

Scanning	LIB.



SPECIFICATION FOR APPROVAL

• CUSTOMER : LG Electronics inc.

• ITEM : Power Supply Unit.

• P/NO

Model Name	Customer	Supplier
LGP4247L-12LPB	EAY62608901	PLDF-L103A

• DATE : 2013. 11. 15

• Revision : 3.3

• Remark : MP (PCB REV 2.0)

Producing District : YANTAI, CHINA (중국 연태)

(생산지)

GWANGJU, KOREA (한국 광주)

BEKASI, INDONESIA (인도네시아 베카시)

WROCLAW, POLAND (폴란드 브루츠와프)

★ 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]

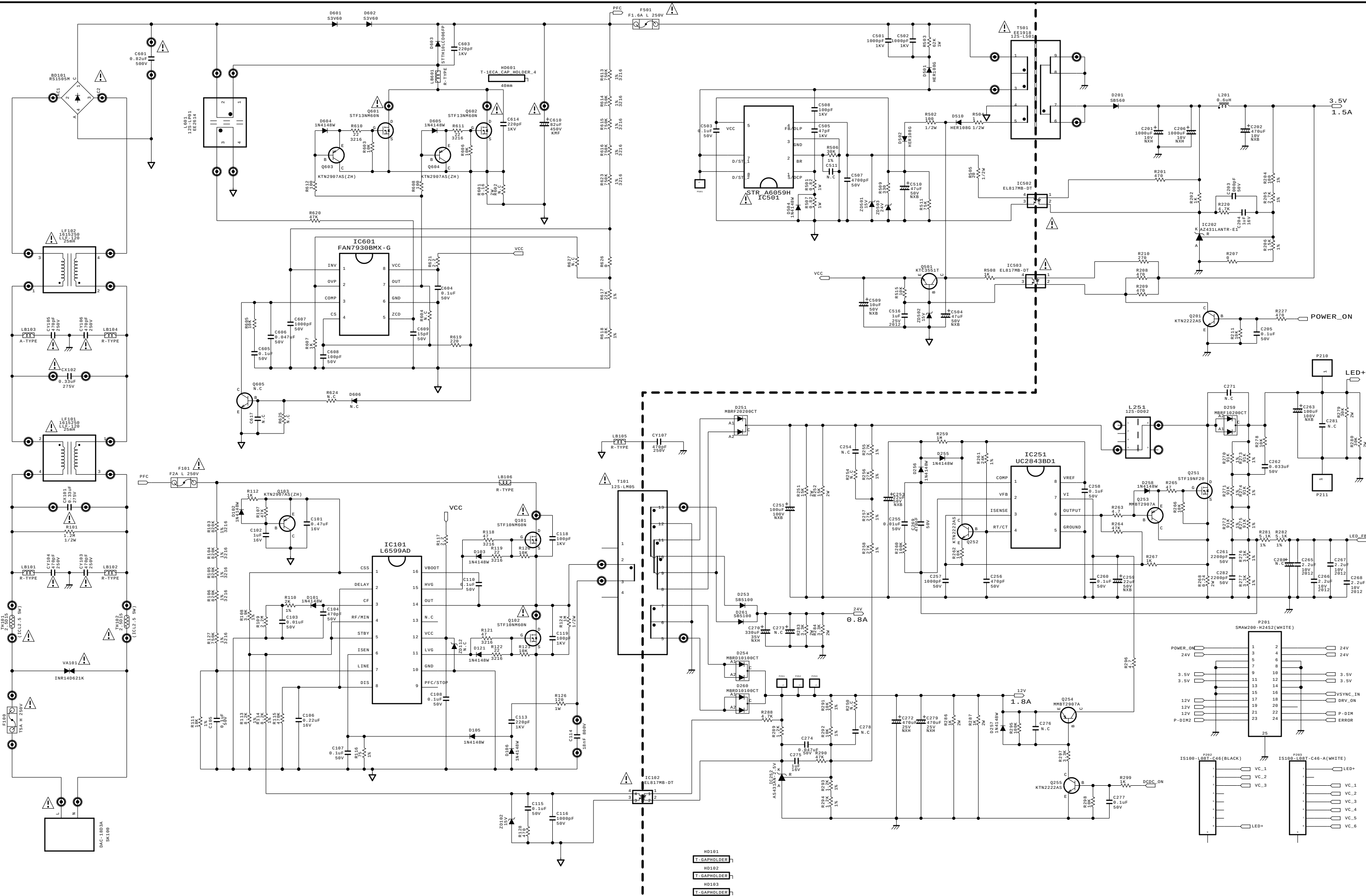
This item must meet the standards of LG Electronics for six major substances as designated by RoHS for control.

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



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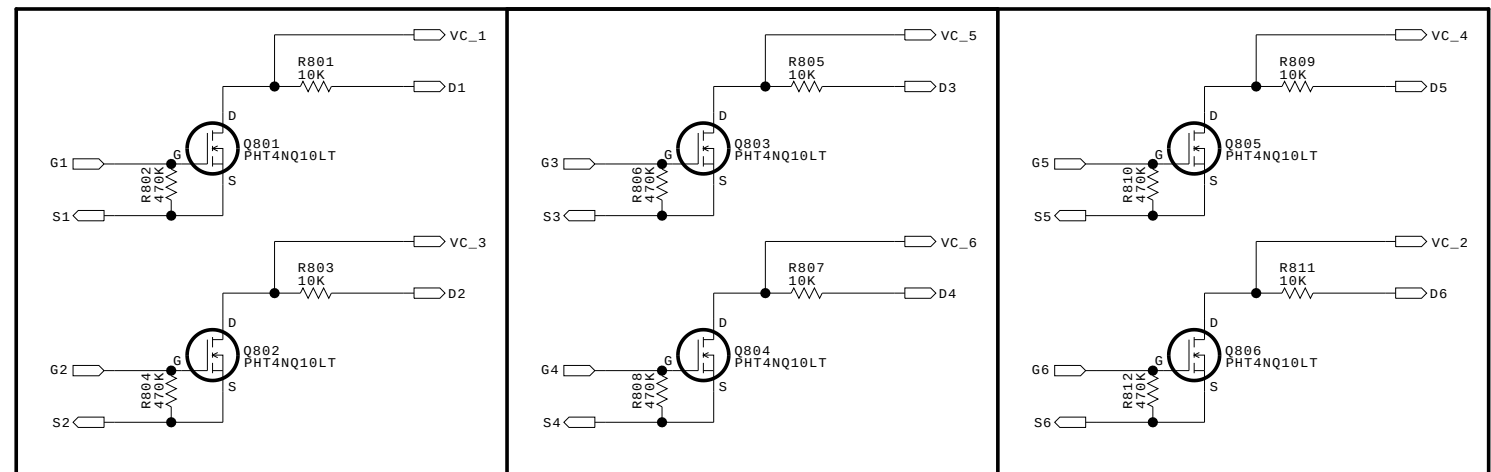
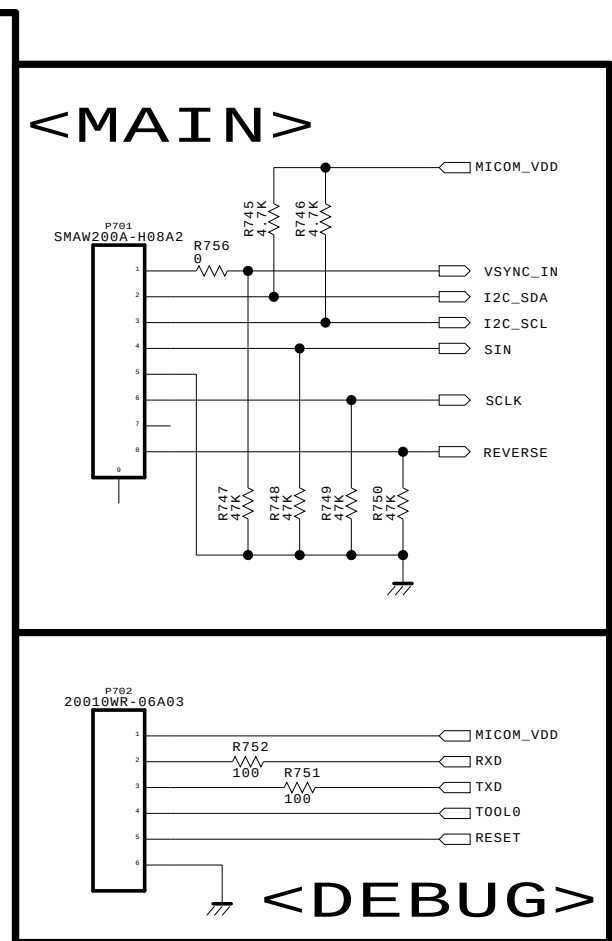
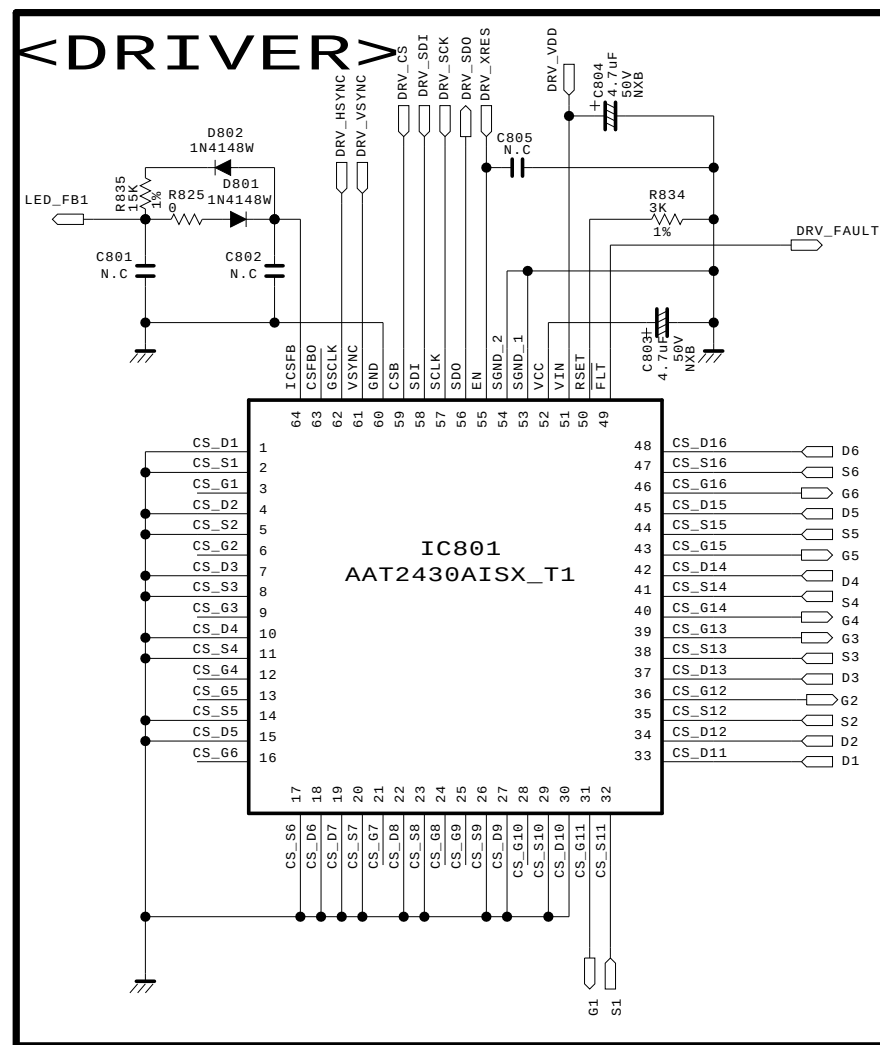
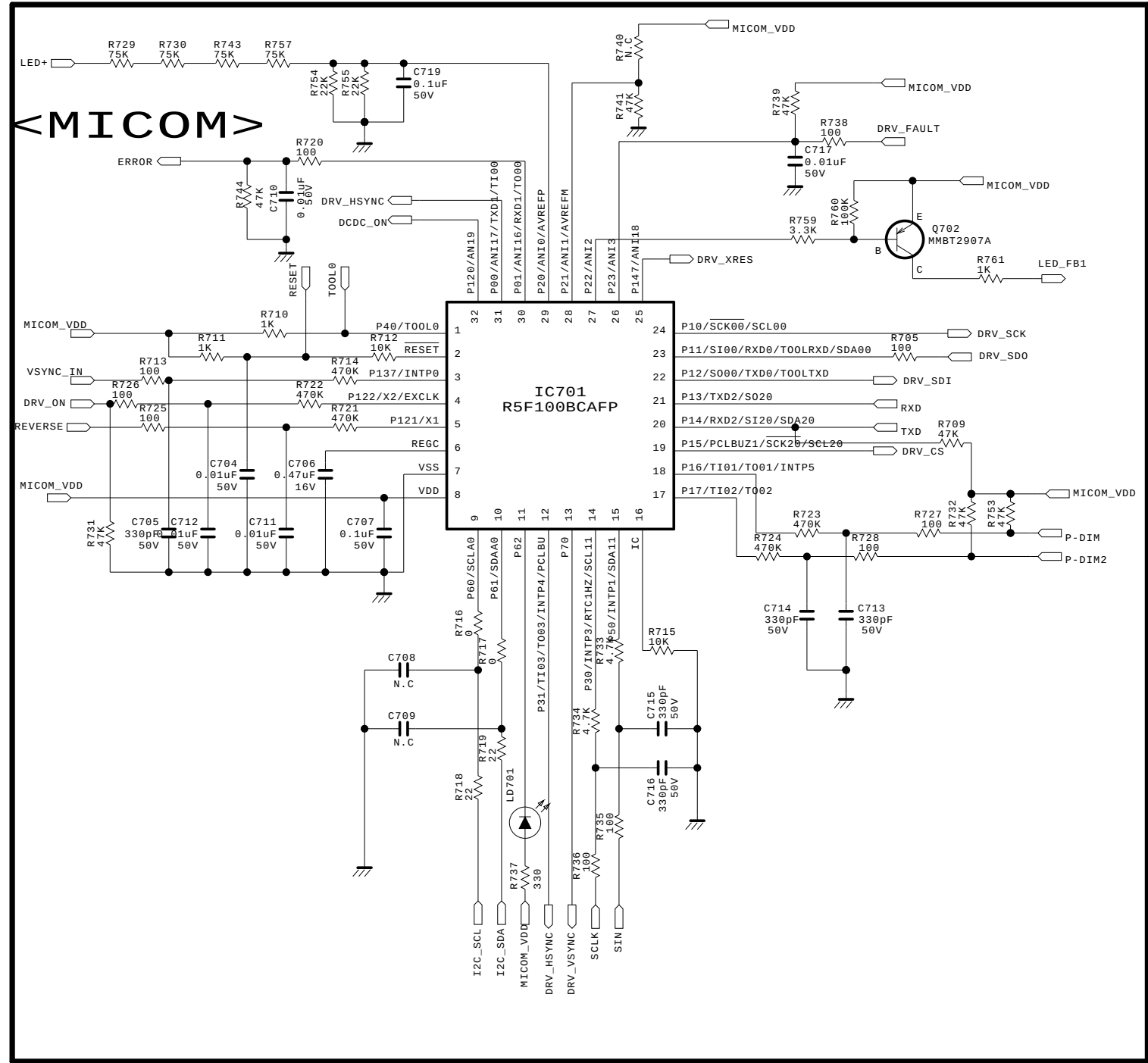
THE SYMBOL MARK OF THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS, WHEN SERVICING IF IS ESSENTIAL THAT ONLY MANUFACTURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SYMBOL MARK OF THE SCHEMATIC.

SECRET
LGElectronics

LG ELECTRONICS

MODEL	LGP4247L-12LPB	DATE	'12.10.09
BLOCK	PFC\STBY\MULTI	SHEET	1 / 2

REV 2.0



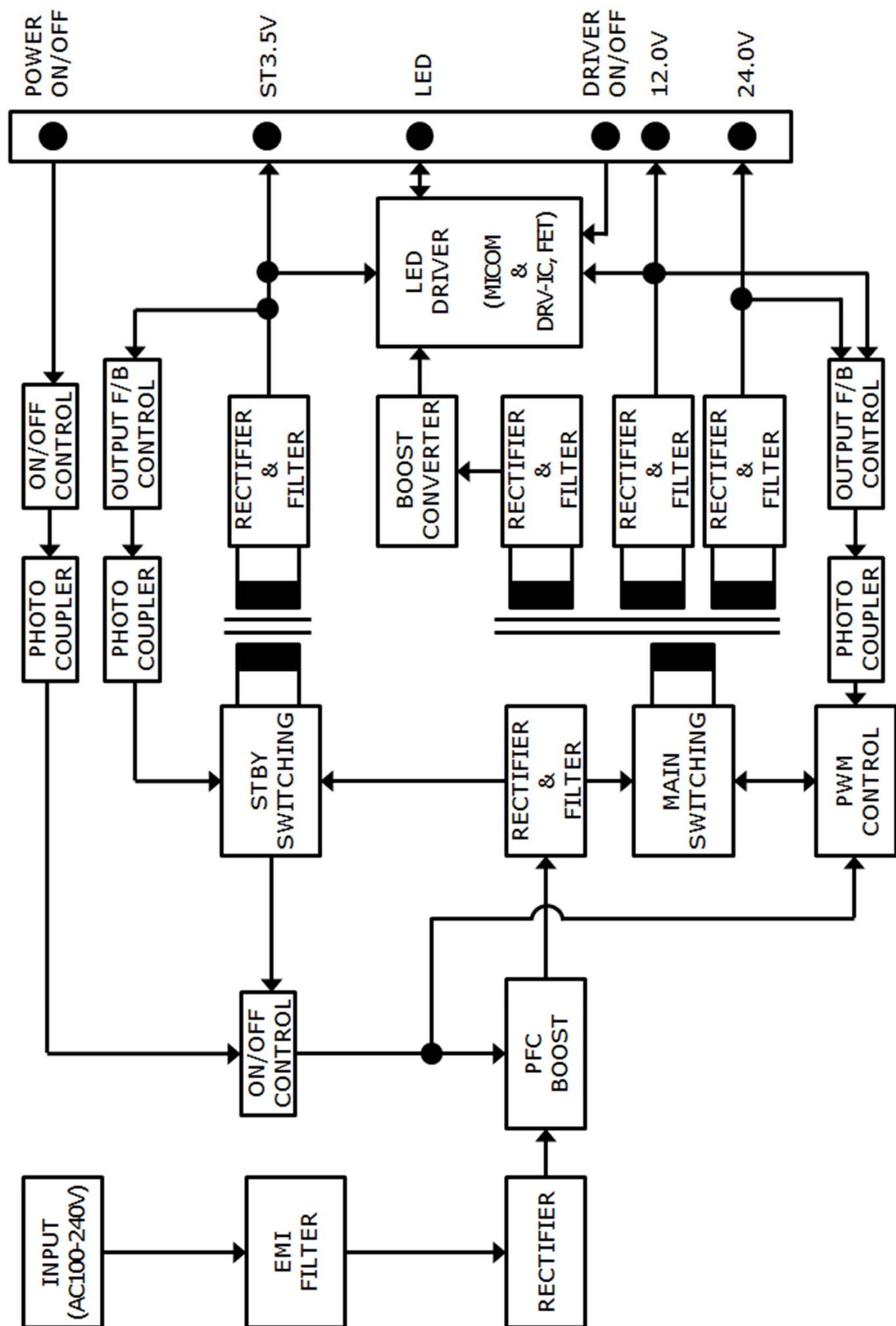
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SECRET

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MODEL	LGP4247L-12LPB	DATE	'12.10.09
BLOCK	DRV	SHEET	2 / 2



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 42 inch, 47 inch LGE LED TV.

1.2 Customers product related items

Product : Power Supply Unit

Part code : EAY62608901

1.3 Product name

Product name : PLDF-L103A

Revision code : 3.3

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 1.5Arms . (at 100Vac & Nominal Load) Under 0.8Arms . (at 240Vac & Nominal Load)
Nominal Frequency	50 / 60 Hz
Frequency Variation Range	47 Hz to 63 Hz
Phase	Single
Leakage Current	0.7mA_peak. (100Vac ~ 240Vac)
Surge Immunity	$\pm 4\text{kV}$ / 1000ns / 0° to 360°
Hold-up Time	More than 20ms at 100Vac and maximum output load
Lightning Surge	2kA Normal, Common Mode
Inrush Current	80A zero-peak max at cold start and any specified line, load, temperature conditions.

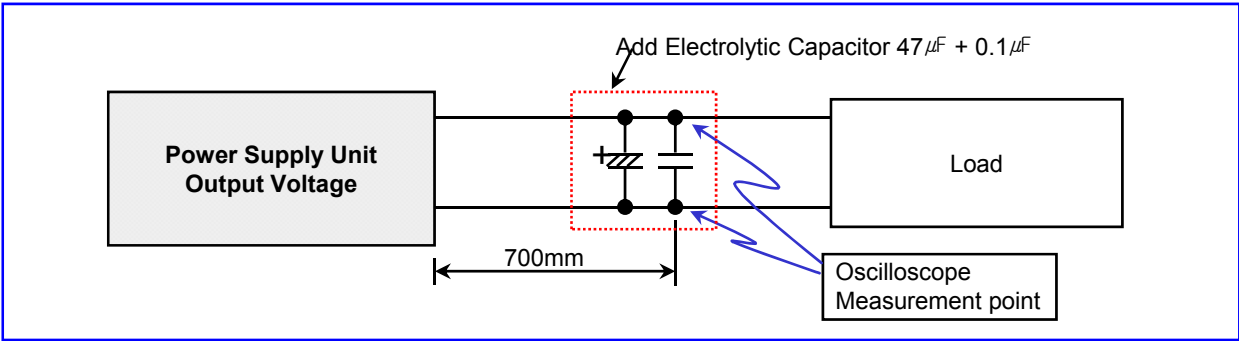
2.1.1 Power Factor

over than 0.9 at 90 – 264Vac & max load condition

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)	3.3V ~ 3.7V	0.3W Under(15mA)	-	-
			1.5A(0~1.5A) (ON condition)	± 5%	250 mVp_p
	12V	11.4V ~ 12.6V	1.8A (0.1~1.8A)	± 5%	350 mVp_p
	24	21.6V ~ 26.4V	0.8A (0.1~0.8A)	± 10%	500 mVp_p
	LED B+	49.3V ~ 75.2V	0.130A(0.1261~0.1339A) × 6Ch	-	-

- * 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)		

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 900g
Unit Size (typ.)	176(W) X 245(D) X 18.9(H)

2.9 Function of protection

Protection	Output Circuit	Trip point		Notes
		Min	Max	
Over Current	STBY 3.5V	2.5A	8.0A	Auto Re-start
	12V	3A	20.0A	Latch
	24V	1.5A	12.0A	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.

Parts List

No	Level	Q'ty	Unit	Location	Specification	Description	Maker
1	MI	1	EA	HS1	MULTI DIODE ASS'Y	HEAT SINK ASS'Y	
2	MI	1	EA	HS1	LPB4247_55_Low HS1 (20 X 40 X 8mm)	HEAT SINK	CHENG CHIA MINGXUE Y A OFENG BAO CHENG INNO D&C YUWON NRT HUA GUANG HUA PENG GUOTAI Ohsung Pampas
3	MI	1	EA	D251	MBRF20200CT 20A 200V TO-220FP MBRF20U200CT 20A 200V TO-220FP	DIODE	SENSITRON KEC
4	MI	1	EA	Q251	STF19NF20 200V 15A TO-220FP TK15A20D 200V 15A TO-220FP	FET	STM TOSHIBA
5	MI	2	EA	FOR D251,Q251	M/S S/W + Φ3.0 7L SILVER PLATE HEAD	SCREW	JUNGWOO SEOUL METAL ASIA BOLT SUNG HO METAL KUOFEI HUIYU MACHINERY DELIKANG DONG HAIKANG RUI YOU TANJIN METAL
6	MI	0.5	GR	FOR D251,Q251	HC300 OKC-5500 G746 YG6111 DS-323 AK100 AK100 KD-3	SILICON GREASE	CHANG AMLS OKONG SHINETSU MOMENTIVE DONGYANG SILICON SUNNICO TAIZBOND SHIN WEI
7	MI	1	EA	HS2	PFC FET ASS'Y	HEAT SINK ASS'Y	
8	MI	1	EA	HS2	LPB4247_55_Low HS2 (25 X 28 X 5.5mm)	HEAT SINK	CHENG CHIA MINGXUE Y A OFENG BAO CHENG INNO D&C YUWON NRT HUA GUANG HUA PENG GUOTAI Ohsung Pampas
9	MI	2	EA	Q601,Q602	IPA60R280E6 650V 13.8A TO-220FP STF13NM60N 650V 11A TO-220FP	FET	INFINEON STM
10	MI	2	EA	FOR Q601,Q602	M/S S/W + Φ3.0 7L SILVER PLATE HEAD	SCREW	JUNGWOO SEOUL METAL ASIA BOLT SUNG HO METAL KUOFEI HUIYU MACHINERY DELIKANG DONG HAIKANG RUI YOU TANJIN METAL
11	MI	0.5	GR	FOR Q601,Q602	HC300 OKC-5500 G746 YG6111 DS-323 AK100 AK100 KD-3	SILICON GREASE	CHANG AMLS OKONG SHINETSU MOMENTIVE DONGYANG SILICON SUNNICO TAIZBOND SHIN WEI
12	MI	1	EA		LGP4247L-12LPB MI & AI COMPONENTS	MI & AI ASS'Y	
13	MI	1	EA	BD101	TS15P05G 600V 15A L-FORMING RS1505M 600V 15A L-FORMING GBJ1506 600V 15A L-FORMING D15SB60 600V 15A L-FORMING	BRIDGE-DIODE	TSC RECTRON LITE-ON DACHANG
14	MI	1	EA	C610	KMF 82uF 450V M P7.5 Φ18x31.5 SK 82uF 450V M P7.5 Φ18x32	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
15	MI	2	EA	C251,C263	NXB 100uF 100V M RB P5 Φ12.5x20 MF 100uF 100V M RB P5 Φ13x21	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
16	MI	1	EA	C601	MPHB 0.82uF 500V J P15 MP 0.82uF 500V J P15 PCMP 372/472 0.82uF 500V J P15	CAPACITOR, FILM	EUROPTRONIC LUMEN PILKOR
17	MI	1	EA	C114	MPLB 0.018uF 1000V J P15 NP 0.018uF 800V J P15 PCMP 384 0.018uF 800V J P15	CAPACITOR, FILM	EUROPTRONIC LUMEN PILKOR
18	MI	2	EA	CX101,CX102	PCX2 337 0.33uF 275V K P15 MPX 0.33uF 275V K P15 CTX 0.33uF 275V K P15	CAPACITOR, FILM	PILKOR EUROPTRONIC CHENG TUNG
19	MI	2	EA	D601,D602	1N5408G 1KV 3A P20 S3V60 600V 3.5A P20 30FDA60 600V 3A P20	DIODE	TSC SHINDENGEN NI
20	MI	1	EA	D603	STTH10LCD06 600V 10A TO-220FP BYV29FX-600 600V 9A TO-220FP	DIODE	STM NXP
21	MI	1	EA	D259	MBRF10U200CT 10A 200V TO-220FP MBRF10200CT 10A 200V TO-220FP FMX-22S 10A 200V TO-220FP	DIODE	KEC SENSITRON SANKEN

22	MI	2	EA	D253,D261	SB5100 100V 5A P20 SR510-24 100V 5A P20 SB5100 100V 5A P20	DIODE	SENSITRON TSC LITE-ON
23	MI	1	EA	D201	SB560 60V 5A P20 SR560 60V 5A P20 SB560 60V 5A P20	DIODE	SENSITRON DA CHANG LITE-ON
24	MI	2	EA	Q101,Q102	TK10A60D 600V 10A TO-220FP L-FORMING STF10NM60N 650V 8A TO-220FP L-FORMING KF12N60F 600V 12A TO-220FP L-FORMING SD10N60C3 600V 10A TO-220FP L-FORMING	FET	TOSHIBA STM KEC INFINEON
25	MI	1	EA	F100	T5A H 250V 215 RED(1-LINE) T5A H 250V 50CT RED(1-LINE) T5A H 250V TSC RED(1-LINE)	FUSE, TIME LAG	LITTELFUSE DAIN WALTER
26	MI	3	EA	PG1,PG2,PG3	JS-12-75-04 SPCC 0.4T GND PIN	GND REINFORCE	SAMSUNG JS ST TELECOM PINGOOD DIHUA HUAKANG KANG YAUNG
28	MI	3	EA	IC102,IC502,IC503	EL817M(DT) B LTV817M-BN	IC	EVERLIGHT LITE-ON
29	MI	1	EA	IC501	STR-A6059H DIP-8	IC	SANKEN
30	MI	2	EA	TH101,TH102	ICL-5W 2R50MSMT DSC2.5D15 2.5Ω 8A Φ15 MF72-2.5D15 2.5Ω 7A Φ15 WTR15D2R5 2.5Ω 8A Φ15	ICL THERMISTOR THERMISTOR THERMISTOR	SMART DSC NSE WMEC
31	MI	1	EA	L201	0.6uH Φ3X10L BAR	INDUCTOR, COIL	DONGYANG TELECOM SOOJUNG CLOVER FEELUX LIENCHANG
32	MI	1	EA	L251	12S-DD02	INDUCTOR, COIL	SOOJUNG JIANGSU CHANNELON ELECTRONIC GROUP FEELUX DONGYANG TELECOM BUJEON LIENCHANG
33	MI	2	EA	LF101,LF102	CS610250S 25mH LT6010250 25mH LLF-120 25mH LLF-120 25mH	LINE FILTER	TNC DONG IL DONGYANG TELECOM FEELUX
34	MI	1	EA	HD601	EC40.0CAP-F-12	MAIN CAP HOLDER	TBI
35	MI	1	EA	T101	12S-LM05	TRANSFORMER	TDK SOOJUNG JIANGSU CHANNELON ELECTRONIC GROUP DONGYANG TELECOM BUJEON LIENCHANG FEELUX LGIT
36	MI	1	EA	L601	12S-LP01	TRANSFORMER	TDK SOOJUNG JIANGSU CHANNELON ELECTRONIC GROUP DONGYANG TELECOM BUJEON LIENCHANG FEELUX LGIT
37	MI	1	EA	T501	12S-LS01	TRANSFORMER	TDK SOOJUNG JIANGSU CHANNELON ELECTRONIC GROUP DONGYANG TELECOM BUJEON LIENCHANG FEELUX CLOVER
38	MI	1	EA	VA101	INR14D621K-CAP 620V Φ14 L-FORMING TUBE SV C621D-14A TM7 620V Φ14 L-FORMING TUBE WMR14D621 620V Φ14 L-FORMING TUBE	VARISTOR	AMOTECH SAMWHA WMEC
39	MI	1	EA	P702	20010WR-06A03 6PIN WHITE	WAFER	YEONHO
40	MI	1	EA	SK100	DAC-18D3A BLACK	WAFER	DONG IL
41	MI	1	EA	P202	IS100-L08T-C46 8PIN BLACK	WAFER	UUU ELE
42	MI	1	EA	P203	IS100-L08T-C46-A 8PIN WHITE	WAFER	UUU ELE
43	MI	1	EA	P701	SMAW200A-H08A2 8PIN WHITE	WAFER	YEONHO
44	MI	1	EA	P201	SMAW200-H24S2 24PIN WHITE	WAFER	YEONHO
45	SMT	1	EA	LGP4247L-12LPB SMT COMPONENTS			
46	SMT	1	EA	LB701	CB1608GK102T JCBH160808A 102	BEAD	SAMWHA JOINSET
47	SMT	1	EA	C609	15pF 50V J 1608 COG	CAPACITOR, CHIP	MURATA PILKOR SAMWHA TAYOYUDEN TDK YAGEO HEC
48	SMT	1	EA	C608	100pF 50V J 1608 COG	CAPACITOR, CHIP	
49	SMT	5	EA	C705,C713,C714,C715,C716	330pF 50V J 1608 COG	CAPACITOR, CHIP	
50	SMT	3	EA	C104,C256,C269	470pF 50V J 1608 COG	CAPACITOR, CHIP	
51	SMT	4	EA	C116,C203,C257,C607	0.001uF 50V K 1608 X7R	CAPACITOR, CHIP	
52	SMT	2	EA	C261,C282	0.0022uF 50V K 1608 X7R	CAPACITOR, CHIP	
53	SMT	1	EA	C507	0.0047uF 50V K 1608 X7R	CAPACITOR, CHIP	
54	SMT	7	EA	C103,C255,C704,C710,C711,C712,C717	0.01uF 50V K 1608 X7R	CAPACITOR, CHIP	
55	SMT	1	EA	C262	0.033uF 50V K 1608 X7R	CAPACITOR, CHIP	
56	SMT	2	EA	C274,C606	0.047uF 50V K 1608 X7R	CAPACITOR, CHIP	

57	SMT	16	EA	C105,C107,C108,C110,C115,C205,C258,C260,C277,C503,C604,C605,C701,C702,C707,C719	0.1uF 50V K 1608 X7R	CAPACITOR, CHIP	MURATA
58	SMT	1	EA	C106	0.22uF 16V K 1608 X7R	CAPACITOR, CHIP	PILKOR
59	SMT	2	EA	C101,C706	0.47uF 16V K 1608 X7R	CAPACITOR, CHIP	SAMWHA
60	SMT	3	EA	C102,C204,C275	1uF 16V K 1608 X7R	CAPACITOR, CHIP	TAIYOUDEN
61	SMT	1	EA	C516	1uF 25V K 2012 X7R or 1uF 50V K 2012 X7R(PILKOR 삭제)	CAPACITOR, CHIP	TDK
62	SMT	4	EA	C265,C266,C267,C268	2.2uF 10V K 2012 X7R or 2.2uF 16V K 2012 X7R	CAPACITOR, CHIP	YAGEO HEC
63	SMT	15	EA	D101,D102,D103,D105,D106,D121,D255,D256,D257,D258,D504,D604,D605,D801,D802	1N4148W 100V 150mA SOD-123 1N4148W 100V 150mA SOD-123 MMSD4148T1 100V 200mA SOD-123 SDS4148G 100V 150mA SOD-123	DIODE	RECTRON DIODES ONSEMI AUK
64	SMT	2	EA	D254,D260	MBRD10100CT 10A 100V D-PACK MBRD10U100CT 10A 100V D-PACK SPEN-210A 10A 100V D-PACK	DIODE	SENSITRON KEC SANKEN
65	SMT	6	EA	Q801,Q802,Q803,Q804,Q805,Q806	PHT4NQ10LT 100V 3.5A SOT-223 MDHT4N20Y 200V 0.85A SOT-223	FET	NXP MAGNACHIP
66	SMT	1	EA	IC101	L6599AD SO-16N	IC	STM
67	SMT	1	EA	IC202	SJ432BS 1.24V ±0.5% SOT-23 TLV431BSN1T1G, 1.24V±0.5%, SOT-23 AZ431LANTR-E1, 1.24V±0.5%, SOT-23	IC	AUK ON SEMI BCD
68	SMT	1	EA	IC251	UC2843B SO-8 AP3843CM SO-8 UC2843B SO-8	IC	ONSEMI BCD STM
69	SMT	1	EA	IC252	SNF431BS 2.5V ±0.5% SOT-23 AS431AN, 2.5V±0.5%, SOT-23 KA431SLMF2, 2.5V±0.5%, SOT-23	IC	AUK BCD FAIRCHILD
70	SMT	1	EA	IC601	FAN7930BMX_G SOIC-8	IC	FAIRCHILD
71	SMT	1	EA	IC701	R5F100BCAFP	IC	Renesas
72	SMT	1	EA	IC801	AAT2430AISX_T1	IC	AATI
73	SMT	20	EA	J14,J17,J18,J20,J27,J36,J37,J38,J39,J42,J47,J48,J49,J50,J53,J54,J55,J68,J69,J70	0Ω J 3216	RESISTOR, CHIP	KAMAYA PILKOR ROHM SAMSUNG YAGEO TZAI YUAN
74	SMT	4	EA	R119,R122,R610,R611	22Ω J 3216	RESISTOR, CHIP	
75	SMT	2	EA	R118,R121	47Ω J 3216	RESISTOR, CHIP	
76	SMT	6	EA	R127,R613,R614,R615,R616,R623	750KΩ F 3216	RESISTOR, CHIP	
77	SMT	4	EA	R103,R104,R105,R106	820KΩ F 3216	RESISTOR, CHIP	
78	SMT	6	EA	R207,R626,R716,R717,R756,R825	0Ω J 1608	RESISTOR, CHIP	
79	SMT	1	EA	R289	1.2KΩ J 1608	RESISTOR, CHIP	
80	SMT	3	EA	R260,R295,R760	100KΩ J 1608	RESISTOR, CHIP	
81	SMT	14	EA	R608,R612,R705,R713,R720,R725,R726,R727,R728,R735,R736,R738,R751,R752	100Ω J 1608	RESISTOR, CHIP	
82	SMT	20	EA	R120,R123,R211,R262,R266,R278,R298,R515,R603,R605,R606,R703,R712,R715,R801,R803,R805,R807,R809,R811	10KΩ J 1608	RESISTOR, CHIP	
83	SMT	1	EA	R704	10Ω J 1608	RESISTOR, CHIP	
84	SMT	10	EA	R112,R202,R267,R299,R508,R607,R701,R710,R711,R761	1KΩ J 1608	RESISTOR, CHIP	
85	SMT	1	EA	R259	1MΩ J 1608	RESISTOR, CHIP	
86	SMT	1	EA	R109	2.2MΩ J 1608	RESISTOR, CHIP	
87	SMT	3	EA	R117,R621,R702	2.2Ω J 1608	RESISTOR, CHIP	
88	SMT	2	EA	R718,R719	22Ω J 1608	RESISTOR, CHIP	
89	SMT	1	EA	R619	220Ω J 1608	RESISTOR, CHIP	
90	SMT	2	EA	R754,R755	22KΩ J 1608	RESISTOR, CHIP	
91	SMT	1	EA	R210	270Ω J 1608	RESISTOR, CHIP	
92	SMT	2	EA	R297,R759	3.3KΩ J 1608	RESISTOR, CHIP	
93	SMT	1	EA	R108	3.9KΩ F 1608	RESISTOR, CHIP	
94	SMT	2	EA	R509,R737	330Ω J 1608	RESISTOR, CHIP	
95	SMT	6	EA	R220,R288,R733,R734,R745,R746	4.7KΩ J 1608	RESISTOR, CHIP	
96	SMT	2	EA	R263,R296	4.7Ω J 1608	RESISTOR, CHIP	
97	SMT	12	EA	R115,R714,R721,R722,R723,R724,R802,R804,R806,R808,R810,R812	470KΩ J 1608	RESISTOR, CHIP	
98	SMT	5	EA	R128,R201,R208,R209,R227	470Ω J 1608	RESISTOR, CHIP	
99	SMT	15	EA	R107,R264,R290,R620,R709,R731,R732,R739,R741,R744,R747,R748,R749,R750,R753	47KΩ J 1608	RESISTOR, CHIP	
100	SMT	1	EA	R265	47Ω J 1608	RESISTOR, CHIP	
101	SMT	5	EA	R511,R729,R730,R743,R757	75KΩ J 1608	RESISTOR, CHIP	
102	SMT	2	EA	R293,R294	1.2KΩ F 1608	RESISTOR, CHIP	
103	SMT	1	EA	R206	1.5KΩ F 1608	RESISTOR, CHIP	
104	SMT	1	EA	R618	1.8KΩ F 1608	RESISTOR, CHIP	
105	SMT	1	EA	R204	100Ω F 1608	RESISTOR, CHIP	
106	SMT	2	EA	R291,R292	10KΩ F 1608	RESISTOR, CHIP	
107	SMT	1	EA	R835	15KΩ F 1608	RESISTOR, CHIP	
108	SMT	1	EA	R111	18KΩ F 1608	RESISTOR, CHIP	
109	SMT	2	EA	R205,R255	2.7KΩ F 1608	RESISTOR, CHIP	
110	SMT	1	EA	R617	22KΩ F 1608	RESISTOR, CHIP	
111	SMT	1	EA	R261	24KΩ F 1608	RESISTOR, CHIP	
112	SMT	3	EA	R256,R257,R258	27KΩ F 1608	RESISTOR, CHIP	
113	SMT	1	EA	R110	2KΩ F 1608	RESISTOR, CHIP	
114	SMT	2	EA	R276,R277	3.3KΩ F 1608	RESISTOR, CHIP	
115	SMT	1	EA	R506	30KΩ F 1608	RESISTOR, CHIP	
116	SMT	1	EA	R834	3KΩ F 1608	RESISTOR, CHIP	
117	SMT	2	EA	R281,R282	5.1KΩ F 1608	RESISTOR, CHIP	
118	SMT	1	EA	R116	75Ω F 1608	RESISTOR, CHIP	
119	SMT	2	EA	R113,R114	8.2KΩ F 1608	RESISTOR, CHIP	
120	SMT	6	EA	R270,R271,R272,R273,R274,R275	91KΩ F 1608	RESISTOR, CHIP	
121	SMT	3	EA	HD101,HD102,HD103	3X2.45X2.5H	SUPPORTER	POWER VALLEY

122	SMT	1	EA	Q701	2N7002K 60V 300mA SOT-23 2N7002K 60V 380mA SOT-23 RK7002 60V 115mA SOT-23 SSM3K7002F 60V 200mA SOT-23	TRANSISTOR	DIODES ONSEMI ROHM TOSHIBA
123	SMT	1	EA	Q501	KTC3551T 80V 1A TSM NPN BCW66GLT1 45V 800mA SOT-23 NPN 2SC5865 SOT-23 NPN	TRANSISTOR	KEC ONSEMI ROHM
124	SMT	3	EA	Q201,Q252,Q255	MMBT2222A 40V 600mA SOT-23 NPN KTN2222AS 40V 600mA SOT-23 NPN PMBT2222A 40V 600mA SOT-23 NPN SBT2222A 40V 600mA SOT-23 NPN	TRANSISTOR	ONSEMI KEC NXP AUK
125	SMT	6	EA	Q103,Q253,Q254,Q603,Q604, Q702	MMBT2907A -60V -600mA SOT-23 PNP KTN2907AS -60V -600mA SOT-23 PNP PMBT2907 -60V -600mA SOT-23 PNP SBT2907A -60V -600mA SOT-23 PNP	TRANSISTOR	ONSEMI KEC NXP AUK
126	SMT	0.5	GR		HT-130A-106 HT-130D-7 LOCTITE 3609 NEB800T	BOND (SMD)	HITECH KOREA HITECH KOREA LOCTITE FUJI
127	AI	1	EA		LGP4247L-12LPB AI COMPONENTS		
128	AI	1	EA	C509	NXB 10uF 50V M P5 Φ5X11 SG 10uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
129	AI	2	EA	C253,C259	NXB 22uF 50V M P5 Φ5X11 SG 22uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
130	AI	2	EA	C803,C804	NXB 4.7uF 50V M P5 Φ5X11 SG 4.7uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
131	AI	1	EA	C202	NXB 470uF 10V M P5 Φ8X11.5 SG 470uF 10V M P5 Φ8X12	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
132	AI	2	EA	C504,C510	NXB 47uF 50V M P5 Φ6.3X11 SG 47uF 50V M P5 Φ6.3X11	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
133	AI	2	EA	C201,C206	NXH 1000uF 10V M P5 Φ10X12.5 MG 1000uF 10V M P5 Φ10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
134	AI	1	EA	C270	NXH 330uF 35V M P5 Φ10X12.5 MG 330uF 35V M P5 Φ10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
135	AI	2	EA	C272,C279	NXH 470uF 25V M P5 Φ10X12.5 MG 470uF 25V M P5 Φ10X13	CAPACITOR, ALUMINUM	SAMYOUNG SUSCON
136	AI	3	EA	C113,C603,C614	DG 220pF 1KV K P5 125℃ CK 220pF 1KV K P5 125℃ CT81 220pF 1KV K P5 125℃ CK45 220pF 1KV K P5 125℃	CAPACITOR, CERAMIC	APEX INTEC DONGIL ELEC. YINANDON TDK
137	AI	3	EA	C118,C119,C508	DG 100pF 1KV K P5 125℃ CK 100pF 1KV K P5 125℃ CT81 100pF 1KV K P5 125℃ CK45 100pF 1KV K P5 125℃	CAPACITOR, CERAMIC	APEX INTEC DONGIL ELEC. YINANDON TDK
138	AI	1	EA	C505	DG 47pF 1KV K P5 125℃ CC 47pF 1KV K P5 125℃ CC81 47pF 1KV K P5 125℃ CC45 47pF 1KV K P5 125℃	CAPACITOR, CERAMIC	APEX INTEC DONGIL ELEC. YINANDON TDK
139	AI	2	EA	C501,C502	DG 1000pF 1KV K P5 125℃ CK 1000pF 1KV K P5 125℃ CT81 1000pF 1KV K P5 125℃ CK45 1000pF 1KV K P5 125℃	CAPACITOR, CERAMIC	APEX INTEC DONGIL ELEC. YINANDON TDK
140	AI	5	EA	CY103,CY104,CY105,CY106,CY107	DA 470pF 400V K P10 105℃ DA 470pF 400V K P10 105℃ CT81 470pF 400V K P10 105℃ CD 470pF 400V K P10 105℃	CAPACITOR, CERAMIC	APEX INTEC DONGIL ELEC. YINANDON TDK
141	AI	3	EA	D501,D502,D510	UF1007 1KV 1A DO-41 UF4007 1KV 1A DO-41 HER108G 1KV 1A DO-41 UF4007 1KV 1A DO-41	DIODE	DIODES DACHANG RECTRON TSC
142	AI	3	EA	ZD102,ZD501,ZD502	1N5245B 15V DO-35 1N5245B 15V DO-35 MTZJ15B 15V DO-34	DIODE, ZENER	VISHAY RECTRON ROHM
143	AI	1	EA	ZD503	1N5252B 24V DO-35 1N5252B 24V DO-35 MTZJ24B 24V DO-34	DIODE, ZENER	VISHAY RECTRON ROHM
144	AI	27	EA	EL3, EL4, EL7, EL8, EL13, EL14,EL21,EL22,EL29,EL30, EL35,EL36,EL37,EL38,EL39, EL43,EL44,EL45,EL46,EL49, EL50,EL51,EL52,EL58,EL59, EL60,EL61	1.6X3.0	EYELET	SAMSUNG JS DOSUNG DAERIN HUA KANG DELIKANG SEJIN LEZHI Avico
145	AI	20	EA	EL1, EL2, EL9, EL10,EL11, EL12,EL15,EL16,EL17,EL18, EL19,EL20,EL23,EL24,EL25, EL26,EL31,EL32,EL33,EL34,	2.0X3.0	EYELET	SAMSUNG JS DOSUNG DAERIN HUA KANG DELIKANG SEJIN LEZHI Avico
146	AI	1	EA	F501	F1.6A L 250V 876	FUSE, FAST ACTING	LITTELFUSE

149	AI	1	EA	LB103	BFS3550A0L SINGLE AXIAL SEB3550050BA SINGLE AXIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA SCC
150	AI	6	EA	LB101, LB102, LB104, LB105, LB106, LB601	BFS3550R2F SINGLE RADIAL SER3550050BA SINGLE RADIAL	INDUCTOR, BEAD FILTER LEAD	SAMWHA SCC
151	AI	39	EA	J1, J3, J4, J5, J6, J7, J8, J9, J10, J11, J12, J13, J15, J16, J19, J21, J22, J23, J24, J25, J28, J29, J30, J31, J32, J33, J34, J35, J40, J41, J43, J44, J45, J46, J51, J59, J65, J66, J67	Φ0.6	JUMPER WIRE	DIELEC DAPcsL.PcsD TPI TZAI YUAN UNI-OHM ILKWANG DM Seungwon RLC
152	AI	1	EA	LD701	LTL-1CHY-001A, 5mm Pitch Type (Yellow) 204-10UYC-S530, 5mm Pitch Type (Yellow)	LED	LITE-ON EVERLIGHT
153	AI	1	EA	R502	CRS 100Ω 1/2W J SMALL RDM92 100Ω 1/2W J SMALL SFR25H 100Ω 1/2W J SMALL CF 100Ω 1/2W J SMALL	RESISTOR, CARBON FILM	ABCO SMART PILKOR TZAI YUAN
154	AI	1	EA	R504	CRS 1Ω 1/2W J SMALL RDM92 1Ω 1/2W J SMALL SFR25H 1Ω 1/2W J SMALL CF 1Ω 1/2W J SMALL	RESISTOR, CARBON FILM	ABCO SMART PILKOR TZAI YUAN
155	AI	1	EA	R505	CRS 20Ω 1/2W J SMALL RDM92 20Ω 1/2W J SMALL SFR25H 20Ω 1/2W J SMALL CF 20Ω 1/2W J SMALL	RESISTOR, CARBON FILM	ABCO SMART PILKOR TZAI YUAN
156	AI	1	EA	R101	PRC 1.2MΩ 1/2W J SURGE MSR37 1.2MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	SMART PILKOR
157	AI	1	EA	R124	PRC 1MΩ 1/2W J SURGE MSR37 1MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION	SMART PILKOR
158	AI	2	EA	R251, R252	MORS 15KΩ 2W J SMALL RSD02 15KΩ 2W J SMALL PR02 15KΩ 2W J SMALL MOF 15KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
159	AI	1	EA	R126	MORS 120Ω 1W J SMALL RSD01 120Ω 1W J SMALL PR01 120Ω 1W J SMALL MOF 120Ω 1W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
160	AI	2	EA	R286, R287	MORS 1KΩ 2W J SMALL RSD02 1KΩ 2W J SMALL PR02 1KΩ 2W J SMALL MOF 1KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
161	AI	2	EA	R279, R280	MORS 30KΩ 2W J SMALL RSD02 30KΩ 2W J SMALL PR02 30KΩ 2W J SMALL MOF 30KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
162	AI	2	EA	R283, R284	MORS 3.3KΩ 2W J SMALL RSD02 3.3KΩ 2W J SMALL PR02 3.3KΩ 2W J SMALL MOF 3.3KΩ 2W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
163	AI	1	EA	R503	MORS 62KΩ 1W J SMALL RSD01 62KΩ 1W J SMALL PR01 62KΩ 1W J SMALL MOF 62KΩ 1W J SMALL	RESISTOR, METAL OXIDE FILM	ABCO SMART PILKOR TZAI YUAN
164	AI	2	EA	R501, R507	WNPS 0.82Ω 1W J SMALL PRN 0.82Ω 1W J SMALL	RESISTOR, WIRE WOUND	ABCO SMART
165	AI	1	EA	R601	WNPS 0.16Ω 2W J SMALL PRN 0.16Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO SMART
166	AI	1	EA	R268	WNPS 0.24Ω 2W J SMALL PRN 0.24Ω 2W J SMALL	RESISTOR, WIRE WOUND	ABCO SMART
167	AI	1	EA		EAX64427101 LGP4247L-12LPB 176 x 245 1.6T FR1 KB, DS, L, R-8700 CTI-600	PCB	DUCK SUNG HT CIRCUIT(QINGDAO) DONGMYUNG CIR SHANGHAI WANZHENG SHENG KIUANG NEW TRIUNION TIANJIN DEA DUCK HUIHO HSIANG KUO TIAN FENG TIS KOREA Wellbest Cosmotech Kyosha
168	ETC				SUBSIDIARY MATERIALS		
169	ETC	0.0625	EA		509 * 344 * 204 * 8T	BOX CARTON	NEWEA IND DAESAN. HANYOUNG JAEIL QXBW TAILI PACKING HUAXING PACK SOONGSAN WUJIANG ZHENLONG SUZHOU JIADELONG KUNSHAN KUNHONG Dongju Yumi

170	ETC	0.5625	EA		341 * 180 * 8T (Cross board A)	BOX PARTITION	NEWEA IND DAESAN. HANYOUNG JAEIL QXBW TAILI PACKING HUAXING PACK SOONGSAN WUJIANG ZHENLONG SUZHOU JIADELONG KUNSHAN KUNHONG Dongju Yumi
171	ETC	0.3125	EA		506 * 180 * 8T (Cross board B)	BOX PARTITION	NEWEA IND DAESAN. HANYOUNG JAEIL QXBW TAILI PACKING HUAXING PACK SOONGSAN WUJIANG ZHENLONG SUZHOU JIADELONG KUNSHAN KUNHONG Dongju Yumi
172	ETC	0.1875	EA		506 * 341 * 8T	PAD	NEWEA IND DAESAN. HANYOUNG JAEIL QXBW TAILI PACKING HUAXING PACK SOONGSAN WUJIANG ZHENLONG SUZHOU JIADELONG KUNSHAN KUNHONG Dongju Yumi
173	ETC	1	EA		Min 460 * 180	BUBBLE SHEET	DUCKJIN S&P JAEIL QXBW CHUMDAN A-TEK KUNSHANKUNHONG LIYUANG SERVEONE
174	ETC	1	EA		42 X 8 NY WHITE 93CODE 19DIGIT	BAR CODE	SHUN JIN HANA. AIT SERVEONE WUJIANG SUNGLING GUNGGAOQI ZHI XIN
175	ETC	1	EA		19 X 9 NY WHITE MICOM CHECKSUM	LABEL	SHUN JIN HANA. AIT SERVEONE WUJIANG SUNGLING GUNGGAOQI ZHI XIN
176	ETC	12.0	GR		EF-9301(g) ILF-714(kg) TF328-2-2(Kg) EC-19S-8 CS-9111LF	FLUX	ALPHA ION ELEC TONGFANG 동화다무라 청솔
177	ETC	20.0	GR		HSE-11 B20 BAR (SN:99%,AG:0.3%,CU:0.7%) SN:99%, AG:0.3%, CU:0.7% SA0307 A+ SN:99%, AG:0.3%, CU:0.7% YW9-0307 SN:99%, AG:0.3%, CU:0.7% M35E-BAR SN:99%, AG:0.3%, CU:0.7%	SOLDER BAR	HEESUNG METAL SEOUL ALLOYMETAL DYFENCO YUNNAN TIN SOLNET
178	ETC	5.0	GR		HSE-11 B20 BAR (SN:99%,AG:0.3%,CU:0.7%) SN:99%, AG:0.3%, CU:0.7% SA0307 A+ SN:99%, AG:0.3%, CU:0.7% YW9-0307 SN:99%, AG:0.3%, CU:0.7% M35E-BAR SN:99%, AG:0.3%, CU:0.7%	SOLDER WIRE	HEESUNG METAL SEOUL ALLOYMETAL DYFENCO YUNNAN TIN SOLNET
179	ETC	10.0	GR		H-828W OKE-410 QS9112 RTV SS7945W TSE3854DS-W BN707 RTV KE402RTV ES 2044H & 2S2482W UB-5601 EA-4100 DS-818	BOND (RTV)	OKONG OKONG KCC KCC MOMENTIVE BONIC SHINETSU CANADA U-BOND DOW CORNING DONGYANG