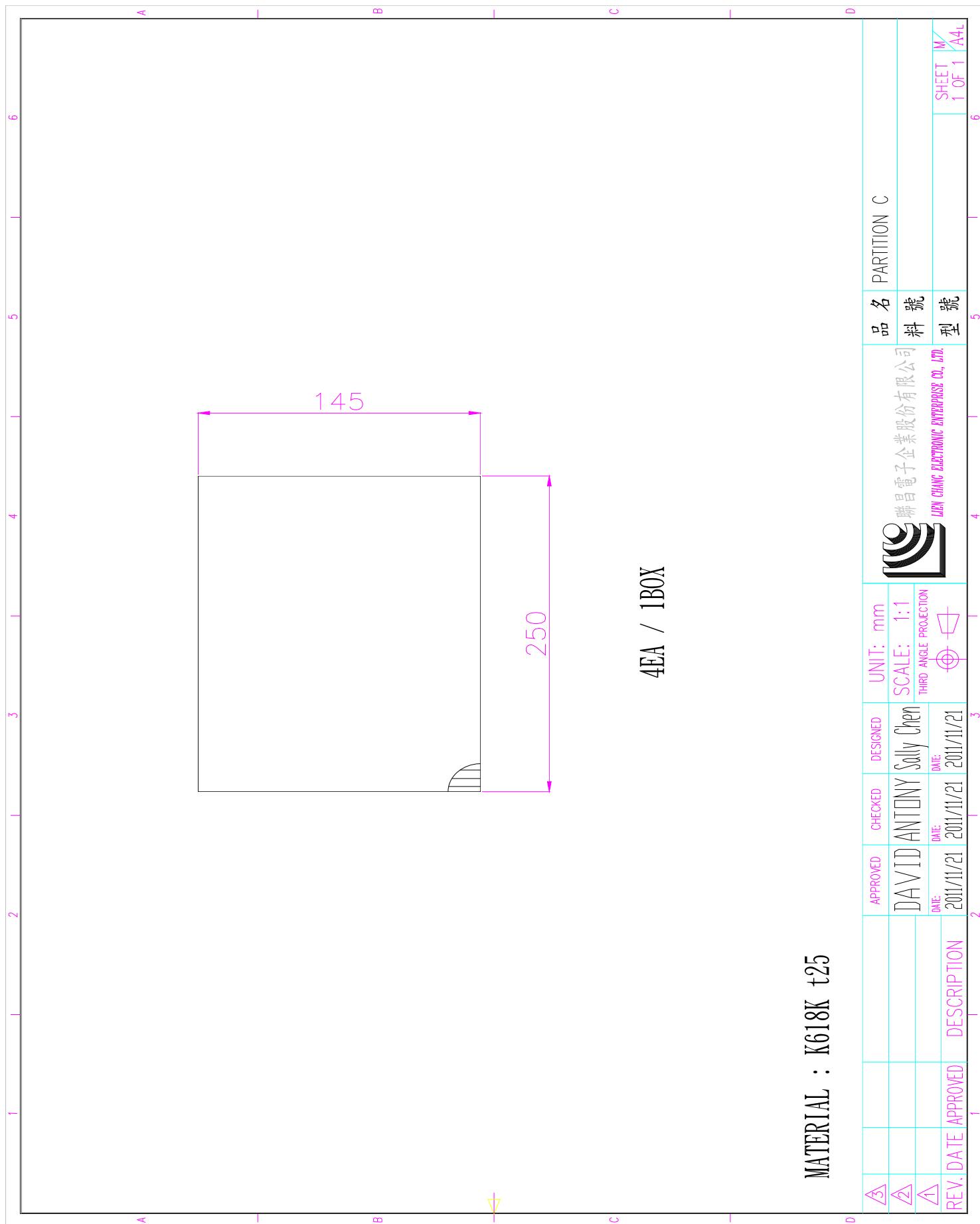


LGP4750-13PL2 LCD TV Power specification



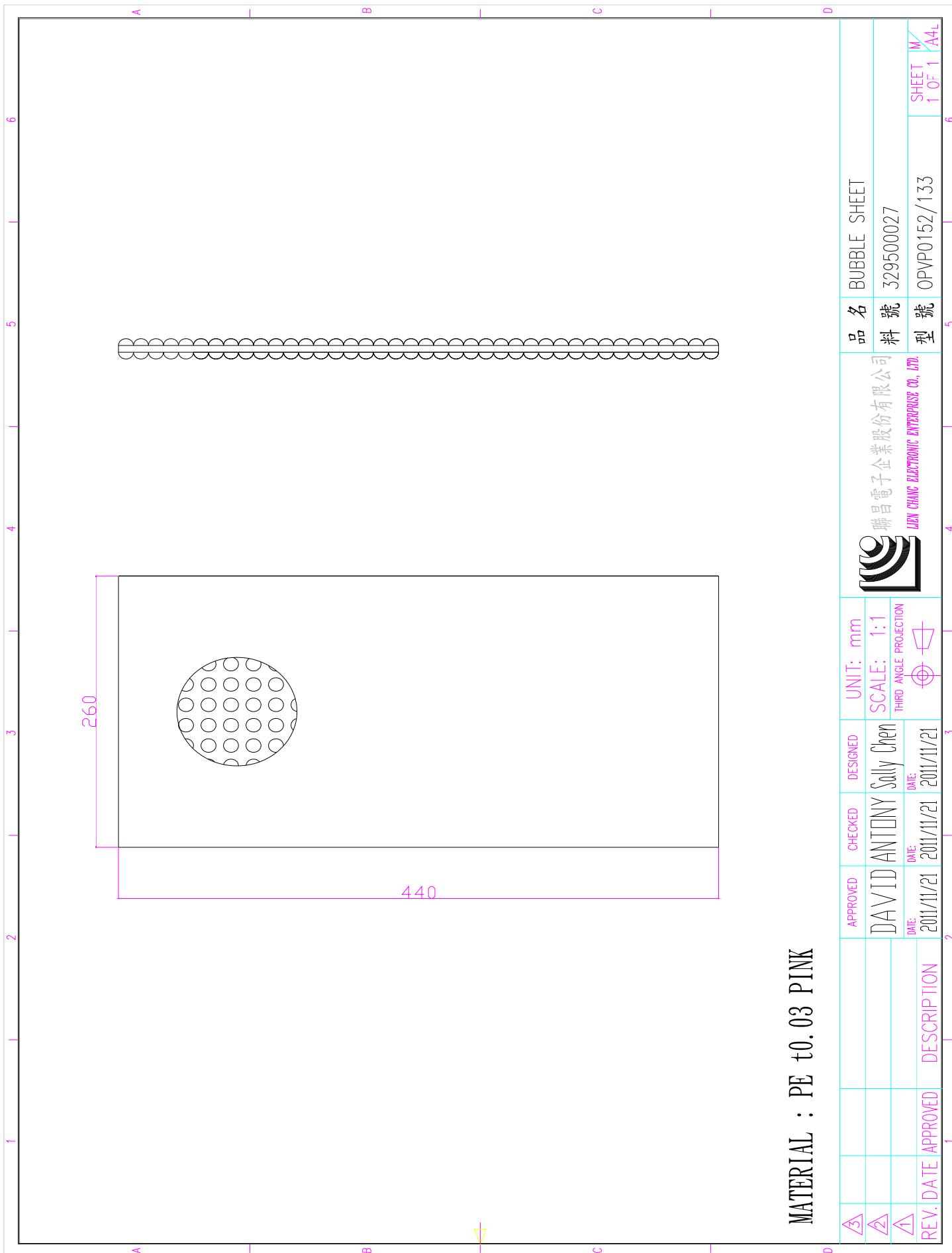


LGP4750-13PL2 LCD TV Power specification





LGP4750-13PL2 LCD TV Power specification





Bar-Code

Label Drawing



LGP4750-13PL2 LCD TV Power specification

A

E931N **628108010001**

E: Lien Chang
(Refer to Left Table)

9: Year,
9=2009,A=2010,B=2011

3: Month
(Jan.:1-9,10:O, 11:N,12:D)

Manufacturing Date
(1,2,3,4,5,6,7,8,9,A,B,C,D,E...V)
except : I,O

0001:S/N:0.0001~9999 (total 4 digit)

62810801 :Last 8 positions of
LGE Part No. **EAY62810801(LGP4750-13PL)**

Production Line:SZ Factory:N-Z.

C

CODE 93 → E731N **628108010001 (**)**

40mm
34mm
2~3mm
2~3mm
8mm
3mm

D

REV.	DATE APPROVED	DESCRIPTION	APPROVED	CHECKED	DESIGNED	UNIT: mm	SCALE: 1:1	品名	LG MODEL BAR CODE
1					Sally Chen		THIRD ANGLE PROJECTION	聯昌電子企業股份有限公司 LIEN CHANG ELECTRONIC ENTERPRISE CO., LTD.	
								圖號	
								型號	For LG(93 CODE) SHEET 1 OF 1 A4L
									6
									5
									4
									3
									2
									1
									0

ECN Revision No. :**2.5**

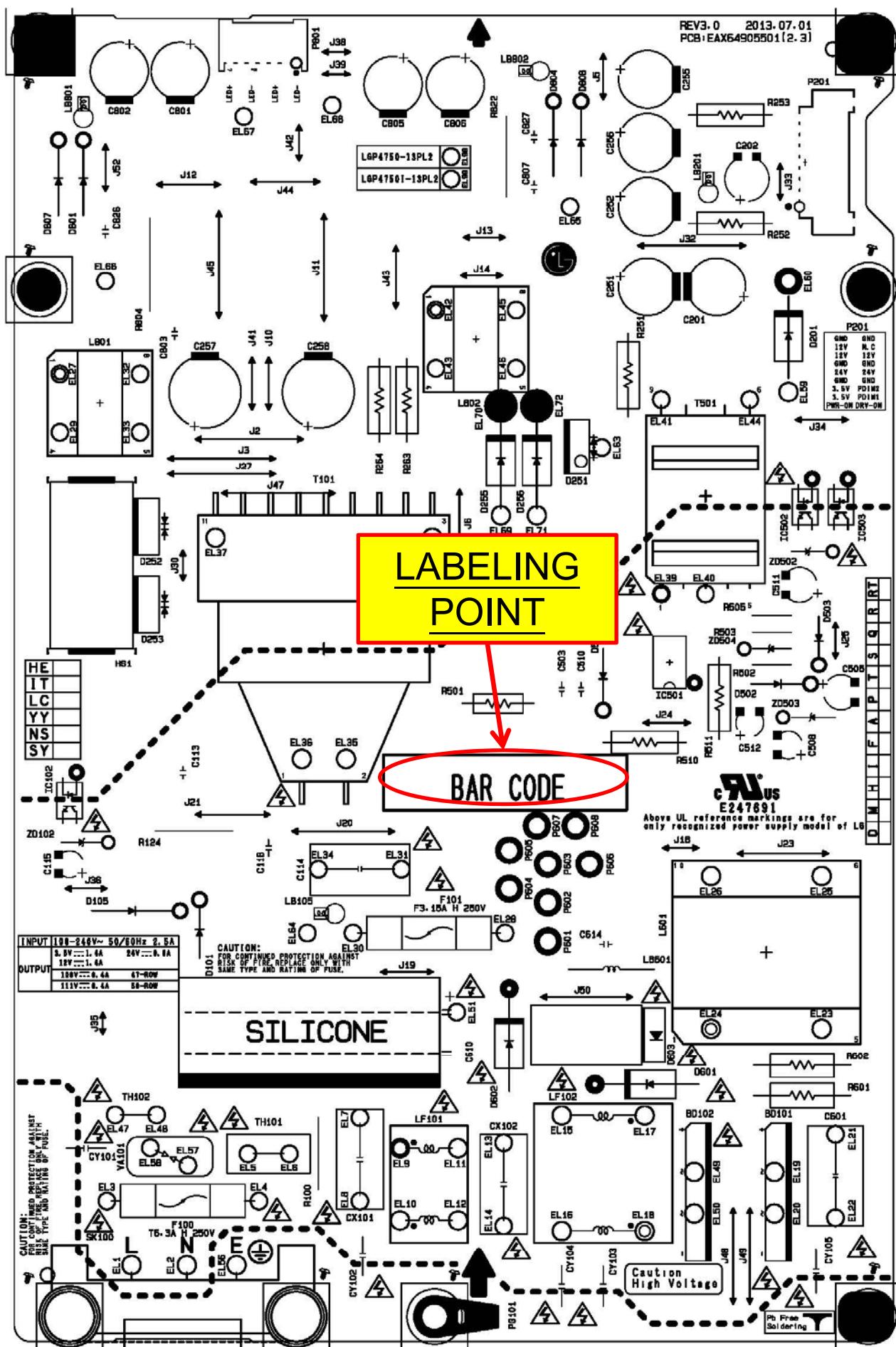


Labeling Point



LGP4750-13PL2 LCD TV Power specification

LABELING POINT



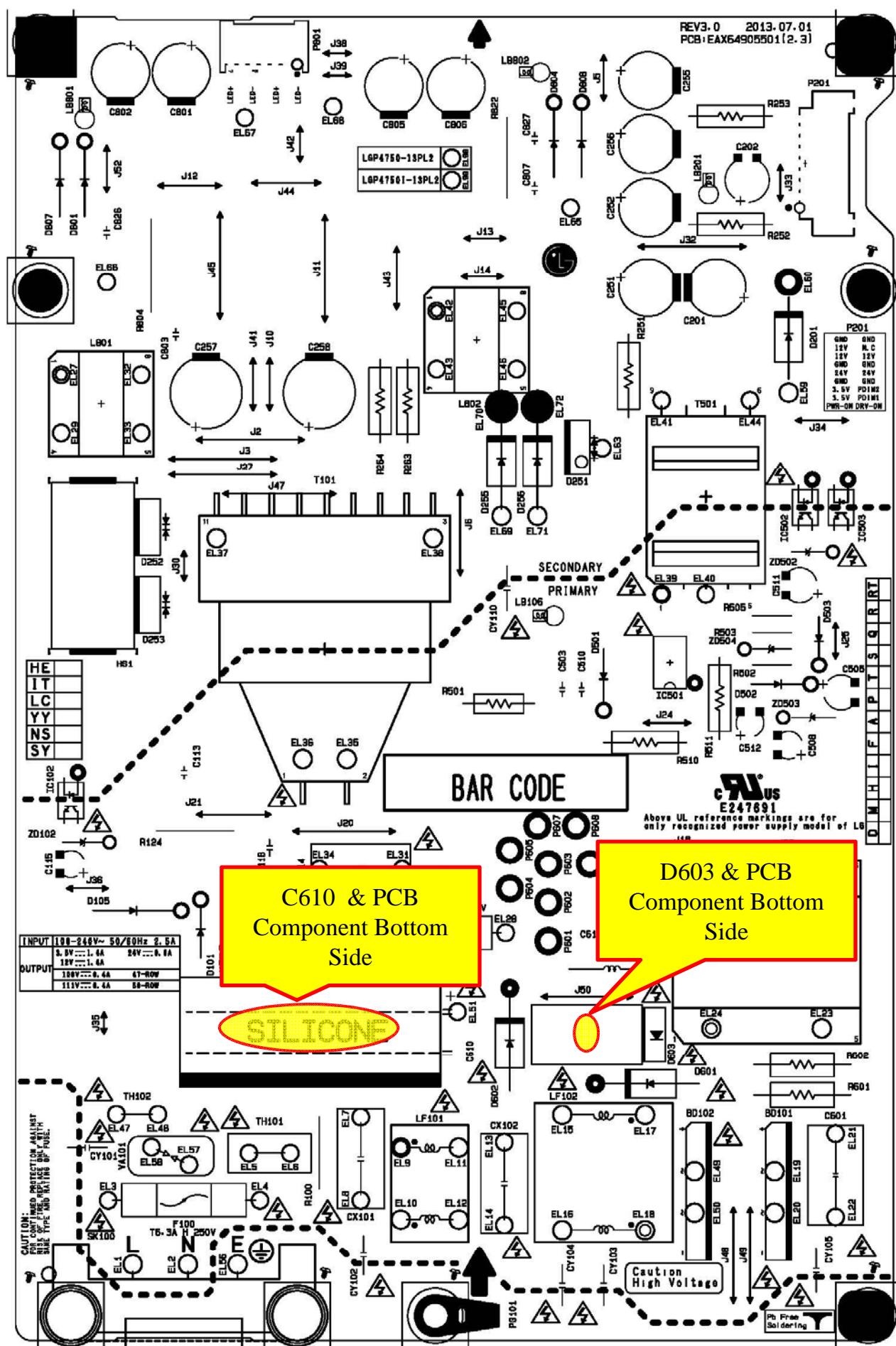


Workmanship Point



LGP4750-13PL2 LCD TV Power specification

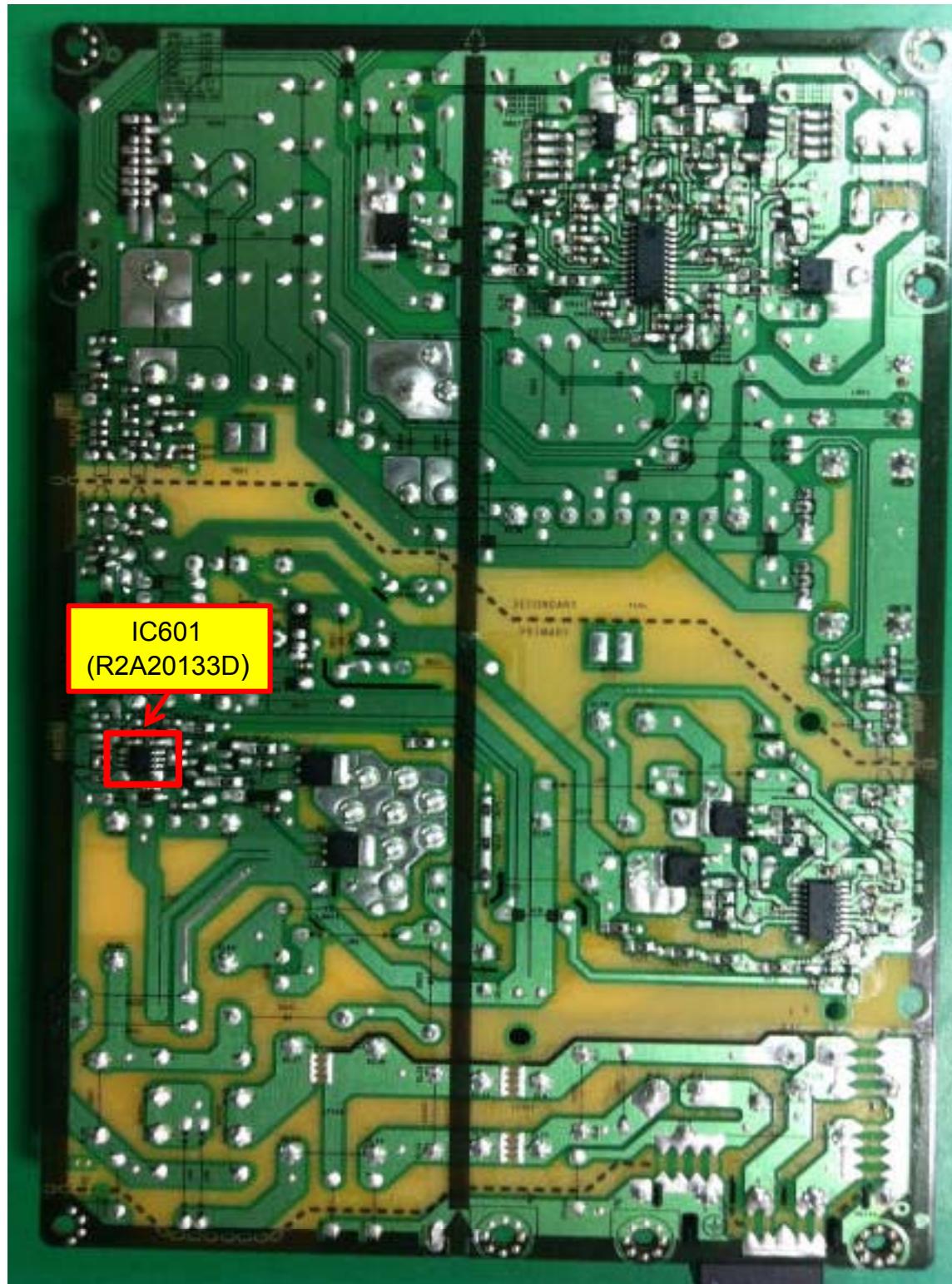
Silicone Bonding Point (●)





LGP4750-13PL2 LCD TV Power specification

Bottom Side (Desiccant)



BOND	Subsidiary materials	Bonding Method
H-727C (OKONG) OKE-1257 (OKONG) 1-2577(LV) (DOW CRNING) LCD2577D (DOW CRNING)	1. Brush oiler 1. Art brush	■ Cover a desiccant at designated point : Fully covered part's leads

Manufacturing Process

4M QC Flow Chart

Process no.	QC Flow	Process name	Work content	Mag. Frequency	4M			
					Man(사람)	Machine(장비)	Material(재료)	Method(방법)
1	△	Purchasing	Raw material purchase	Every P/O	Ping Lang	PC/ FAX/TEL	/	1. Part/No. Part Name, Spec., Q'ty, Delivery. 2. Suppliers' Magt..
2	○	Warehouse	Receive material	Every accept datasheet	Jincheng Guo	Balance Counter	/	1. Check the material box's layer. 2. Check P/No., Spec., Part name, Q'ty, Validity-period.
3	◇	IQC	Incoming material inspection	MIL-STD-105E(II) AQL=0.25	David Zhang	Diode tester LCR meter Hi-pot equipment solder oven	Raw material	1. Check the Brand,P/NO, Spec.Q'ty,Validity-period,Lot No . 2. Check the appearance .
4	○	Eyelet	PCBA eyelet	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Eyelet M/C	Eyelet	1. Check the program of M/C 2. Check parts of BOM 3. Check lead angle:20° ~40°
5	○	Jump Wire	PCBA Jump wire insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Jump Wire M/C	Jump Wire	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~30° 4.Check lead lenth:1.2~1.8mm
6	○	Axial	Axial parts auto insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Axial M/C	Axial parts	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~30° 4.Check lead lenth:1.2~1.8mm
7	○	Radial	Radial parts auto insertion	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Radial M/C barcode scanner	Radial parts	1.Check the program of M/C 2.Check parts of BOM 3.Check lead angle:15° ~45° 4.Check lead lenth:1.2~1.8mm
8	◇	QA inspection	Sampling check	transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier LCR meter	/	1. check parts 2. Checking the PCBA 3. Checking the Quality of SMD-process
9	○	Apply red glue	Apply red glue on pcb	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Apply gule machine	red glue	1. Progarm Editing 2. Checking the Progarm File 3. "Red-glue" store-condition: 5~10°C /6months.
10	○	SMT mounting	SMD mounted on PCB	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	Yamaha Mounting machine	SMD parts	1. Progarm Editing 2. Checking the Progarm File 3. Material's checking
11	◇	Visual inspection	check parts	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	nipper magnifier	/	1. "FAI"-checking & "Sample"-checking 2. Check the Part (Missing; inverse-insertion; damaged...)
								1.Inspection form in SMT area (SEB3R28) 2. QA first samples check in SMT area (SEB1R33)

12		Reflow	PCBA reflow	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	profile measure requirement reflow	/	Control the temperature of "Reflow"-M/C.	1. Profile of reflow 2. Temp. control records of SMT (SEM9R04)
13		SMT inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	nipper magnifier barcode scanner	/	1. Checking the PCB with magnify 2. Checing the Quality of SMD-process	1. Self-inspection in SMT area (SEB1R36) 2. Check form in SMT 3.MES system
14		QA inspection	Sampling check	transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier LCR meter Push-pull meter	/	1. Every 2hrs, testing the capacity of "SMD-Capacitor" 2. Every 2hrs, testing the "bonding"-strength 3. Checking the PCB with magnify 4. Checking the Quality of SMD-process	1. QA inspection form in SMT area (SEB1R34) 2. SMD capacitor measure in SMT area (SEP5R02) 3. Push-pull force data for SMT part (SEP5R01)
15		component prepare	processing material	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	processing jig	prepared material	Sample Checking	1.Self-inspection 2.check datasheet for component prepare
16		M/I	Manual insert material	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	NG box tray fixture barcode scanner	common parts	1. Checking the brand, P/N0, Spec., Name, Q'ty, Lot No. 2. Checking the quality of MI	1.Self-inspection 2. Check form of part date code 2. check form of PCBA in process
17		Double wave solder	soldering	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	DIP TEST equipment auto wave-solder	solder bar flux	1.Pre-heat: 350°C+/-20°C. 2.Soldering-M/C : 255°C~260°C. 3.Flux : 0.80+/-0.02g/cm3, Soldering Speed : 1.20 ~ 1.60m/Min.	1. Monthly maintain form of wave solder (SDR1R23) 2.Daily/weekly maintain form of wave solder (SDR1R22)
18		PCBA inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	magnifier	/	1. Materials' checking 2. Soldering-"Q" Checking 3. Checking the quality of Soldering surface	1.Daily report of AI/INVERTER QC (SEB3R21) 2. Inspection form of PCBA in process (SEB3R19)
19		AOI inspection	automatic optical inspection	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	AOI M/C	/	1. Checking the Test-program 2.Checking the quality of Soldering surface	1. AOI daily test report (SEB3R27) 2.Inspection form of PCBA in process (SEB3R19)
20		Touch up	manual soldering	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	IRon-soder	solder wire	Repair the "Poor-soldering" point (including cold-soldering, warp-soldering, solder-short)	1.Self-inspection 2. Inspection form of PCBA in process (SEB3R19)
21		ICT	ICT test	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	ICT test M/C	/	1. Checking the Test-program 2. Checking the Part's Spec.	1. ICT daily test report (SEB3R27) 2.Inspection form of PCBA in process (SEB3R19)
22		HI-POT	safety test	100% transfer shift change model ECN one time/2 hrs	Xian Xu	HI-POT test M/C barcode Scanner	/	1.check HI-POT test condition meet the SPEC 2..For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1. Inspection form (SEB3R23) 2. Equipment adjust before production (SDS1R03) 3.Inspection form of finished products (SEB3R19) 4.MES system

23		Initial test	first function test	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	DC load AC power source test jig FLUKE-45 barcode Scanner	/	1.check test condition meet the SPEC 2.For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1. Check data form (SEB3R23) 2.equipment adjust (SDS S1R03) 3.MES system
24		apply glue	Apply RTV bond	100% transfer shift change model ECN one time/2 hrs	Yuxing Tang	apply glue M/C	RTV bond	1. Check the P/N and Spec of silicone 2.Check the glue quantity which locates on the right place 3. Check if there is miss of applying glue	1.Self-inspection 2. Inspection form of products in process
25		PCBA sampling check	sampling check appearance	100% transfer shift change model ECN one time/2 hrs	Caselin Sun	magnifier	/	1. Material's checking 2. Checking the soldering-quality 3. Checking the quality of PCB-print	1.PCBA inspection form (SEB1R26) 2.PCBA rejection form (SEB1R30)
26		CTP Aging	burn in	100% transfer shift change model ECN one time/2 hrs	Xian Xu	Power source aging tools aging load	/	1.Aging Load:meet the SPEC. 2.aging time : 2hrs. Temp : 45°C+/-5°C.	1.records of AI/INVERTER aging(SDR9R19) 2.Aging input check form (SDR9D20)
27		CTP Final test (ATE)	Final function test	100% transfer shift change model ECN one time/2 hrs	Xian Xu	ATE barcode Scanner	/	1.check ATE test condition meet the SPEC 2. For ok products, scan and flow to the next station. If It is NG, stick NG label and put into NG box	1.Daily visual form(SEB3R21) 2. Inspection form of PCBA in process (SEB3R19) 3. Adjust equipment before production(SDS1R03) 4.MES system
28		Visual inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Xian Xu	magnifier	/	1. Check if the part was damaged and the other fails 2. Check if there was miss of applying gule 3. Do marking on the good products and flow out 4. Stick the NG label on the NG product and put into the box, at the same time, record the related information	1. Daily visual inspection form (SEB3R21) 2.Inspection form of PCBA in process(SEB3R19) LIPS/INVERTER Final test records of finished products in process(SEB3R31)
29		100% inspection	check appearance	100% transfer shift change model ECN one time/2 hrs	Xian Xu	barcode Scanner	/	1.Carefully check the solder status, for example: empty solder, wrap solder, cold solder, PCB 2. Check the PIN is damaged in connector	1. Visual daily form(SEB3R21) 2. LIPS/INVERTER inspection form(SEB3R31) 3.MES system
30		Package	pack PCBA into box	100% transfer shift change model one time/2 hrs	Xian Xu	Tape M/C Pen	box bubble sheet	1. Check the P/N, Model name, date, label, carton 2. Put the products in the right place and stick label	1.Records of products traking s/n (SEB3R22) 2. Records of tracing the Inverter S/N Inspection finished products form (SEB3R19)
31		OQC	Sampling finished products	MIL-STD-105E(II) AQL=0.25	Caselin Sun	DC load AC/DC SOURCE FLUKE-45 barcode Scanner	/	1. Check the part, soldering status, part damage, and so on 2. Measure the dimension of the product 3. Test the electrical parameter 4. Stick the NG label on the NG product and put into the NG box, at the same open the reject note 5. NG product must be rework	1.Finished products inspection procedure 2.Adjust equipment before production (SDS1R03) 3.outgoing inspection data of finished products (SEB1R28) 4.MES system
32		Warehouse	Store product	Every store datasheet	Jincheng Guo	Trailler barcode Scanner	/	1. Check P/N, Model, Quantity 2. Check the heigh of stock and carton 3. cHeck the QA pass seal	1.Finished product store procedure 2.Store datasheet 3.MES system

incoming

operate

inspect

store



Appendix List

No.	Contents	Total Page number
1	Power Check list	11 Page
2	Warranty letter	3page

Appendix 1.

POWER CHECK LIST



LGP4750-13PL2 LCD TV Power specification

Revision History		Rev	DATE	REMARK
1	Format changed PCB Check Sheet Ver1.9 to Power Check Sheet Ver1.0	1.0	2011.06.02	
2	1. Essentiality Marking items – Add No. 14 Input Standard Mark for 2 pin in Bare PCB 2. Component –Add No. 13 If you use choke coil lying, You can use after appoint test item for poor prevention.	1.1	2012.05.23	
3	PCB Pattern Space – Add No. 9 Add 8.5mm (thickness of GND Pattern) or Insert of Jump Wire For use Together (IT and TV)	1.2	2012.10.30	



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Details Check Item		RESULT		REMARK
► Components LOCATION NO.		OK	NG	
1	Power Primary section circuit Location No. : 100 series (Including Multi primary)	OK		
2	Power Secondary section circuit Location No. : 200 series (Including Stand by & Multi Secondary)	OK		
3	Inverter Primary section circuit Location No. : 300 series	-		
4	Inverter Secondary section (Including F/B,OVP circuit) circuit Location No. : 400 series	-		
5	Stand by Primary section circuit Location No. : 500 series	OK		
6	PFC section circuit Location No. : 600 series	OK		
7	MICOM section circuit Location No. : 700 series	-		
8	LCD : LED Driver section circuit Location No. : 800 series	OK		This content only applies to LCD
9	PDP : Stand by Primary and Secondary section circuit Location No. : 300 series	-		This content only applies to PDP
10	PDP : Va Secondary section circuit Location No. : 500 series	-		This content only applies to PDP
11	PDP : Vs Secondary section circuit Location No. : 900 series	-		This content only applies to PDP
12	PDP : Vs,Va Primary section circuit Location No. : 800 series	-		This content only applies to PDP
13	CTV : Power Block section circuit Location No. : 800 series	-		This content only applies to CTV



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Details Check Item		RESULT		REMARK
► Components LOCATION NO.		OK	NG	
14	Resistor circuit Location No. : From beginning to R***.	OK		
15	Capacitor circuit Location No. : From beginning to C***.	OK		
16	Diode circuit Location No. : From beginning to D***.	OK		
17	Zener Diode circuit Location No. : From beginning to ZD***.	OK		
18	Coil circuit Location No. : From beginning to L***.(Including PFC section)	OK		
19	Transformer circuit Location No. : From beginning to T***.(Including Drive Trans)	OK		
20	Bead circuit Location No. : From beginning to LB***.	OK		
21	Fuse circuit Location No. : From beginning to F***.	OK		
22	TR/FET/Thyristor circuit Location No. : From beginning to Q***.	OK		
23	Varistor circuit Location No. : From beginning to VA***.	OK		
24	Volume Resistor circuit Location No. : From beginning to VR***.	-		Variable Resistance
25	Jumper circuit Location No. : From beginning to J***.	OK		
26	H/S circuit Location No. : From beginning to HS***.	OK		
27	IC circuit Location No. : From beginning to IC***.	OK		2007.04.16 DDC Standard
28	Connector wafer / Ass'y(Board in type) circuit Location No.: From beginning to P***.	OK		
29	Eyelet circuit Location No. : From beginning to EL***.	OK		
30	Gripper circuit Location No. : From beginning to G***.	-		
31	Holder circuit Location No. : From beginning to HD***.	-		
32	Thermistor circuit Location No. : From beginning to TH***.	OK		



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Details Check Item		RESULT		REMARK
► Components LOCATION NO.		OK	NG	
33	Metal Ground circuit Location No. : From beginning to PG***.	OK		
34	Line Filter circuit Location No. : From beginning to L***.	OK		
35	AC Socket(Inlet) circuit Location No. : From beginning to SK***. (Including AC Power supply wafer for Docking)	OK		2007.04.16 DDC Standard
36	Photo Coupler circuit Location No. : From beginning to IC***.	OK		2007.04.16 DDC Standard
37	Relay circuit Location No. : From beginning to RL***.	-		
38	Y-Capacitor circuit Location No. : From beginning to CY***.	OK		
39	X-Capacitor circuit Location No. : From beginning to CX***.	OK		
40	Fuseble Resistor Location No. : From beginning to R***.	-		
► PCB Pattern Space (Keep a Safety distance)		OK	NG	
1	Primary ⇔ Secondary(GND,Y-Cap,Photo Coupler) : A space(Gap) of at least 6.5mm. (But, Working Voltage is more than 350V, Comply with the space of the safety request.)	OK		Refer to the Attached File  NOTE 0 Creepage
2	Primary(L,N) ⇔ Safety GND : A space of at least 3mm. (But, In the case of Two Pin, A space of at least 6mm)	OK		
3	Live ⇔ Neutral : A space of at least 3mm.	OK		
4	Primary⇨Secondary components (Clearance) : A space of at least 6mm. (if space is below 6mm, it must add insulation sheet)	OK		
5	(Power Primary section) Main Current loop is made more than 3mm on Pattern thickness(width). (B/Diode ⇔ Primary Main cap : Very important)	OK		
6	Don't pass small signal line under PFC Coil. DC is no problem.	OK		
7	When It Connects Main GND (AC smooth Capacitor Cap. GND) to IC GND, separate pattern after consideration for pattern impedance.	OK		
8	In the case of Stand by IC of the Dip type, secure safety distance between pin of the high voltage and pin of the low voltage. (Only, use N.A or Bare Pin near Drain pin)	-		



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Details Check Item		RESULT		REMARK
► PCB Pattern Space (Keep a Safety distance)		OK	NG	
9	Satisfy Continuity TEST of the grounding about FG GND (40A / 2Minute) → Add 8.5mm (thickness of GND Pattern) or Insert of Jump Wire For use Together (IT and TV) (But, If EMI Issue occur, we don't apply.)	OK		



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Details Check Item		RESULT		REMARK
► Component		OK	NG	
1	When surge test, Between Primary and Secondary space have to gap of at least 6mm. { Distinguish between safety GND and secondary GND (Use Y-cap with insulation) , need Space, need Insulation Sheet }	OK		* 3 Pin : A space of at least 3mm 2 Pin : A space of at least 6mm
2	Beside Primary smooth cap. component is separated a heating component over 3mm. (clearance)	OK		
3	Primary smooth cap. component is separate as below - Upper area : over 1mm - Bottom area : over 5mm (Only, Vertical type Capacitor) (Note 1)	OK		
4	Don't pass the pattern under 3mm area on primary smooth cap. (Only top side pattern of Epoxy)	OK		
5	If use short-height core, you must use insulation tape. (To add the space distance with PCB)	OK		This content only applies to Insulation Trans of first, secondary
6	In case of trans, use Barrier of at least 7mm(6.4 + 3.2) by 300V (Standard). (Wire's Tube can be use for reduce Barrier tape height) Safety Gr. is sure to check the item. (Note 0)	OK		
7	In case of AC Inlet, Screw of Yellow-Green wire is use more than 3.5Φ. * if it don't use Y/G wire. When only PCB pattern use, it must have pass the 200A test. * Safety GND is role of independence GND. UL Test Request If it use only Pattern, Safety is certainly check.	OK		
8	The component is pushed by force, The Clearance is need to at least 6mm between Primary and Secondary components. Don't touch the core by another parts.	OK		
9	When use Box type Capacitor, apply to Forming type with RTV Bond. (Including X-capacitor) (Only Sony PDP Model)	-		

NOTE 0



Creepage

NOTE 1



CAPACITOR



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Details Check Item		RESULT		REMARK
► Component		OK	NG	
10	All of parts should be separated more than 2mm around CORE (Including all Trans type). •In case of Induced Voltage 1kV (peak to peak) should be separated more than 4mm. (based on 1000:1 Probe)	OK		
11	Between Inverter Trans and Metal Frame(shield) is separated more than 4mm. (if it is difficult, surely add Insulation sheet)	-		
12	Output wafer of the secondary use add type of a fixed pin. (But, except for the wafer of LPB using for Micom Debugging)	OK		
13	If you use choke coil lying, You can use after appoint test item for poor prevention (Note 2)	OK		

NOTE 2



Choke coil



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Details Check Item		RESULT		REMARK
► Essentiality Marking items		OK	NG	
1	AC Socket, AC inlet Wafer must be marked "L"/"N". Also docking Type is marked.(QA Request), : Top & Bottom side (Note 3-2)	OK		* Fuse is located on Live
2	When Safety GND is separated from Chassis, Worker should be located by confirmation. (Note 2) • PCB top & bottom side is all marking, Please Check the attached file in detail Content. And, Certainly receive the final confirm by safety Gr.	OK		* But, except for 2 pin
3	Fuse rating(Voltage,T, Current,H), caution(Safety title), UL Mark should be input. Ex) T5A H 250V * Caution: Don't change the words based on UL's sentence. (For ~ , Replace ~)	OK		
4	Fuse must locate very ease finding scope. (Fuse Marking is the same)	OK		
5	High Voltage warning mark have to be input. - Inverter Output : Only LIPS. - Primary section Metal.(H/Sink), High Voltage opened location. (Fuse) : All Model	OK		
6	To mark the Input/Output Voltage &, Current Spec. (Note 3)	OK		
7	Classify Primary and Secondary section have to be marked for separation of Area. (Top side/Bottom side) - Power side Primary & Secondary - to mark the Only the Inverter output.	OK		
8	Each component circuit No. have to be shown	OK		
9	Don't overlap the Bottom circuit No. in solder pattern/ Components shape etc.	OK		
10	Draw PCB marking, Considering Dead Space of Tool structure. Add Metal area mark for PCB fixing.	OK		
11	Check CTI spec in PCB specification Check Marking in Bare PCB - Marking : CTI 600 (More than 600V)	OK		
12	Input Caution Mark in a Circuit diagram (CCL standards) 	OK		
13	Input Screw Mark in Bare PCB 	OK		
14	Input Standard Mark for 2 pin in Bare PCB 	-		* Only, apply to 2 pin

NOTE 2



Safety GND 규정

NOTE 3



Input/Output

NOTE 3-2



B/D-in socket



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Details Check Item		RESULT		REMARK
► EMI		OK	NG	
1	When Lightning Surge is L/N Test, Varistor must use more than 14Φ 620V .	OK		
2	Lightning Surge to L/G & G/N : 3KV over Y-Cap. (Use Y1 Class)	OK		
3	In case of lightning surge, only Fuse Dead is OK, only . (Countermeasure : Protect to arcing. Varistor is closely located Fuse.)	OK		
4	GND Arcing pattern Slit size is 1.2mm. Both ends distance of the Arcing Pattern is 3.0mm by safety role. (Between L and N)	OK		
5	Conducted Emission Test Condition : 110Vac/220Vac & 50Hz/60Hz TV Model : GND Connect / No connect VIVID/STANDARD, HDMI/ANTENNA	OK		
► INVERTER (only LIPS)		OK	NG	
1	Do use Ballaster capacitor.			
2	When small signal AC pattern pass around to 4mm from Inverter Trans, it is no problem after confirmed OVP/OLP and etc Worst condition. (Including Feed Back Line) [For the reduce of inverter noise from AC Input, Power FET's Heat sink's form can change for using shield between AC input and Inverter Trans. (CE restriction item) – Consider design]	-		
3	The Lead of high voltage ceramic CAP applied at inverter output part must keep insulation distance or be applied RTV bonding, even though the article force is applied.	-		
4	Check size around Gripper or Eyelet of Inverter Trans. -Size of the copper around Gripper or Eyelet : More than 5.5mm -Pattern Size around Gripper or Eyelet : More than 6mm (But, only apply LIPS of more than 32Inch)	-		
5	Inverter wafer use horizontality type.	-		



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Details Check Item		RESULT		REMARK
▶ ETC		OK	NG	
1	Don't use CAN Type Fuse.	OK		
2	Housing's Maker of Connector what Main Board /Power Board (LIPS) have to be same with Wafer Maker. If they are differ, You have to check the spec./Drawing or request the component test to IQC(in case Board in type connector, Also Terminal type must be checked)	OK		
3	Don't use Litz Wire.	OK		USTC
4	Apply to PFC Bypass Diode. (Note 4)	-		See attached file(Bypass)
5	When use Relay, apply to Fusing Resistor. (Note 5) (But, when Fusing Resister don't apply, Check Relay Open Test – Check PL Condition)	-		See attached file(Relay)
6	Use of High Ripple & Low Impedance type's rectification CAP at primary control IC VCC.	OK		
7	Don't use RN Type (Metal Film Type) Resistor over 100kohm.	OK		In June 26 th 08, We have had problem about this at MP for LGEND.
8	When apply TO-220, TO-3P type FET, Diode, IC, Lead length is shorted because of cutting after forming. So, Lead length and pitch must have checked by Heat-sink, Approval sheet on PDM, Actual Component. (Take conference previously with LGEAZ, LGEND about this issue, LGEND wants forming type in all TO-220, TO-3P type's components)	OK		In March 08 for LGEAZ CKD PQ event , We have history responded to the emergency issues
9	Check the Lead length of PCB bottom side, when use H/sink, wafer and other component at special type model which manages Lead length.	OK		
10	In this case, Component in Critical Component List. Check Marking on component.	OK		
11	If discharge resistance is used model sold to the Japanese market, Use Resister of the Dip Type certified standard. (Only, Use model sold to the Japanese market)	OK		

NOTE 4



Bypass-Diode

NOTE 5



Relay



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Details Check Item		RESULT		REMARK
► Attachment		OK	NG	
1	PL check List  PL Safety Check List Ver3.7	OK		



Appendix 2

Warranty letter



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Non-use certificate

Description	For approval / For mass production	Submitting date	2012 . 07 . 31
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Cooperating suppliers

Company name	Lien Chang Electronic	Approval	Person in charge	Head of department
Contact	Tel: (886-2) 22035100	Name	Alan Wang	Sales Dept.
e-Mail	alanwang@lienchang.com.tw	Signature		

LGE Part No.	EA Y62810801	Part production date	filling the sheet in case of mass production
Maker Part No.	OPVP-0178	Production plant	filling the sheet in case of mass production
Part name	LGP4750-13PL2		

This is to certify that materials used and contained in the products and components that we supply to your company, meet the standards of the checked items listed below.

————— below ————

- We meet the standards of LG Electronics for six major substances (Pb, Cd, Cr⁶⁺, Hg, PBBs, PBDEs) as designated by RoHS for control.

* Records are requested if they are parts to be actually installed on the PCB (Printed Circuit Board)

Soldering Type:

Flow

Reflow (Requirement : 250°C / 10 sec)

1. Maximum heat-resisting temperature : 260 °C

2. Time within actual Peak time : 10 sec.

- Pb-Free Soldering (all solder cream, Bar, Wires included) is available to apply.

Note.

1. All the contents written on these documents must be created on the basis of facts, and cooperating suppliers must submit the data immediately whenever LG Electronics requests.
2. In the case that these documents are used for approval purposes, cooperating suppliers must submit the sample on the request. For the purpose of mass production, it must be submitted at the time of delivering the first product.





Control list of environment-related substances

Description	Substances	Contained		Remark
		YES	NO	
Level A- I	Lead(Pb) and its compounds		✓	
	Cadmium(Cd) and its compounds		✓	
	Mercury(Hg) and its compounds		✓	
	Hexavalent chromium and its compounds		✓	
	Polybrominated biphenyls(PBB)		✓	
	Polybrominated diphenylethers(PBDE)		✓	
Level A- II	Polychlorinated biphenyls (PCB)		✓	
	Polychlorinated naphthalenes (PCN)		✓	
	Polychlorinated terphenyls (PCT)		✓	
	Short-chain Chlorinated paraffins (SCCP)		✓	
	Asbestos and its compounds		✓	
	Ozone Depleting Substances		✓	
	Azo compounds		✓	
	Nickel(Ni) and its compounds		✓	
	Specific Organic tin compounds		✓	
	Arsenic(As) and its compounds		✓	
Level B	Formaldehydes		✓	
	Polyvinyl chloride (PVC)		✓	
	Phthalates		✓	
	Beryllium(Be) and its compounds		✓	
	Antimony(Sb) and its compounds		✓	
	Selenium(Se) and its compounds		✓	
	Palladium and its compounds		✓	
	Bismuth and its compounds		✓	
	Other Chlorinated flame retardants		✓	
	Other brominated flame retardants		✓	