

MODEL	C610
LGP42-13R2	82uF/450V
LGP42I-13R2	100uF/500V

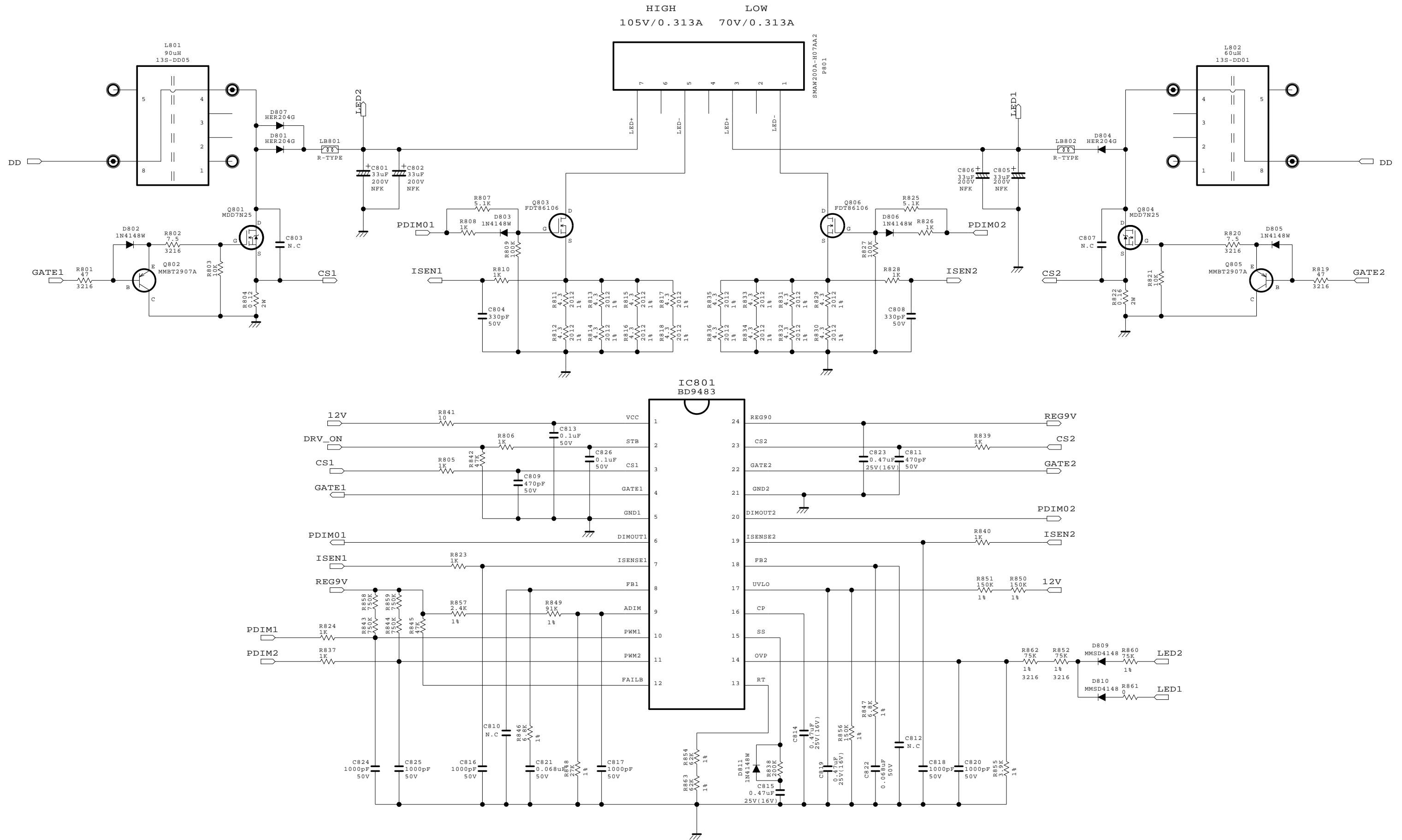
LGP42-13R2	○	○	○
LGP42I-13R2	○	○	○

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

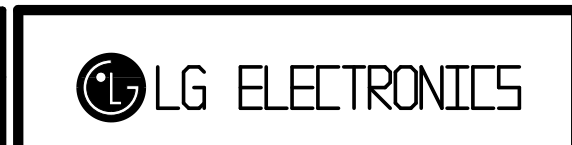


MODEL	LGP42-13R2	DATE	'13.03.18
BLOCK	PFC\STBY\MULTI	SHEET	1 / 2



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.

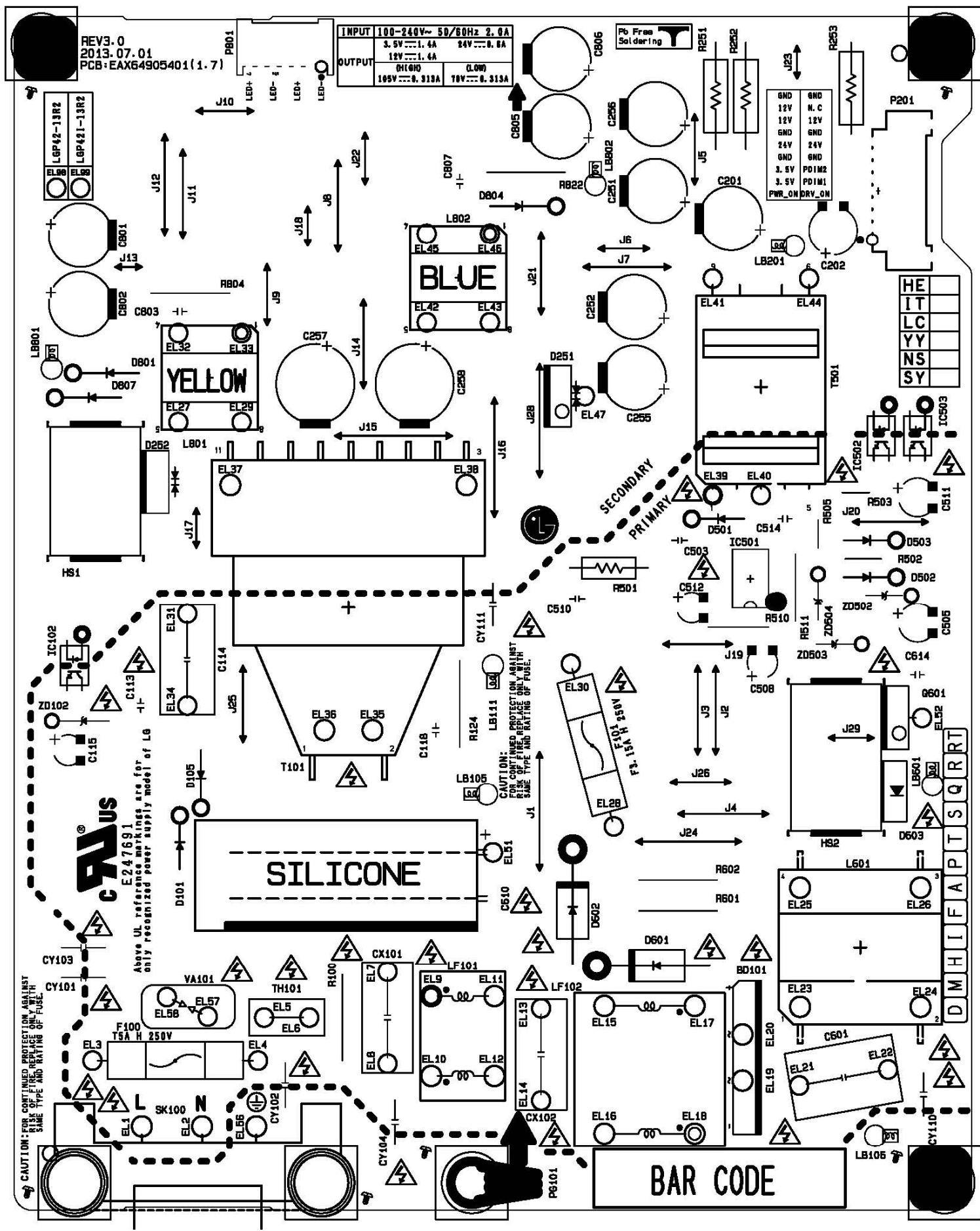
SECRET  
LGElectronics



MODEL	LGP42-13R2	DATE	'13.03.18
BLOCK	PFC\STBY\MULTI	SHEET	2 / 2

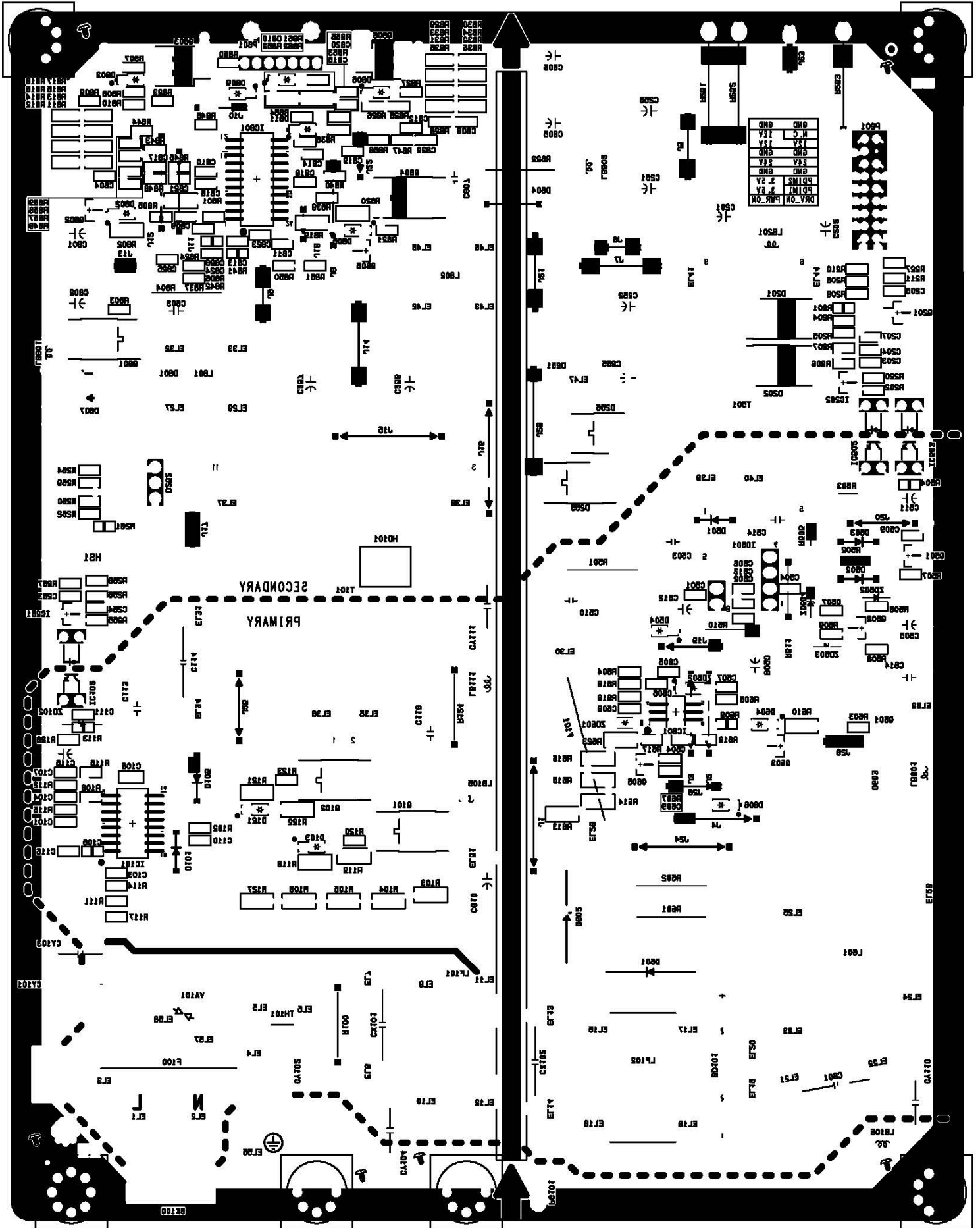


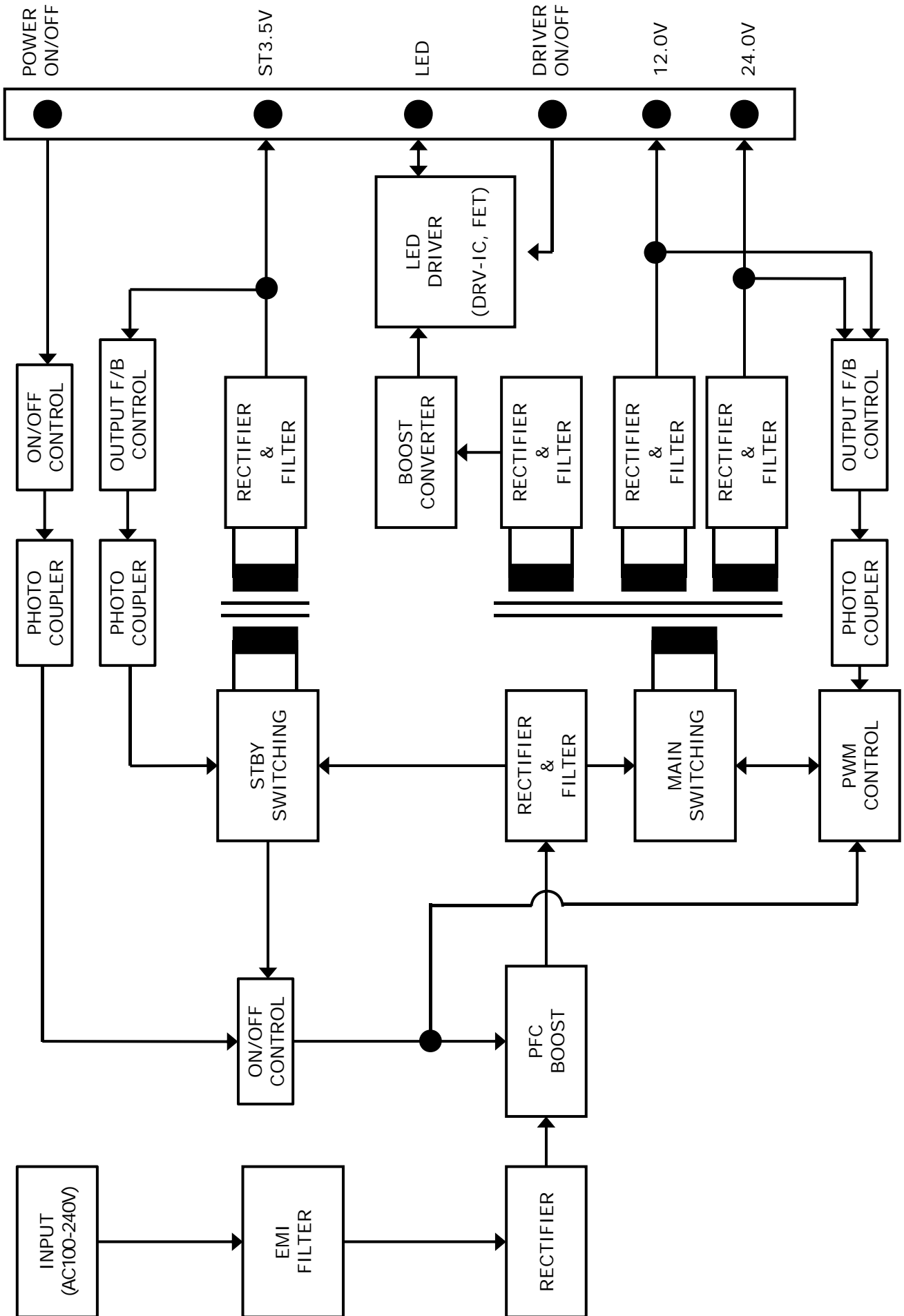
Top Silk





**Bottom Silk :**







# Parts List



NO.	L/V	Qty	UNIT	LOCATION	SPECIFICATION	DESCRIPTION	MAKER
	M				DIODE ASS'Y	HEAT SINK ASS'Y	
1	MI	1	EA	HS1	HS1(21X15X18.3)	HEAT SINK	MINGXUE HUA PENG YAO FENG
2	MI	1	EA	D252	MBRF10200CT 200V 10A ITO-220AB MBRF10U200CT 200V 10A TO-220IS MBRF10200CT 200V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
3	MI	1	EA	FOR D252	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 Clarfix, Cr3+WH Plating	SCREW	RUI YOU ROEN
4	MI	0.01	GR	FOR D252	KD-3 H-SC-7	SILICON GREASE	SANCHEN XUNWEI
	M				FET / DIODE ASS'Y	HEAT SINK ASS'Y	
5	MI	1	EA	HS2	HS2(24X15X18.3)	HEAT SINK	MINGXUE HUA PENG YAO FENG
6	MI	1	EA	Q601	STF13NM60N 650V 11A TO-220F TK10A60W 600V 9.7A TO-220SIS	FET	STM TOSHIBA
7	MI	1	EA	D603	STTH10LCD06 600V 10A TO-220F BYV29FX-600 600V 9A TO-220F	DIODE	STM NXP
8	MI	2	EA	FOR Q601,D603	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 Clarfix, Cr3+WH Plating	SCREW	RUI YOU ROEN
9	MI	0.02	GR	FOR Q601,D603	KD-3 H-SC-7	SILICON GREASE	SANCHEN XUNWEI
	M				LGP42-13R2 MI COMPONENTS	MI ASS'Y	
10	MI	1	EA	BD101	TS10K60 600V 10A KBJ1006G 600V 10A D10XB60 600V 10A	DIODE	TSC LITEON DACHANG
11	MI	1	EA	C610	KMF 82uF 450V MRB P7.5 Φ18x31.5 SK 82uF 450V MRB P7.5 Φ18X32	CAPACTOR, ALUMINUM	SAMYOUNG SUSCON
12	MI	2	EA	CX101,CX102	PCX2 337 0.33uF 275V P15 CTX 0.33uF 275V P15 MPX 0.33uF 275V P15	CAPACTOR, FILM	PILKOR CHENG TUNG EUROPTRONIC
13	MI	1	EA	C601	PCMP 372 0.82uF 500V J P15 MPHB 0.82uF 500V J P15 CTH 0.82uF 500V J P15	CAPACTOR,FILM	PILKOR EUROPTRONIC CHENG TUNG
14	MI	1	EA	C114	PCMP 384 0.027uF 800V J P15 MPLB 0.027uF 1000V J P15	CAPACTOR,FILM	PILKOR EUROPTRONIC
15	MI	2	EA	D601,D602	1N5408G 1KV 3A P20	DIODE	TSC
16	MI	1	EA	D251	MBRF10100CT 100V 10A ITO-220AB MBRF10U100CT 100V 10A TO-220IS MBRF10100CT 100V 10A ITO-220AB	DIODE	SENSITRON KEC TSC
17	MI	1	EA	F100	T5A H 250V 215 RED(1-LINE) T5A H 250V 50CT RED(1-LINE)	FUSE, TIME LAG	LITTEL FUSE Dainfuse
18	MI	1	EA	F101	F3.15A H 250V 216 VIOLET(2-LINE) F3.15A H 250V 50CF VIOLET(2-LINE)	FUSE, FAST ACTING	LITTEL FUSE Dainfuse
19	MI	3	EA	IC102,IC502,IC503	EL817MB(DT) LTV817M-BN	IC	EVERLIGHT LITEON
20	MI	1	EA	IC501	ICE3BR4765JZ DIP-8	IC	INFINEON
21	MI	1	EA	PG101	YF-002-00131 SPCC 0.4T GND PIN JS-12-75-04 SPCC 0.4T GND PIN	GND REINFORCE	YAO FENG DIHUA
22	MI	1	EA	TH101	DSC5D15 5Ω 8A Φ15 IN, OUT FORMING MF72-5D15 5Ω 7A Φ15 OUT FORMING WTR15D5 5Ω 8A Φ15 OUT FORMING	THERMISTOR	DSC NSE Xiamen Wanming
23	MI	1	EA	L601	12S-LP01(EE2614)	TRANSFORMER	FEELUX ZHONGTAI
24	MI	1	EA	L801	13S-DD05(90uH)	CHOKE	FEELUX ZHONGTAI
25	MI	1	EA	L802	13S-DD01(60uH)	CHOKE	FEELUX ZHONGTAI
26	MI	1	EA	LF101	LLF-124, 28mH LLF-124, 28mH	LINE FILTER	FEELUX ZHONGTAI
27	MI	1	EA	LF102	LLF-100, 7.7mH SQ2424	LINE FILTER	FEELUX ZHONGTAI
28	MI	1	EA	T101	13S-LM04(SRV3820)	TRANSFORMER	FEELUX ZHONGTAI
29	MI	1	EA	T501	12S-LS01 (EE1918 1.1mH)	TRANSFORMER	FEELUX ZHONGTAI
30	MI	1	EA	VA101	INR14D621K-CAP 620V Φ14 TUBE WMR14D621K 620V Φ14 TUBE SVC621D-14ATW7 620V Φ14 TUBE NFC14D621K0037WC 620V Φ14 TUBE	VARISTOR	AMOTECH Xiamen Wanming SAMWHA NFC





31	MI	1	EA	SK100	DAC-18C3M1 c	AC SOCKET	DONGIL TECH
32	MI	1	EA	P201	SMAW200-H18S2 18PIN WHITE	WAFER	YEONHO
33	MI	1	EA	P801	SMAW200A-H07AA2 4PIN WHITE	WAFER	YEONHO
	SMT				LGP42-13R2 SMD COMPONENT	SMT ASS'Y	
34	SMT	2	EA	C804,C808	330pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
35	SMT	2	EA	C809,C811	470pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
36	SMT	1	EA	C104	680pF 50V J 1608 COG	CAPACITOR, CHIP	YAGEO HEC
37	SMT	12	EA	C107,C116,C253,C504,C607,C608,C816,C817,C818,C820,C824,C825	1000pF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
38	SMT	1	EA	C254	0.01uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
39	SMT	2	EA	C111,C605	0.022uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
40	SMT	1	EA	C606	0.047uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
41	SMT	2	EA	C821,C822	0.068uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
42	SMT	11	EA	C103,C106,C110,C205,C501,C502,C507,C509,C604,C813,C826	0.1uF 50V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
43	SMT	1	EA	C101	0.33uF 16V K 1608 X7R / 0.33uF 25V K 1608 X7R	CAPACITOR, CHIP	YAGEO HEC
44	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
45	SMT	1	EA	C108	0.47uF 25V K 2012 X7R	CAPACITOR, CHIP	YAGEO HEC
46	SMT	11	EA	D103,D121,D504,D604,D802,D803,D805,D806,D809, D810,D811	1N4148W 100V 150mA SOD-123 1N4148W 100V 150mA SOD-123	DIODE	TSC DIODES
47	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
48	SMT	4	EA	D201,D202,D255,D256	MBRD10100CT 10A 100V D-PACK MBRD10U100CT 10A 100V D-PACK	DIODE	SENSITRON KEC
49	SMT	1	EA	ZD601	BZT52C6V8S 6.8V SOD-323 BZT52C6V8S 6.8V SOD-323	DIODE, ZENER	DIODES TSC
50	SMT	2	EA	Q101,Q102	STD10NM60N 600V 10A D-PAK FCD600N60Z 600V 7.4A D-PAK TK8P60V 600V 8A D-PAK	FET	STM FAIRCHILD TOSHIBA
51	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 THOSIBA
52	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
53	SMT	1	EA	Q501	BCW66GLT SOT-23 NPN 2SC5865 SOT-23 NPN	TRANSISTOR	ONSEMI ROHM
54	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
55	SMT	3	EA	Q603,Q802,Q805	MMBT2907A -60V -600mA SOT-23 PNP KTN2907AS -60V -600mA SOT-23 PNP SBT2907A -60V -600mA SOT-23 PNP	TRANSISTOR	ONSEMI KEC AUK
56	SMT	1	EA	IC801	R2A20133D, SOIC-8	IC	RENESAS
57	SMT	1	EA	IC101	SSC9527S, SOIC-18	IC	SANKEN
58	SMT	1	EA	IC801	BD9483F, SOP-24	IC	ROHM
59	SMT	1	EA	IC202	SJ432BS 1.24V ±0.5% SOT-23 AZ431LANTR-E1 1.24V±0.5% SOT-23	IC	AUK BCD
60	SMT	1	EA	IC251	SNF431BS 2.5V ±0.5% SOT-23 AS431ANTR-E1 2.5V ±0.5% SOT-23	IC	AUK BCD
61	SMT	3	EA	R207,R257,R861	0Ω J 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
62	SMT	1	EA	R841	10Ω J 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
63	SMT	2	EA	R102,R612	33Ω J 1608	RESISTOR, CHIP	YAGEO TZAIYUAN
64	SMT	1	EA	R117	47Ω J 1608	RESISTOR, CHIP	YAGEO TZAIYUAN





65	SMT	1	EA	R605	100Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
66	SMT	2	EA	R210,R609	270Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
67	SMT	2	EA	R115,R201	330Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
68	SMT	4	EA	R108,R208,R209,R227	470Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
69	SMT	1	EA	R113	680Ω J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
70	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
71	SMT	1	EA	R254	2.2KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
72	SMT	1	EA	R255	3.9KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
73	SMT	2	EA	R807,R825	5.1KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
74	SMT	9	EA	R120,R123,R211,R220,R256, R507,R603,R803,R821	10KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
75	SMT	3	EA	R128,R842,R845	47KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
76	SMT	1	EA	R506	75KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
77	SMT	4	EA	R509,R604,R809,R827	100KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
78	SMT	4	EA	R843,R844,R858,R859	750KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
79	SMT	1	EA	R838	200KΩ J 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
80	SMT	1	EA	R204	100Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
81	SMT	1	EA	R112	120Ω F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
82	SMT	1	EA	R206	1.5KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
83	SMT	1	EA	R261	2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
84	SMT	2	EA	R258,R857	2.4KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
85	SMT	1	EA	R205	2.7KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
86	SMT	2	EA	R114,R855	3.9KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
87	SMT	1	EA	R259	6.2KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
88	SMT	2	EA	R846,R847	6.8KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
89	SMT	2	EA	R111,R260	10KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
90	SMT	1	EA	R618	24KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
91	SMT	1	EA	R848	27KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
92	SMT	1	EA	R617	30KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
93	SMT	1	EA	R262	47KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
94	SMT	2	EA	R854,R863	62KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
95	SMT	1	EA	R860	75KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
96	SMT	1	EA	R849	91KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
97	SMT	3	EA	R850,R851,R856	150KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
98	SMT	1	EA	R116	240KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
99	SMT	1	EA	R619	270KΩ F 1608	RESISTOR, CHIP	YAGEO TZAI YUAN
100	SMT	16	EA	R811,R812,R813,R814,R815, R816,R817,R818,R829,R830, R831,R832,R833,R834,R835,R836	4.3Ω F 2012	RESISTOR, CHIP	YAGEO TZAI YUAN
101	SMT	2	EA	R802,R820	7.5Ω J 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
102	SMT	2	EA	R119,R122	10Ω J 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
103	SMT	1	EA	R610	18Ω J 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
104	SMT	2	EA	R801,R819	47Ω J 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
105	SMT	2	EA	R118,R121	120Ω J 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
106	SMT	2	EA	R852,R862	75KΩ F 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
107	SMT	10	EA	R103,R104,R105,R106,R127, R613,R614,R615,R616,R623	750KΩ F 3216	RESISTOR, CHIP	YAGEO TZAI YUAN
108	SMT	0.5	GR		NE8800T	BOND	FUJI



	AI			LGP42-13R2 AI COMPONENTS	AI ASSY	
109	AI	2	EA	CY101,CY102	CD 100pF 250V K P10, Y1 CT81 100pF 250V K P10, Y1	CAPACITOR, CERAMIC TDK YINANDON
110	AI	2	EA	CY103,CY104	CD 470pF 250V K P10, Y1 CT81 470pF 250V K P10, Y1	CAPACITOR, CERAMIC TDK YINANDON
111	AI	1	EA	CY110	CD 680pF 250V K P10, Y1 CT81 680pF 250V K P10, Y1	CAPACITOR, CERAMIC TDK YINANDON
112	AI	1	EA	C115	NXB 2.2uF 50V M P5 Φ5X11 SG 2.2uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
113	AI	2	EA	C508,C512	NXB 10uF 50V M P5 Φ5X11 SG 10uF 50V M P5 Φ5X11	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
114	AI	2	EA	C505,C511	NXB 47uF 50V M P5 Φ6.3X11 SG 47uF 50V M P5 Φ6.3X11	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
115	AI	1	EA	C201	NXB 1500uF 10V M P5 Φ10X20 SG 1500uF 10V M P5 Φ10*20	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
116	AI	1	EA	C202	NXB 470uF 10V M P5 Φ8X11.5 SG 470uF 10V M P5 Φ8X12	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
117	AI	2	EA	C251,C252	NXH 330uF 35V M P5 Φ10X12.5 MG 330uF 35V M P5 Φ10X13	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
118	AI	2	EA	C255,C256	NXH 470uF 25V M P5 Φ10X12.5 MG 470uF 25V M P5 Φ10X13	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
119	AI	2	EA	C257,C258	NXB 100uF 100V M P5 Φ12.5x20 MF 100uF 100V M P5 Φ13x21	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
120	AI	4	EA	C801,C802,C805,C806	NFK 33uF 200V M P5 Φ 10X20 SE 33uF 200V M P5 Φ 10x20	CAPACITOR, ALUMINUM SAMYOUNG SUSCON
121	AI	1	EA	C118	OK45 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
122	AI	2	EA	C113,C614	OK45 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
123	AI	2	EA	C503,C510	OK45 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
124	AI	5	EA	D101,D105,D501,D502,D503	UF4007 1KV 1A DO-41 UF4007 1KV 1A DO-41	DIODE TSC DACHANG
125	AI	3	EA	D801,D804,D807	HER204G 300V 2A DO-41 HER204G 300V 2A DO-41	DIODE TSC DACHANG
126	AI	1	EA	ZD504	1N5235B 6.8V DO-35	DIODE, ZENER TSC
127	AI	1	EA	ZD102	1N5239B 9.1V DO-35	DIODE, ZENER TSC
128	AI	1	EA	ZD502	1N5245B 15V DO-35	DIODE, ZENER TSC
129	AI	1	EA	ZD503	1N5250B 20V DO-35	DIODE, ZENER TSC
130	AI	32	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,EL51,EL52,EL57, EL58,EL98	1.6X3.0	EYELET YAOFENG DELIKANG
131	AI	21	EA	EL1,EL2,EL9,EL10,EL11, EL12,EL15,EL16,EL17,EL18, EL19,EL20,EL23,EL24,EL25, EL26,EL35,EL36,EL37,EL38,EL56	2.0X3.0	EYELET YAOFENG DELIKANG
132	AI	6	EA	LB105,LB106,LB201,LB601, LB801,LB802	BFS3550R2F SINGLE RADIAL	INDUCTOR, BEAD FILTER LEAD SAMWHA
133	AI	28	EA	J1,J2,J3,J4,J5, J6,J7,J8,J9,J10, J11,J12,J13,J14,J15, J16,J17,J18,J19,J20, J21,J22,J23,J24,J25, J26,J28,J29	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
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	1	EA	R124	MSR37 1MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION PILKOR
141	AI	1	EA	R100	MSR37 1.2MΩ 1/2W J SURGE	RESISTOR, FIXED CARBON COMPOSITION PILKOR
142	AI	2	EA	R510,R511	WNPS 0.82Ω 1W J SMALL PRN 0.82Ω 1W J SMALL	RESISTOR,WIRE WOUND ABCO SMART
143	AI	1	EA	R804	WNPS 0.12Ω 2W J SMALL PRN 0.12Ω 2W J SMALL	RESISTOR,WIRE WOUND ABCO SMART
144	AI	1	EA	R822	WNPS 0.16Ω 2W J SMALL PRN 0.16Ω 2W J SMALL	RESISTOR,WIRE WOUND ABCO SMART
145	AI	2	EA	R601,R602	WNPS 0.2Ω 2W J SMALL PRN 0.2Ω 2W J SMALL	RESISTOR,WIRE WOUND ABCO SMART
146	AI	1	EA	PCB	LGP42-13R2(159X195X1.6T) FR-1 KB,DS,L, 1oz CTI-600	PCB SHANGHAI WANZHENG NEW TRIUNION WYT



				LGP42-13R2 SUBSIDIARY MATERIALS		
147	ETC	1	EA	40X8 NY WHITE 93CODE 19DIGIT	BAR CODE	QIUJING
148	ETC	3.00	GR	ES2044H & ES2482W SD-5 UB-5601	BOND (RTV)	CANADA SANCHEN U-BOND
149	ETC	0.0333	EA	630 x 425 x 240 x t8	BOX CARTON	WUJIANG ZHENLONG SUZHOU JIADELONG
150	ETC	0.0667	EA	615 x 410 x t8	BOX PAD	WUJIANG ZHENLONG SUZHOU JIADELONG
151	ETC	0.3667	EA	415 x 200 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
152	ETC	0.2000	EA	620 x 200 x t8	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
153	ETC	0.2000	EA	160 x 180 x t35	BOX PARTITION	WUJIANG ZHENLONG SUZHOU JIADELONG
154	ETC	1.0000	EA	165 x 600	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



# 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 42 inch LGE LED TV.

### 1.2 Customers product related items

Product : Power Supply Unit  
Part code : EAY62810601

### 1.3 Product name

Product name : LGP42-13R2  
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 2.0Arms . (at 100Vac & Nominal Load) Under 1.0Arms . (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 0.9 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)	3.325V ~ 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+	97.5V~109.5V	0.313A(0.297~0.329A)	± 5%	-
	65~75V	0.313A(0.297~0.329A)		

\* 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.

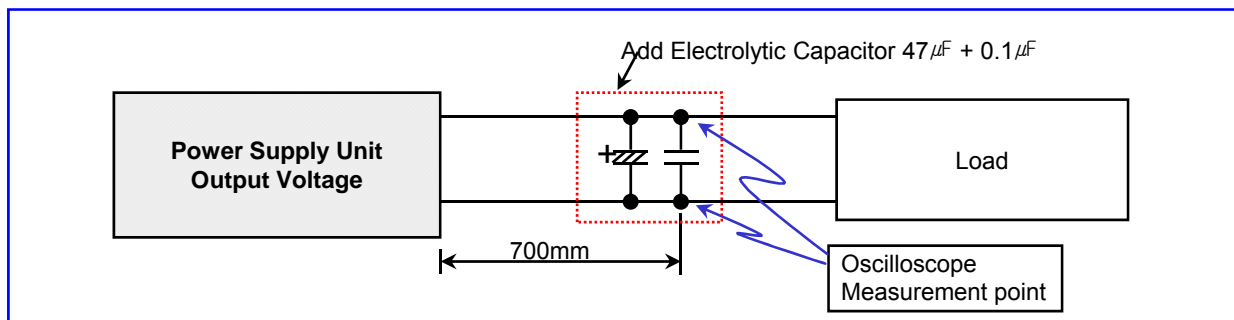
Do not turn "Power\_ON" Signal on at the load condition of 3.5V output, more than 40mA.

\* 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)		



### 2.3 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 <sup>2</sup> Shock test consists of pivoting the power supply, from one edge of it's 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.





## 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 195(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

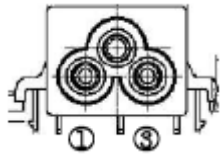
- \* This Power Supply has above-mentioned protections.
- \* Short circuit protection between different output terminals is not considered.
- \* Trip point for over voltage indicates the operating point when the output voltage slowly increases.
- \* The conditions of Over Current measurement  
Multi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



## 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 (SMAW200-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



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. 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 -&gt; -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 -&gt; 25°C</td> </tr> <tr> <td>30 minutes</td> <td>25°C</td> </tr> <tr> <td>30 minutes</td> <td>25°C -&gt; 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 -&gt; 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
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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. After that, electrical characteristics shall be satisfied.</p> <p>Condition : -45°C (30minutes), 120°C (30minutes), Switching time : Less than 5 minutes, 200 cycles.</p>																		



**2.15 Mechanical Characteristics**

No.	Test Item	Test method
1	Appearance	There shall be no contaminant or dirt on the switching regulator which has adverse effect on electrical characteristics. There shall be no excessive unevenness or scratches on the plated or painted surface.
2	Vibration	While applying electricity : Vibration frequency : 5 ~ 100Hz Acceleration : 4.9 m/s <sup>2</sup> Vibration in X,Y,Z direction for 30 minutes  While applying electricity : Vibration frequency : 5 ~ 100Hz Acceleration : 14.7 m/s <sup>2</sup> Vibration in X,Y,Z direction for 30 minutes  After that electrical characteristics shall be satisfied. There shall be no damage to appearance and construction.
3	Shock	Shock : 98 m/s <sup>2</sup>  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.  There shall be no damage to appearance and construction.