

Service
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Service Manual

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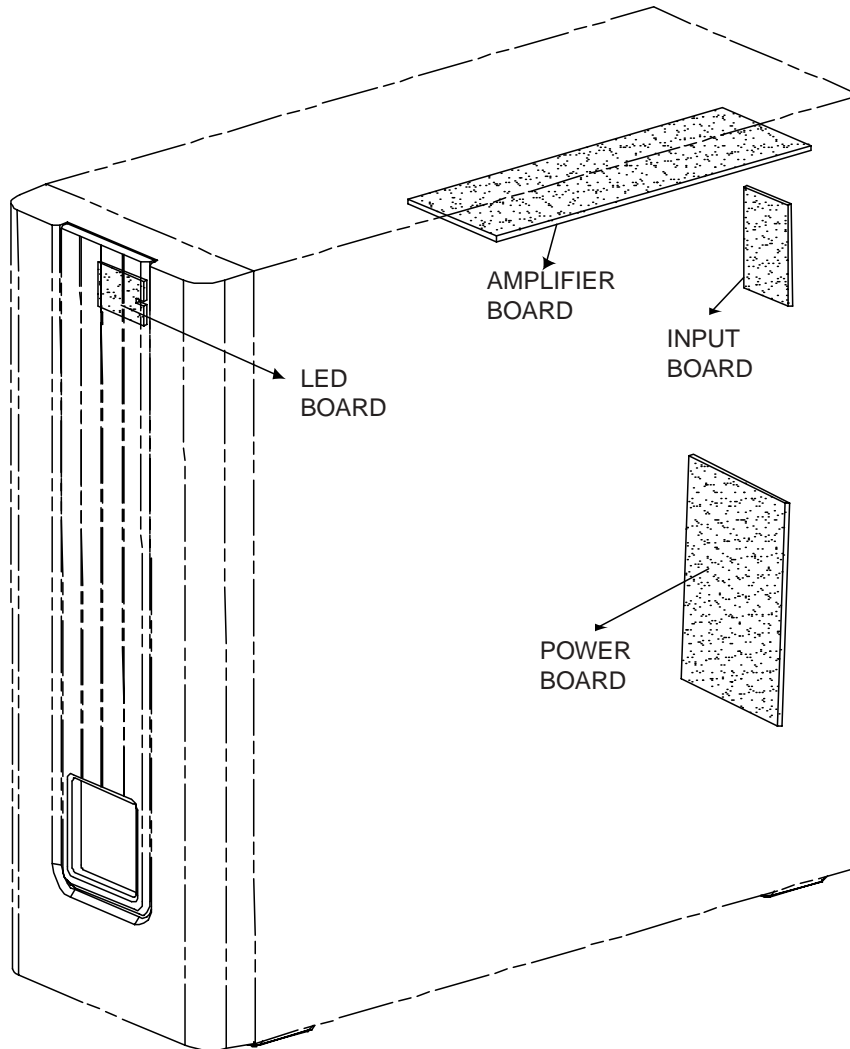
3139 785 30057

Version 1.0



PHILIPS

LOCATION OF PC BOARDS

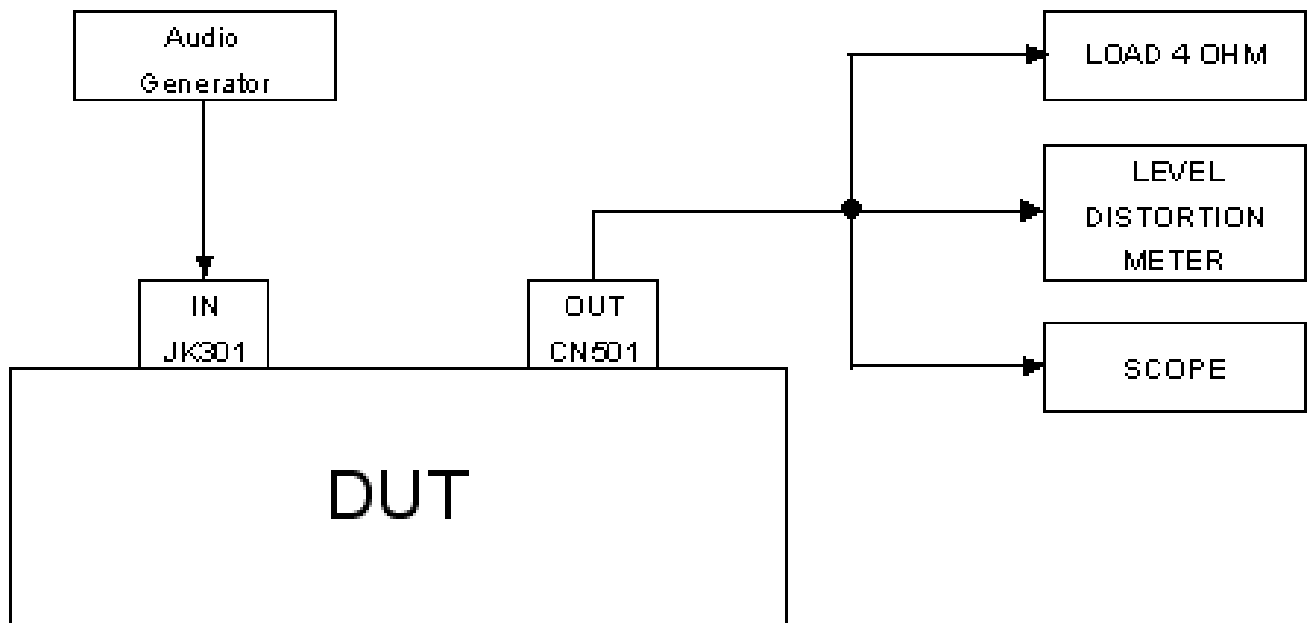


SPECIFICATIONS

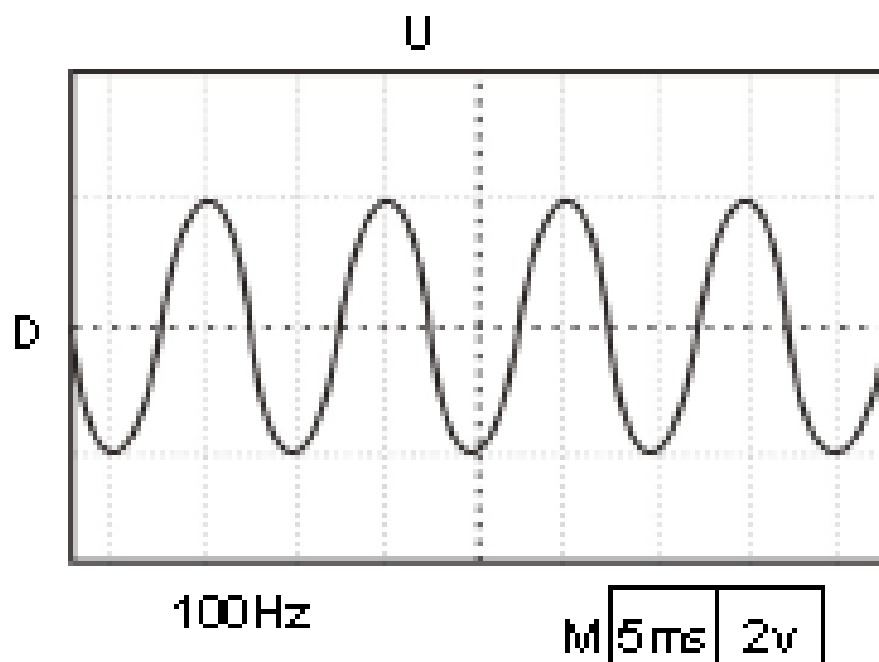
SUBWOOFER

Subwoofer (not magnetically shielded design).....	6.5"
Output Power.....	75W (4Ω,DIN)
THD (Total Harmonic Distortion)	10% at 80 Hz (output power)
Reproduction Frequency Response.....	30 Hz-180 Hz
Phase Switch.....	0°,180°
Input Sensitivity (Subwoofer In).....	200 mVrms
AC Power (for SW3500/37S)	120V / 60 Hz
AC Power (for SW3000/06S; SW3500/06S)	110 ~ 127V / 60 Hz
AC Power (for SW3000/00S)	220 ~ 240V / 50Hz
AC Power (for SW3000/00S;SW3500/02S)	220 ~ 240V / 50 / 60 Hz
power Consumption.....	53 W (at 1/8 Rated Power)
Dimensions (w x h x d).....	130 mm x 337 mm x 375 mm
Weight.....	7 Kg

MEASUREMENT SETUP



Audio Test Signal



ESD & SAFETY INSTRUCTION

GB WARNING

All ICs and many other semi-conductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.

When repairing, make sure that you are connected with the same potential as the mass of the set via a wrist wrap with resistance. Keep components and tools also at this potential.

F ATTENTION

Tous les IC et beaucoup d'autres semi-conducteurs sont sensibles aux décharges statiques (ESD).

Leur longévité pourrait être considérablement écourtée par le fait qu'aucune précaution n'est prise à leur manipulation.

Lors de réparations, s'assurer de bien être relié au même potentiel que la masse de l'appareil et enfiler le bracelet serti d'une résistance de sécurité.

Veiller à ce que les composants ainsi que les outils que l'on utilise soient également à ce potentiel.

GB

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified, be used.

NL

Veiligheidsbepalingen vereisen, dat het apparaat bij reparatie in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.

F

Les normes de sécurité exigent que l'appareil soit remis à l'état d'origine et que soient utilisés les pièces de rechange identiques à celles spécifiées.

D

Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Geräts darf nicht verändert werden; für Reparaturen sind Original-Ersatzteile zu verwenden.

I

Le norme di sicurezza esigono che l'apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambio identici a quelli specificati.

"After servicing and before returning set to customer perform a leakage current measurement test from all exposed metal parts to earth ground to assure no shock hazard exist. The leakage current must not exceed 0.5mA."

ESD



NL WAARSCHUWING

Alle IC's en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).

Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen verminderen. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.

Houd componenten en hulpmiddelen ook op hetzelfde potentiaal.

I AVVERTIMENTO

Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).

La loro longevità potrebbe essere fortemente ridotta in caso di non osservazione della più grande cauzione alla loro manipolazione.

Durante le riparazioni occorre quindi essere collegato allo stesso potenziale che quello della massa dell'apparecchio tramite un braccialetto a resistenza.

Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

"Pour votre sécurité, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

DISASSEMBLY INSTRUCTIONS

Dismantling the Grill Base & Speaker Driver

1. Place the Subwoofer Box as shown in the Picture 1 and use a screw driver to force open the Grill Base.

Caution: Take care the surface when take out the Grill Base of Subwoofer



Picture 1

2. Place the Subwoofer Box as shown in the Picture 2 and loosen 4 screws A to remove the Speaker Driver.



Picture 2

Dismantling the Front Assembly

1. Place the Subwoofer Box as shown in the Picture 3 (Bottom view) and use a screw driver to force open the front assembly.

Caution: Do not break the bundle of wires to the front. Take care the surface when take out the front panel of subwoofer



Picture 3

Dismantling the Rear assembly

1. Loosen 9 screws B as shown in the Picture 4 (Rear View) to pull out the Printed Circuit Board assembly.

Caution: Do not break the bundle of wires to the front.



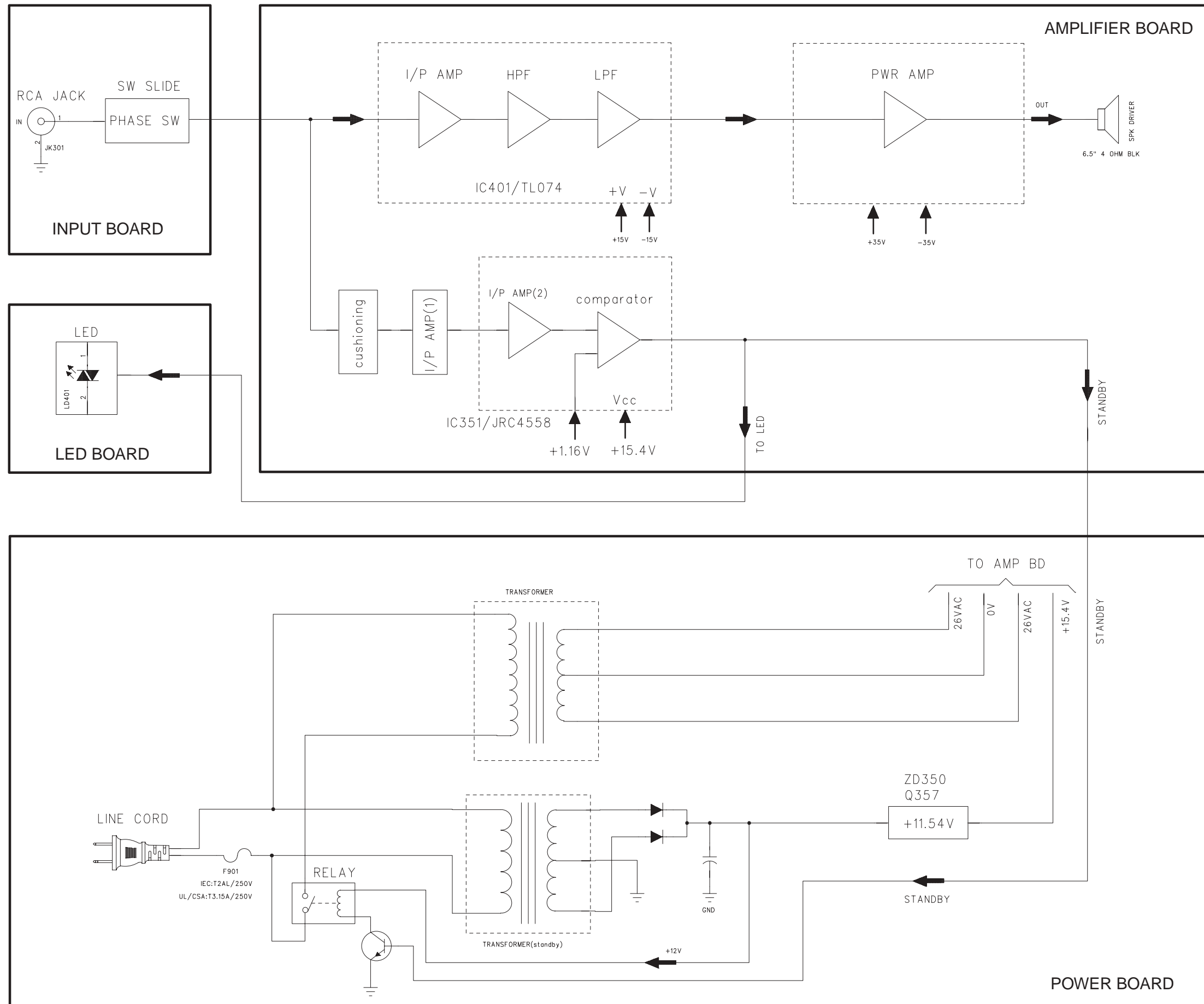
Picture 4

WARNING: THERE IS ONLY HAS A LED BETWEEN FRONT PANEL AND WOOD BOX. IF NO NECESSARY, PLEASE DON'T TRY TO OPEN THE FRONT PANEL!!!

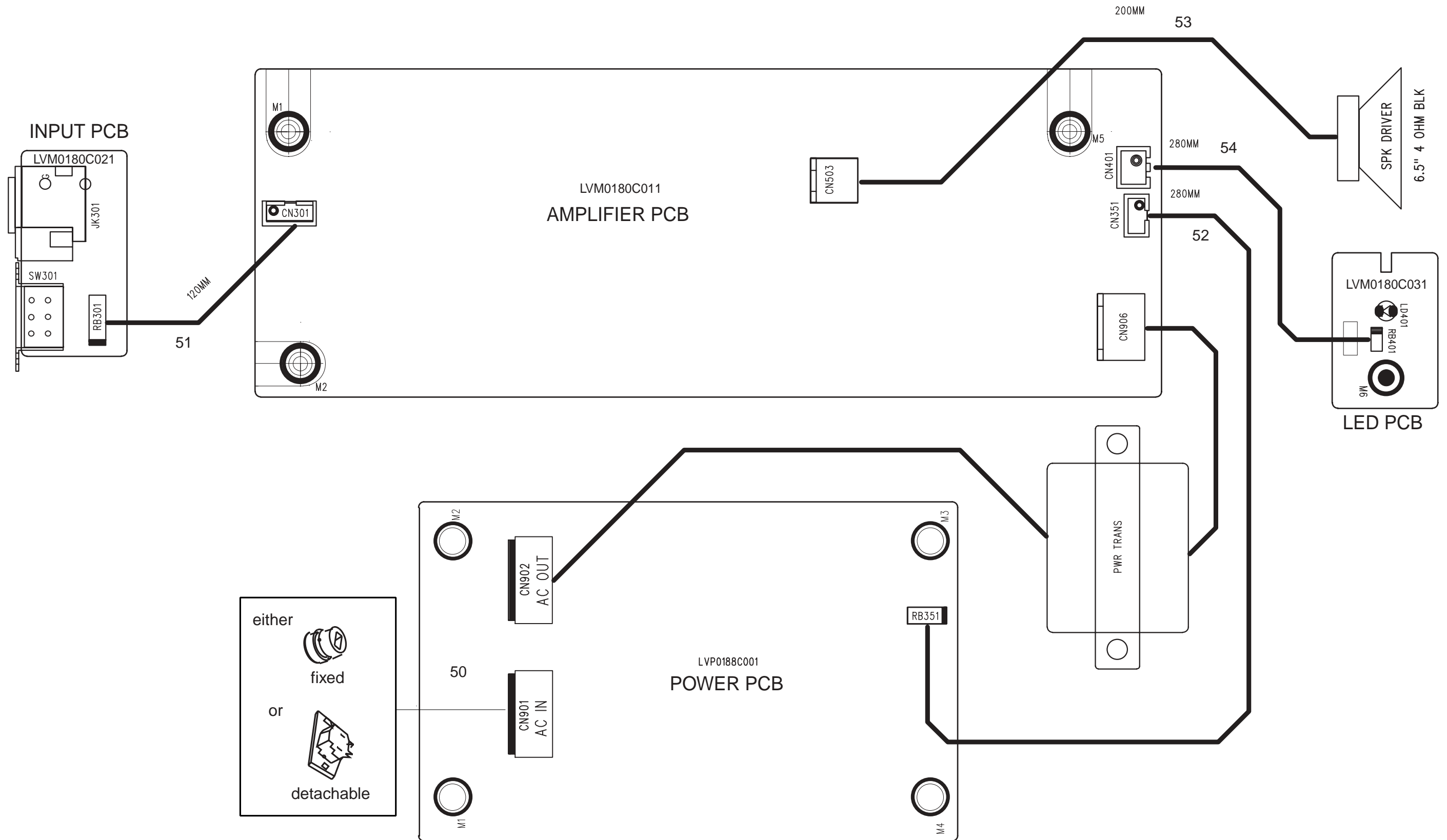
SERVICE POSITION



SET BLOCK DIAGRAM



SET WIRING DIRGRAM

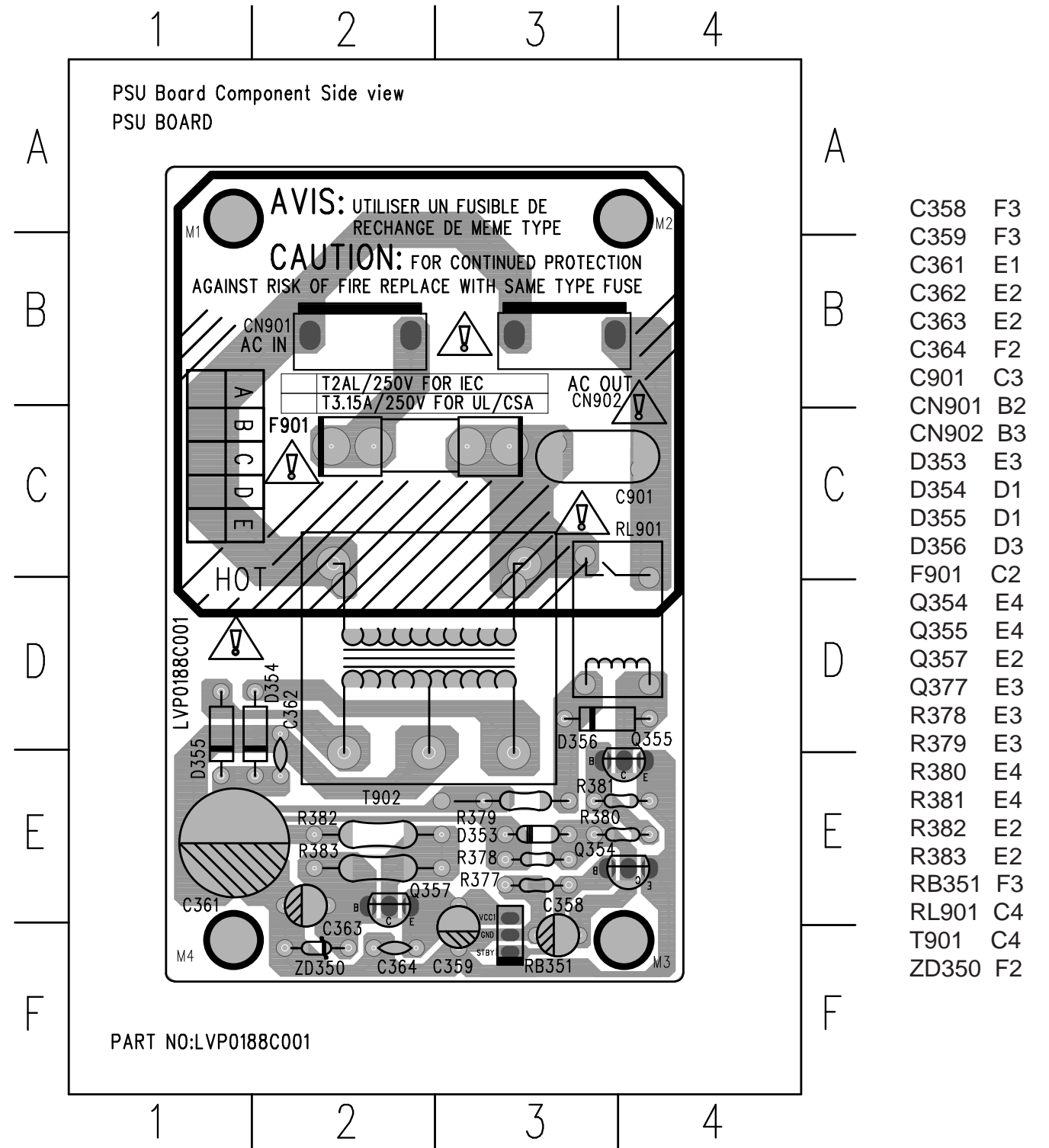


PCB LAYOUT VIEW - POWER BOARD

POWER BOARD

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F901
IEC:T2AL/250V
UL/CSA:T3.15A/250V

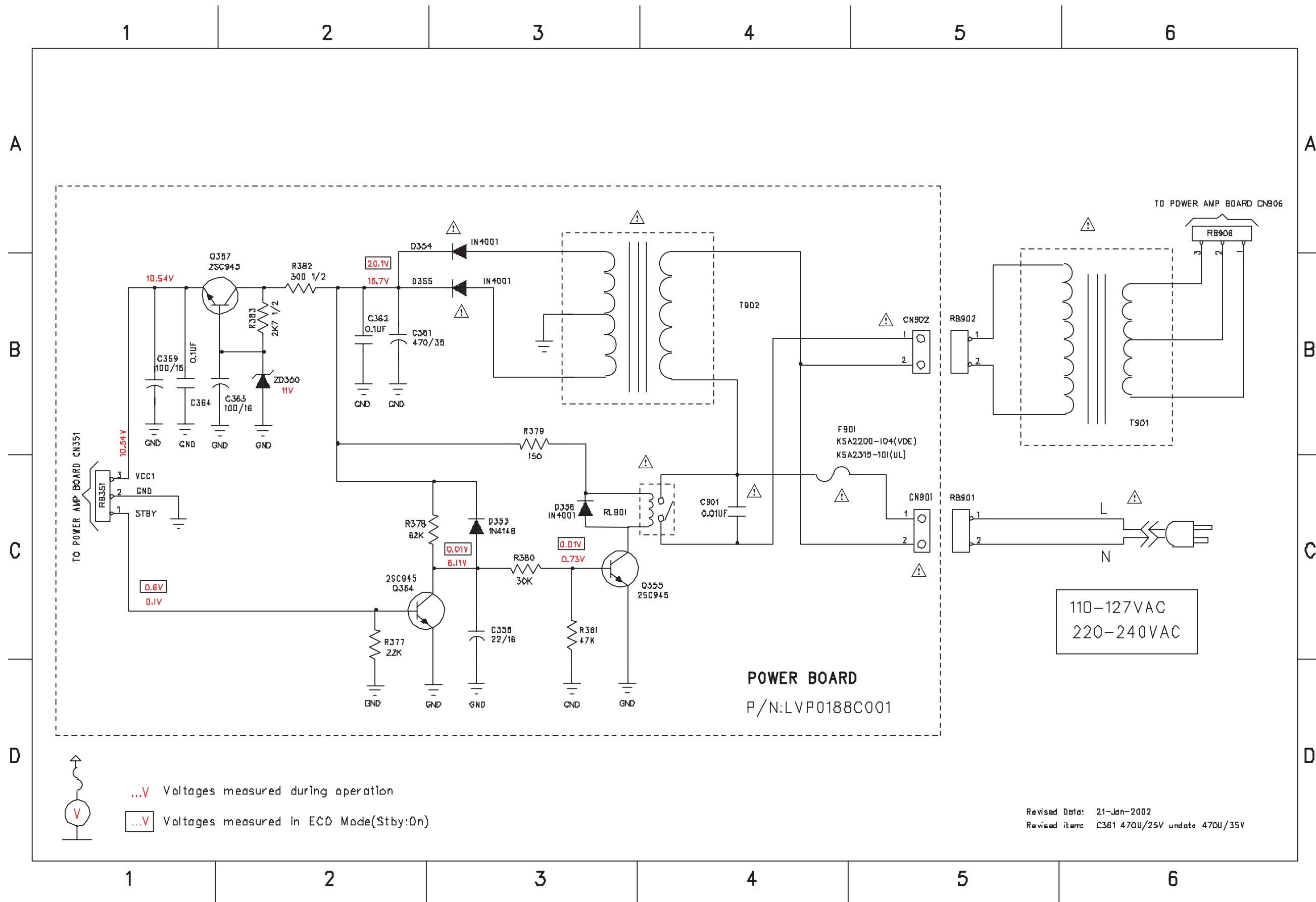
Pin No	Q354	Q355	Q357
B	0.13V	0.73V	11.24V
C	6.11V	0.54V	13.9V
E	0V	0V	10.54V

Measurement in Stby Off

Pin No	Q354	Q355	Q357
B	0.6V	0.03V	11.26V
C	0.05V	20.2V	16.3V
E	0V	0V	10.59V

Measurement in Stby On

CIRCUIT DIAGRAM - POWER BOARD



- C358 C3
- C359 B1
- C361 B2
- C362 B2
- C363 B2
- C364 B1
- C901 C4
- CN901 C5
- CN902 B5
- D353 C3
- D354 A3
- D355 B3
- D356 C3
- F901 C4
- Q354 C2
- Q355 C3
- Q357 B2
- R377 C2
- R378 C3
- R379 B3
- R380 C3
- R381 C3
- R382 B2
- R383 B2
- RB351 C1
- RB901 C5
- RB902 B5
- RB906 A6
- RL901 C4
- T901 B6
- T902 B4
- ZD350 B2

ELECTRICAL PARTS LIST - POWER BOARD

MISCELLANEOUS

CN901	9965 000 12636	△	CONNECTOR 4 PIN P=3,96MM
CN902	9965 000 12636	△	CONNECTOR 4 PIN P=3,96MM
F901	9965 000 12638	△	FUSE T2A 250V SLOW /00S/02S
F901	4822 070 33152	△	FUSE T3,15A 250V SLOW /17S
F901	9965 000 12500	△	FUSE T3,15A 250V SLOW /06S
RL901	9965 000 09708	△	RELAY GJ-SH-112DM 320OHM
T902	9965 000 12602	△	TRANSFORMER 120V /06S/17S
T902	9965 000 12603	△	TRANSFORMER 230V /00S/02S

CAPACITORS

C358	9965 000 12639		22UF 16V 20%
C359	9965 000 12559		100UF 16V 20%
C361	9965 000 12640		470UF 35V 20%
C362	2038 554 00065		100NF +80-20% 50V
C363	9965 000 12559		100UF 16V 20%
C364	2038 554 00065		100NF +80-20% 50V
C901	9965 000 12604		0,01UF 20%

RESISTORS

R377	4822 050 22203		22K 1% 0,6W
R378	9965 000 12641		62K 1/6W 5%
R379	4822 116 83868		150R 5% 0,5W
R380	9965 000 12629		30K 1/6W 5%
R381	4822 050 24703		47K 1% 0,6W
R382	4822 116 52218		300R 5% 0,5W
R383	4822 116 52263		2,7K 5% 0,5W

DIODES

D353	4822 130 30621		1N4148
D354	4822 130 31438	△	1N4001G
D355	4822 130 31438	△	1N4001G
D356	4822 130 31438	△	1N4001G
ZD350	9965 000 12642		ZENER 11,1-11,6V 0,5W

TRANSISTORS

Q354	4822 130 41198		2SC945P
Q355	4822 130 41198		2SC945P
Q357	4822 130 41198		2SC945P

Note: Only the parts mentioned in this list are normal service spare parts.

COMBI BOARD

INTERNAL IC DIAGRAM

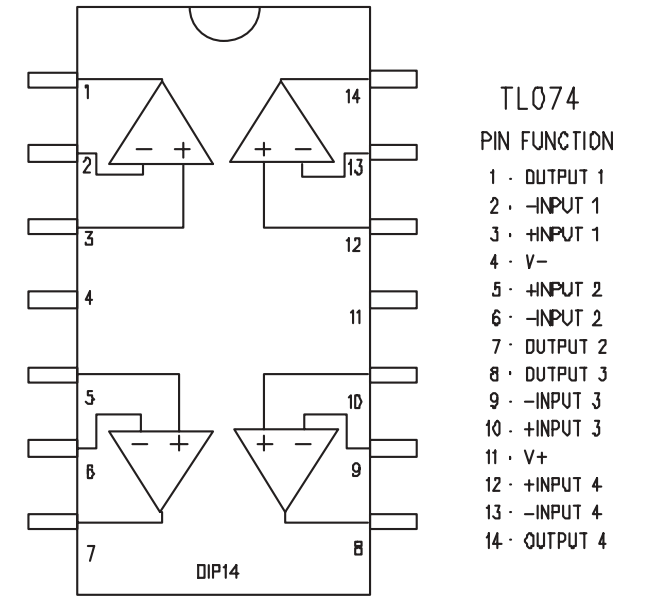
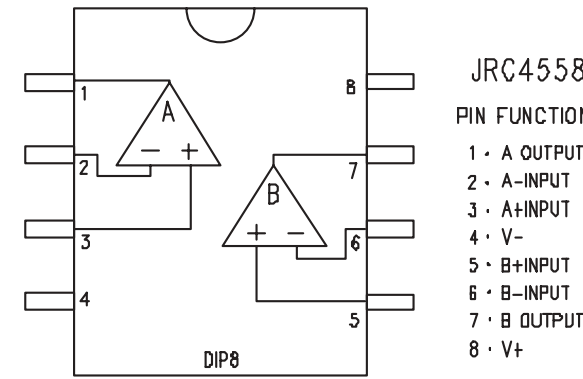
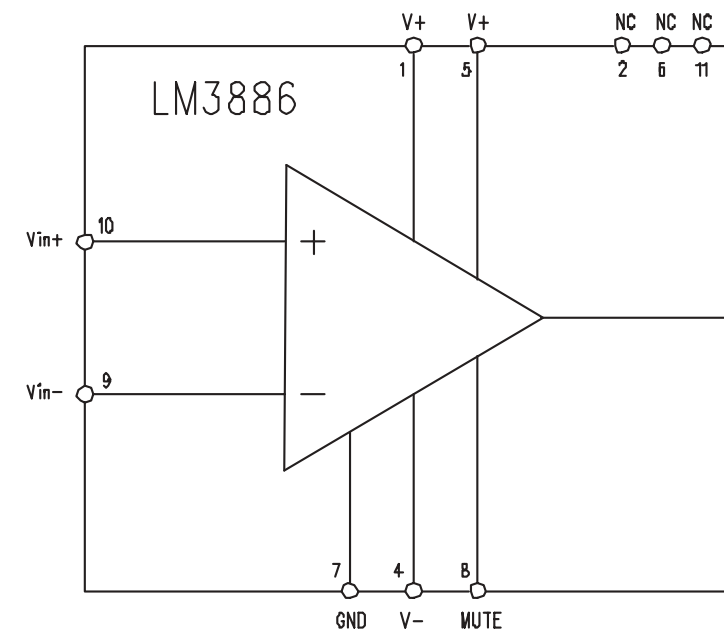


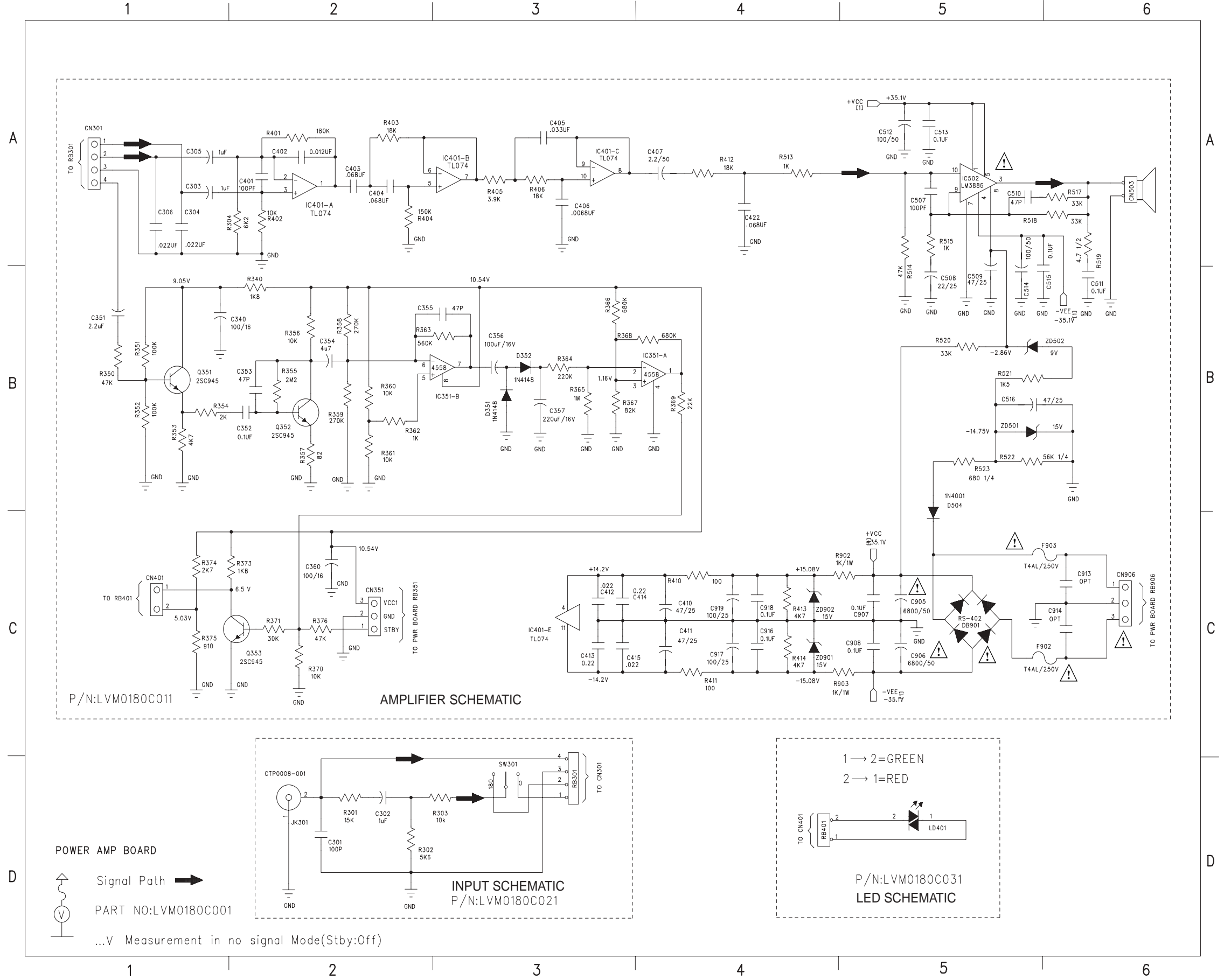
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CIRCUIT DIAGRAM - COMBI BOARD

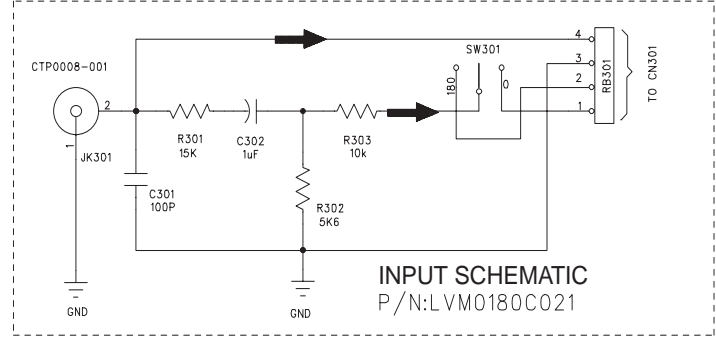
C301 D2 C305 A1 C352 B2 C356 B3 C402 A2 C406 A3 C412 C3 C422 A4 C510 A5 C514 B5 C906 C5 C914 C6 C919 C4 CN503 A6 D504 C5 IC351A B4 IC401C A3 LD401 D5 R301 D2 R340 B2 R353 B1 R357 B2 R361 B2 R365 B3 R369 B4 R374 C1 R402 A2 R406 A3 R413 C4 R515 A5 R520 B5 R902 C5 SW301 D3 ZD902 C4
 C302 D2 C306 A1 C353 B2 C357 B3 C403 A2 C407 A4 C413 C3 C507 A5 C511 B6 C515 B6 C907 C5 C916 C4 CN301 A1 CN906 C6 DB901 C5 IC351B B3 IC401E C3 Q351 B1 R302 D3 R350 B1 R354 B1 R358 B2 R362 B2 R366 B3 R370 C2 R375 C1 R403 A2 R410 C4 R414 C4 R517 A6 R521 B5 R903 C5 ZD501 B5
 C303 A1 C340 B1 C354 B2 C360 C2 C404 A2 C410 C4 C414 C4 C508 B5 C512 A5 C516 B5 C908 C5 C917 C4 CN351 C2 D351 B3 F902 C6 IC401A A2 IC502 A5 Q352 B2 R303 D3 R351 B1 R355 B2 R359 B2 R363 B3 R367 B3 R371 C2 R376 C2 R404 A2 R411 C4 R513 A4 R518 A6 R522 B5 RB301 D3 ZD502 B5
 C304 A1 C351 B1 C355 B3 C401 A2 C405 A3 C411 C4 C415 C4 C509 B5 C513 A5 C905 C5 C913 C6 C918 C4 CN401 C1 D352 B3 F903 C6 IC401B A3 JK301 D2 Q353 C2 R304 A2 R352 B1 R356 B2 R360 B2 R364 B3 R368 B4 R373 C2 R401 A2 R405 A3 R412 A4 R514 A5 R519 A6 R523 B5 RB401 D4 ZD901 C4



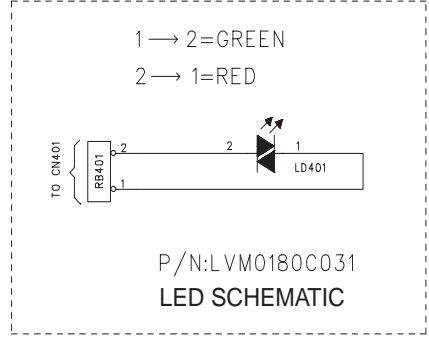
P/N:LVM0180C011

AMPLIFIER SCHEMATIC

POWER AMP BOARD
 Signal Path →
 PART NO:LVM0180C001
 ...V Measurement in no signal Mode(Stby:Off)



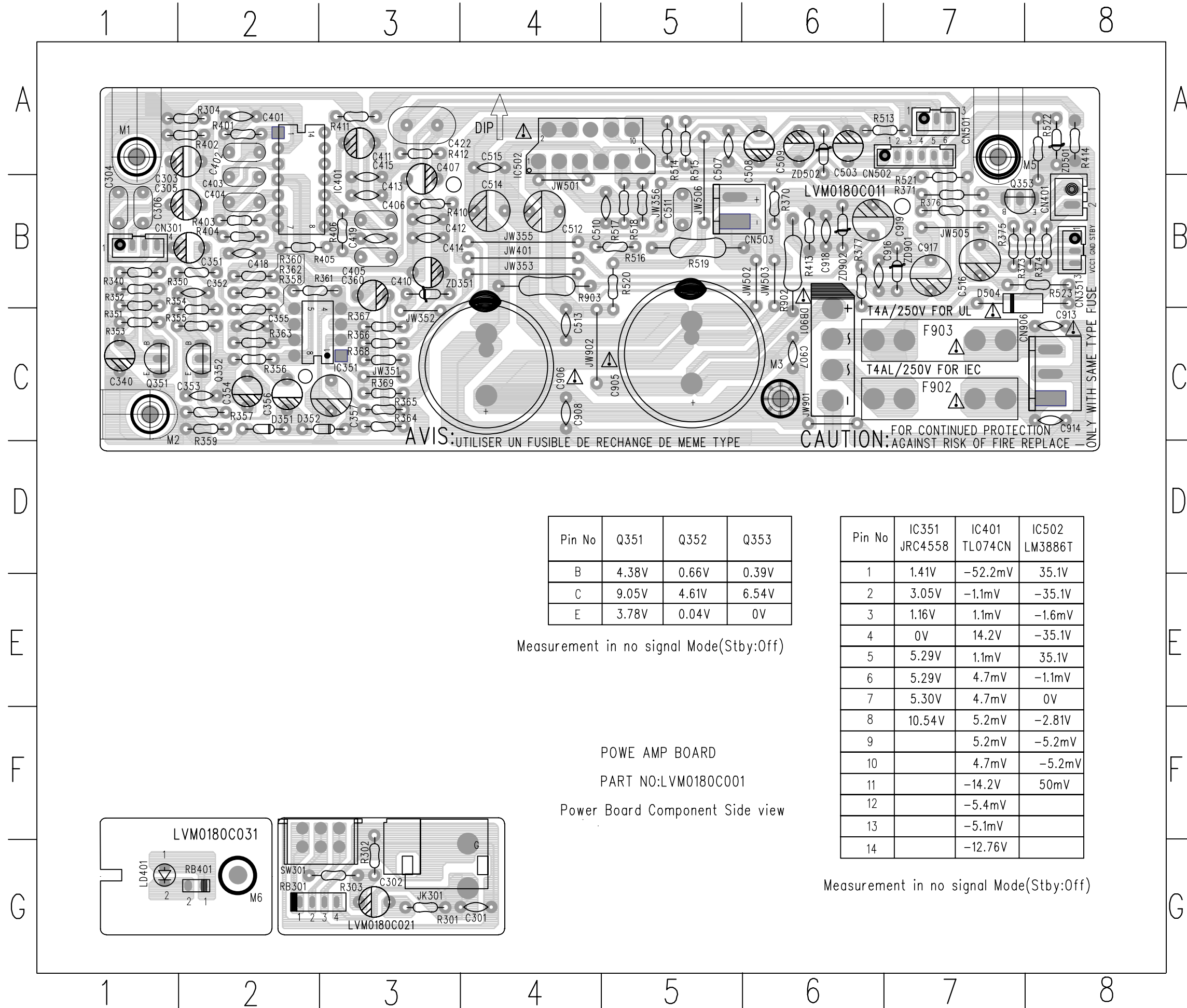
INPUT SCHEMATIC
P/N:LVM0180C021



P/N:LVM0180C031
LED SCHEMATIC

1 2 3 4 5 6

PCB LAYOUT VIEW - COMBI BOARD



Pin No	Q351	Q352	Q353
B	4.38V	0.66V	0.39V
C	9.05V	4.61V	6.54V
E	3.78V	0.04V	0V

Measurement in no signal Mode(Stby:Off)

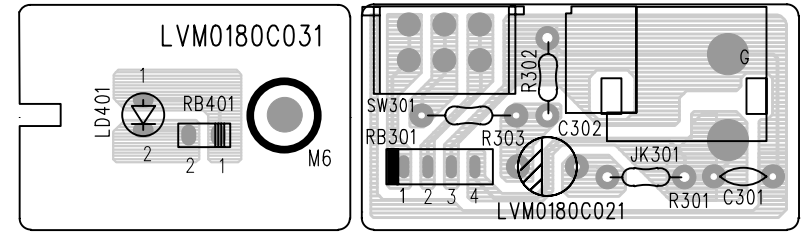
Pin No	IC351 JRC4558	IC401 TL074CN	IC502 LM3886T
1	1.41V	-52.2mV	35.1V
2	3.05V	-1.1mV	-35.1V
3	1.16V	1.1mV	-1.6mV
4	0V	14.2V	-35.1V
5	5.29V	1.1mV	35.1V
6	5.29V	4.7mV	-1.1mV
7	5.30V	4.7mV	0V
8	10.54V	5.2mV	-2.81V
9		5.2mV	-5.2mV
10		4.7mV	-5.2mV
11		-14.2V	50mV
12		-5.4mV	
13		-5.1mV	
14		-12.76V	

Measurement in no signal Mode(Stby:Off)

POWE AMP BOARD

PART NO:LVM0180C001

Power Board Component Side view



C301	G4	CN301	B1	R363	C2
C302	G3	CN351	B8	R364	C3
C303	A2	CN401	B8	R365	C3
C304	B1	CN501	A7	R366	C3
C305	B2	CN502	A7	R367	C3
C306	B1	CN503	B5	R368	C3
C340	C1	CN906	C8	R369	C3
C351	B2	D351	C2	R370	B6
C352	B2	D352	C3	R371	B7
C353	C2	D504	B8	R373	B8
C354	C2	DB901	C6	R374	B8
C355	C2	F901	C7	R375	B7
C356	C2	F902	C7	R376	B7
C357	C3	IC351	C3	R377	B6
C360	B3	IC401	B2	R401	A2
C401	A2	IC502	A4	R402	A2
C402	A2	JK301	G3	R403	B2
C403	A2	JW351	C3	R404	B2
C404	B2	JW352	B3	R405	B2
C405	B3	JW353	B4	R406	B3
C406	B3	JW355	B4	R410	B3
C407	B3	JW356	B5	R411	A3
C410	B3	JW401	B4	R412	A3
C411	A3	JW501	B4	R413	B6
C412	B3	JW502	B6	R414	A8
C413	B3	JW503	B6	R513	A6
C414	B3	JW505	B7	R514	A5
C415	B3	JW506	B5	R515	A5
C418	B2	JW901	C6	R516	B5
C419	B3	JW902	C4	R517	B5
C422	A3	LD401	G1	R518	B5
C503	A6	Q351	C1	R519	B5
C507	A5	Q352	C2	R520	B5
C508	A6	Q353	B7	R521	B7
C509	A6	R301	G3	R522	A8
C510	B5	R302	G3	R523	B8
C511	B5	R303	G3	R902	B6
C512	B4	R304	A2	R903	B4
C513	C4	R340	B1	RB301	G3
C514	B4	R350	B2	RB401	G2
C515	A4	R351	B1	SW301	G3
C516	B7	R352	B1	ZD501	A8
C905	C5	R353	C1	ZD502	A6
C906	C4	R354	C2	ZD901	B7
C907	C6	R355	C2	ZD902	B6
C908	C4	R356	C2		
C913	C8	R357	C2		
C914	C8	R358	C2		
C916	B6	R359	C2		
C917	B7	R360	B2		
C918	B6	R361	B2		
C919	B6	R362	B2		

ELECTRICAL PARTS LIST - AMPLIFIER PART**MISCELLANEOUS**

CN906	9965 000 12617	CONNECTOR 3PIN PITCH=3,96 M
F902	4822 070 34002 Δ	FUSE T4A 250V SLOW
F903	4822 070 34002 Δ	FUSE T4A 250V SLOW

CAPACITORS

C303	4822 124 21913	1UF 20% 63V
C304	9965 000 08286	0,022UF 100V 5%
C305	4822 124 21913	1UF 20% 63V
C306	9965 000 08286	0,022UF 100V 5%
C340	9965 000 12559	100UF 16V 20%
C351	4822 124 22652	2,2UF 20% 50V
C352	2038 554 00065	100NF +80-20% 50V
C353	9965 000 12614	47PF 50V 5%
C354	9965 000 12522	4,7UF 50V 20%
C355	9965 000 12614	47PF 50V 5%
C356	9965 000 12559	100UF 16V 20%
C357	9965 000 12558	220UF 16V 20%
C360	9965 000 12559	100UF 16V 20%
C401	4822 122 33293	100PF 5% 50V
C402	4822 121 41935	12NF 5% 250V
C403	5322 121 42662	68NF 5% 250V
C404	5322 121 42662	68NF 5% 250V
C405	5322 121 42489	33NF 5% 250V
C406	4822 121 42077	6,8NF 10% 400V
C407	4822 124 22652	2,2UF 20% 50V
C410	4822 124 40433	47UF 20% 25V
C411	4822 124 40433	47UF 20% 25V
C412	4822 122 30103	22NF 80% 63V
C413	9965 000 12613	0,22UF 50V +80-20%
C414	9965 000 12613	0,22UF 50V +80-20%
C415	4822 122 30103	22NF 80% 63V
C422	5322 121 42662	68NF 5% 250V
C507	4822 122 33293	100PF 5% 50V
C508	5322 124 41945	22UF 20% 35V
C509	4822 124 40433	47UF 20% 25V
C510	9965 000 12614	47PF 50V 5%
C511	5322 121 42578	100NF 5% 250V
C512	9965 000 12536	100UF 50V 20%
C513	2038 554 00065	100NF +80-20% 50V
C514	9965 000 12536	100UF 50V 20%
C515	2038 554 00065	100NF +80-20% 50V
C516	4822 124 40433	47UF 20% 25V
C905	9965 000 12619 Δ	6800UF 50V 20%
C906	9965 000 12619 Δ	6800UF 50V 20%
C907	2038 554 00065	100NF +80-20% 50V
C908	2038 554 00065	100NF +80-20% 50V
C913	9965 000 11041	0,01UF 500V 20%
C914	9965 000 11041	0,01UF 500V 20%
C916	2038 554 00065	100NF +80-20% 50V
C917	4822 124 40207	100UF 20% 25V
C918	2038 554 00065	100NF +80-20% 50V
C919	4822 124 40207	100UF 20% 25V

RESISTORS

R304	4822 050 26202	6,2K 1% 0,6W
R340	9965 000 12620	1,8K 1/6W 5%
R350	4822 050 24703	47K 1% 0,6W
R351	4822 050 21004	100K 1% 0,6W
R352	4822 050 21004	100K 1% 0,6W
R353	9965 000 09725	4,7K 1/6W 5% CF
R354	9965 000 12621	2K 1/6W 5%
R355	9965 000 12622	2,2M 1/6W 5%
R356	4822 050 21003	10K 1% 0,6W
R357	9965 000 12623	82R 1/6W 5%
R358	9965 000 12624	270K 1/6W 5%
R359	9965 000 12624	270K 1/6W 5%
R360	4822 050 21003	10K 1% 0,6W
R361	4822 050 21003	10K 1% 0,6W
R362	9965 000 12519	1K 1/6W 5% CF
R363	9965 000 12625	560K 1/6W 5%
R364	9965 000 08284	220K 1/6W 5% CF
R365	9965 000 12626	1M 1/6W 5%
R366	9965 000 12627	680K 1/6W 5%
R367	9965 000 12628	82K 1/6W 5%
R368	9965 000 12627	680K 1/6W 5%
R369	4822 050 22203	22K 1% 0,6W
R370	4822 050 21003	10K 1% 0,6W
R371	9965 000 12629	30K 1/6W 5%
R373	9965 000 12620	1,8K 1/6W 5%
R374	4822 050 22702	2,7K 1% 0,6W
R375	9965 000 13450	910R 5% 1/6W
R376	4822 050 24703	47K 1% 0,6W
R401	9965 000 12631	180K 1/6W 5%
R402	4822 050 21003	10K 1% 0,6W
R403	9965 000 08285	18K 1/6W 5% CF
R404	4822 050 21504	150K 1% 0,6W
R405	9965 000 09724	3,9K 1/6W 5% CF
R406	9965 000 08285	18K 1/6W 5% CF
R410	4822 050 21001	100R 1% 0,6W
R411	4822 050 21001	100R 1% 0,6W
R412	9965 000 08285	18K 1/6W 5% CF
R413	9965 000 09725	4,7K 1/6W 5% CF
R414	9965 000 09725	4,7K 1/6W 5% CF
R513	9965 000 12519	1K 1/6W 5% CF
R513	9965 000 09725	4,7K 1/6W 5% CF
R514	4822 050 24703	47K 1% 0,6W
R515	9965 000 12519	1K 1/6W 5% CF
R517	9965 000 12629	30K 1/6W 5%
R518	9965 000 12629	30K 1/6W 5%
R519	4822 116 81753	4,7R 5% 0,5W
R520	4822 050 23303	33K 1% 0,6W
R521	4822 050 21502	1,5K 1% 0,6W
R522	4822 116 52291	56K 5% 0,5W
R523	4822 116 52228	680R 5% 0,5W
R902	9965 000 12632	1K 1W 5%
R903	9965 000 12632	1K 1W 5%

ELECTRICAL PARTS LIST - AMPLIFIER PART**DIODES**

D351	4822 130 30621	1N4148
D352	4822 130 30621	1N4148
D504	4822 130 31438 Δ	1N4001G
DB901	4822 130 70035 Δ	RS402L
ZD501	4822 130 34281	BZX79-B15
ZD502	9965 000 12635	ZENER 9,1-9,5V 0,5W
ZD901	4822 130 34281	BZX79-B15
ZD902	4822 130 34281	BZX79-B15

TRANSISTORS & INTEGRATED CIRCUITS

IC351	4822 209 83631	NJM4558DD
IC401	4822 209 32742	TL074IN
IC502	9965 000 12633 Δ	LM3886T POWER IC
Q351	4822 130 41198	2SC945P
Q352	9965 000 12634	2SC946P
Q353	4822 130 41198	2SC945P

Note: Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - INPUT PART**MISCELLANEOUS**

JK301	4822 267 41238	CINCH SOCKET 1P, AUDIO-IN
SW301	4822 277 11821	SLIDE SWITCH, PHASE

CAPACITORS

C301	4822 122 33293	100PF 5% 50V
C302	4822 124 21913	1UF 20% 63V

RESISTORS

R301	4822 050 21003	10K 1% 0,6W
R302	4822 050 25602	5,6K 1% 0,6W
R303	4822 050 21003	10K 1% 0,6W

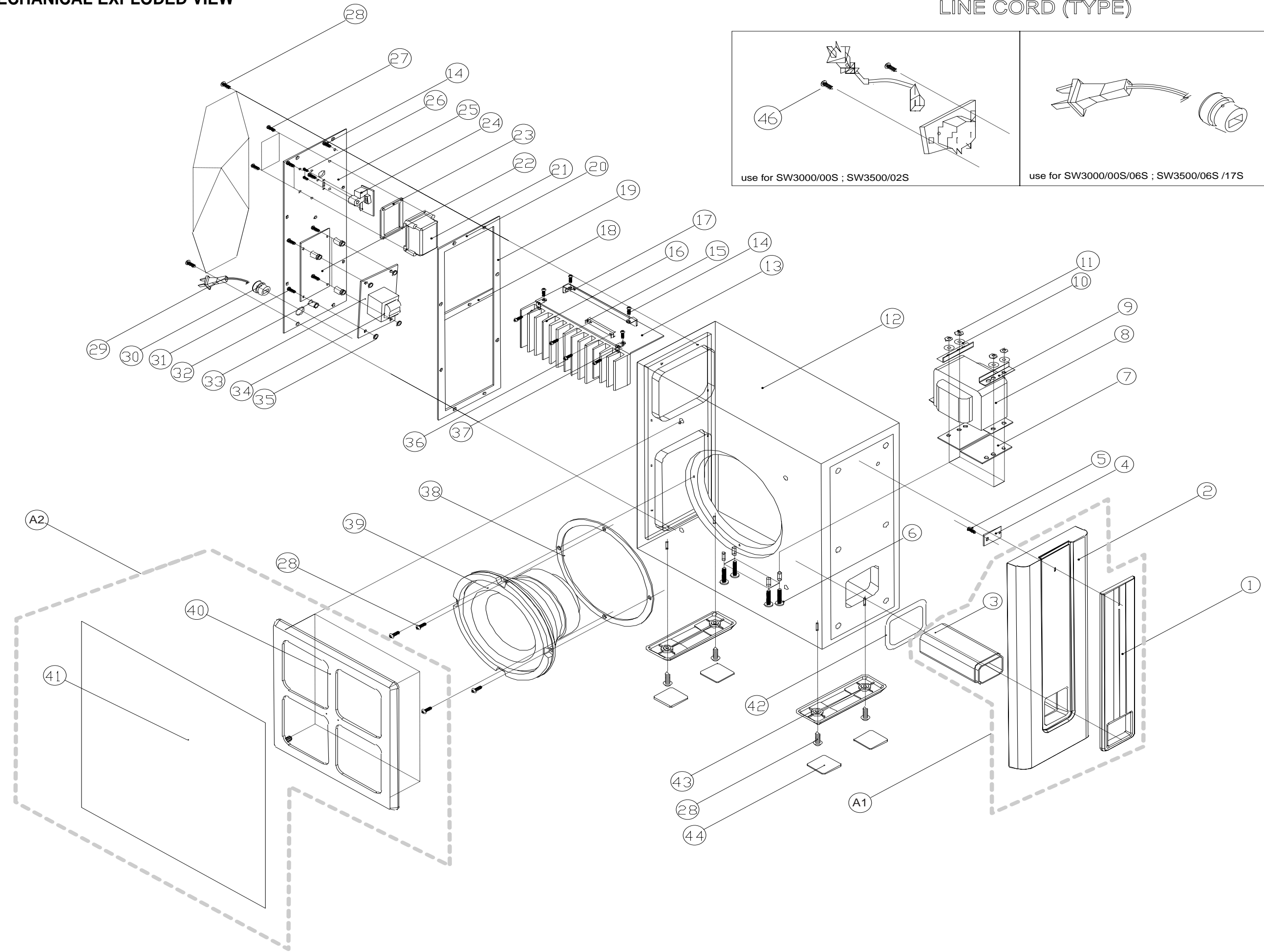
Note: Only the parts mentioned in this list are normal service spare parts.

ELECTRICAL PARTS LIST - LED PART

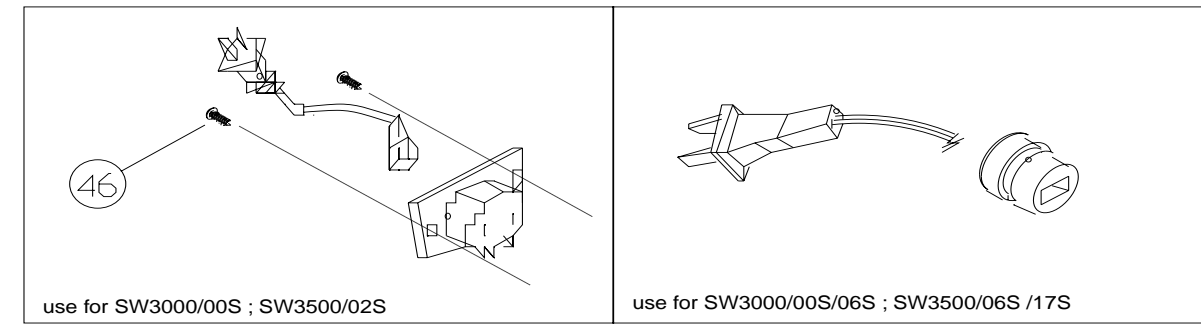
	9965 000 12978	LED PCB ASSEMBLY
LD401	9965 000 12618	LED RED/GREEN

Note: Only the parts mentioned in this list are normal service spare parts.

MECHANICAL EXPLODED VIEW



LINE CORD (TYPE)



MECHANICAL & ACCESSORIES PARTS LIST - MAIN UNIT**SCREW LIST - MAIN UNIT**

A1	9965 000 12977	FRONT PANEL ASSY SW3000/00S/06S	5	D3 x 6
A1	9965 000 12983	FRONT PANEL ASSY SW3500/02S/06S	6	M3,8 x 25
A1	9965 000 12985	FRONT PANEL ASSY SW3500/17S	14	M3 x 8
A2	9965 000 12980	CLOTH FRAME ASSY SW3000 GREY	26	M2 x 6
A2	9965 000 12984	CLOTH FRAME ASSY SW3500 ORANGE	27	D3 x 10
4	9965 000 12978	LED PCB ASSEMBLY	28	D3,6 x 14
8	9965 000 12979	MAINS TRANSFORMER 120V /06S/17S	31	M3 x 22
8	9965 000 12982	MAINS TRANSFORMER 230V /00S/02S	36	M3 x 14
29	9965 000 12818	MAINS CORD /17S FIXED	46	M3 x 12
29	9965 000 12819	MAINS CORD /06S FIXED		
29	9965 000 12820	MAINS CORD /00S/02S DETACHABLE		
29	9965 000 12821	MAINS CORD /00S AUSTRALIA FIXED		
30	9965 000 07092	BUSHING, FIXED CORD		
30	9965 000 12443	AC SOCKET, DETACHABLE CORD		
38	4822 532 13065	WASHER		
39	9965 000 08278	SPEAKER DRIVER 100W 6,5" 4OHM		
44	9965 000 12981	RUBBER FOOT		

Note: Only the parts mentioned in this list are normal service spare parts.