



Service Manual

JBL SW10

Wireless Subwoofer

SKU: JBLSW10BLKAS, JBLSW10BLKEU, JBLSW10BLKAM



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Technical Specifications

Maximum power	300W
Standby power	<0.5W
Transducer Size	10" (250mm)
Frequency Response	35 - 120Hz
Operating temperature	0°C - 45°C
Dimensions (W x H x D)	305mm x 440mm x 305mm (12" x 16" x 12")
Weight	12.3kg (27.2lbs)
5.8G Wireless Frequency Range	5740MHz-5840MHz
5.8G Wireless transmitter modulation	GFSK
5.8G Max Transmitting power	8dBm

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong is provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or the apparatus has been exposed to rain or moisture, does not operate normally or has been dropped.
15. Do not expose this apparatus to dripping or splashing and ensure that no objects filled with liquids, such as vases, are placed on the apparatus.
16. To completely disconnect this apparatus from the AC Mains, disconnect the power supply cord plug from the AC receptacle.
17. The mains plug of the power supply cord shall remain readily operable.
18. Do not expose batteries to excessive heat such as sunshine, fire or the like.



For Products That Transmit and Receive RF Energy:

FCC Regulations (USA Only)

FCC Information For Users

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference; and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radio and Television Interference

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and then on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and receiver.
- Connect the equipment to a different outlet so that the equipment and receiver are on different branch circuits.
- Consult the dealer or an experienced radio/TV technician for help.

NOTE: Changes or modifications not expressly approved by Harman could void the user's authority to operate the equipment.

IC Statement and Warning (Canada Only)

This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For Canadian Model

This Class B digital apparatus complies with Canadian ICES-003.

Modèle pour les Canadien

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

For Products with Radio Receivers That Can Use an External Antenna:

CATV or Antenna Grounding

If an outside antenna or cable system is connected to this product, be certain that it is grounded so as to provide some protection against voltage surges and static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements of the grounding electrode.

Note to CATV System Installer:

This reminder is provided to call the CATV (cable TV) system installer's attention to article 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as possible.

For CD/DVD/Blu-ray Disc™ Players:

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUIT LASER

CAUTION

RISK OF ELECTRIC SHOCK. DO NOT OPEN.



THE LIGHTNING FLASH WITH AN ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE PRODUCT.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

Caution:

This product uses a laser system. To prevent direct exposure to the laser beam, do not open the cabinet enclosure or defeat any of the safety mechanisms provided for your protection. DO NOT STARE INTO THE LASER BEAM. To ensure proper use of this product, please read the owner's manual carefully and retain it for future use. Should the unit require maintenance or repair, please contact your local Harman Kardon service center. Refer servicing to qualified personnel only.

For Products That Include Batteries:



Pb

Instructions for Users on Removal and Disposal of Used Batteries.

CAUTION

Risk of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type.

Alkaline batteries are considered nonhazardous. Rechargeable batteries (i.e., nickel cadmium, nickel metal-hydride, lithium and lithium-ion) are considered hazardous household materials and may pose an unnecessary health and safety risk.

In the European Union and other locations, it is illegal to dispose of any battery with household trash. All batteries must be disposed of in an environmentally sound manner. Contact your local waste management officials for information regarding the environmentally sound collection, recycling and disposal of used batteries.

To remove the batteries from your equipment or remote control, reverse the procedure described for inserting batteries in the owner's manual.

For products with a built-in battery that lasts for the lifetime of the product, removal may not be possible for the user. In this case, recycling or recovery centers handle the dismantling of the product and the removal of the battery. If, for any reason, it becomes necessary to replace such a battery, this procedure must be performed by authorized service centers.

ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor "chip" components.

The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge build-up or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material.)
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

CAUTION : Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES devices.

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing.

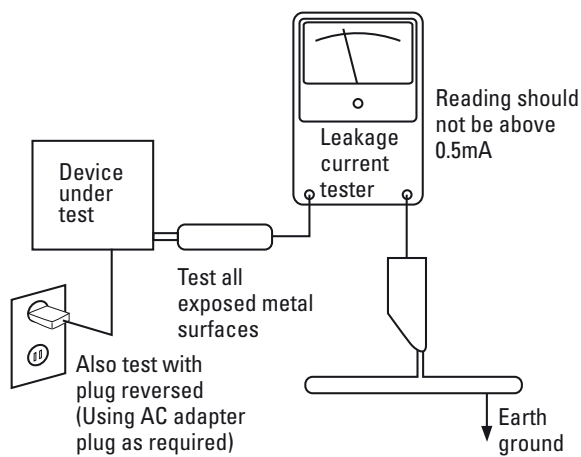
Components identified with the IEC symbol  in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



AC Leakage Test

ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

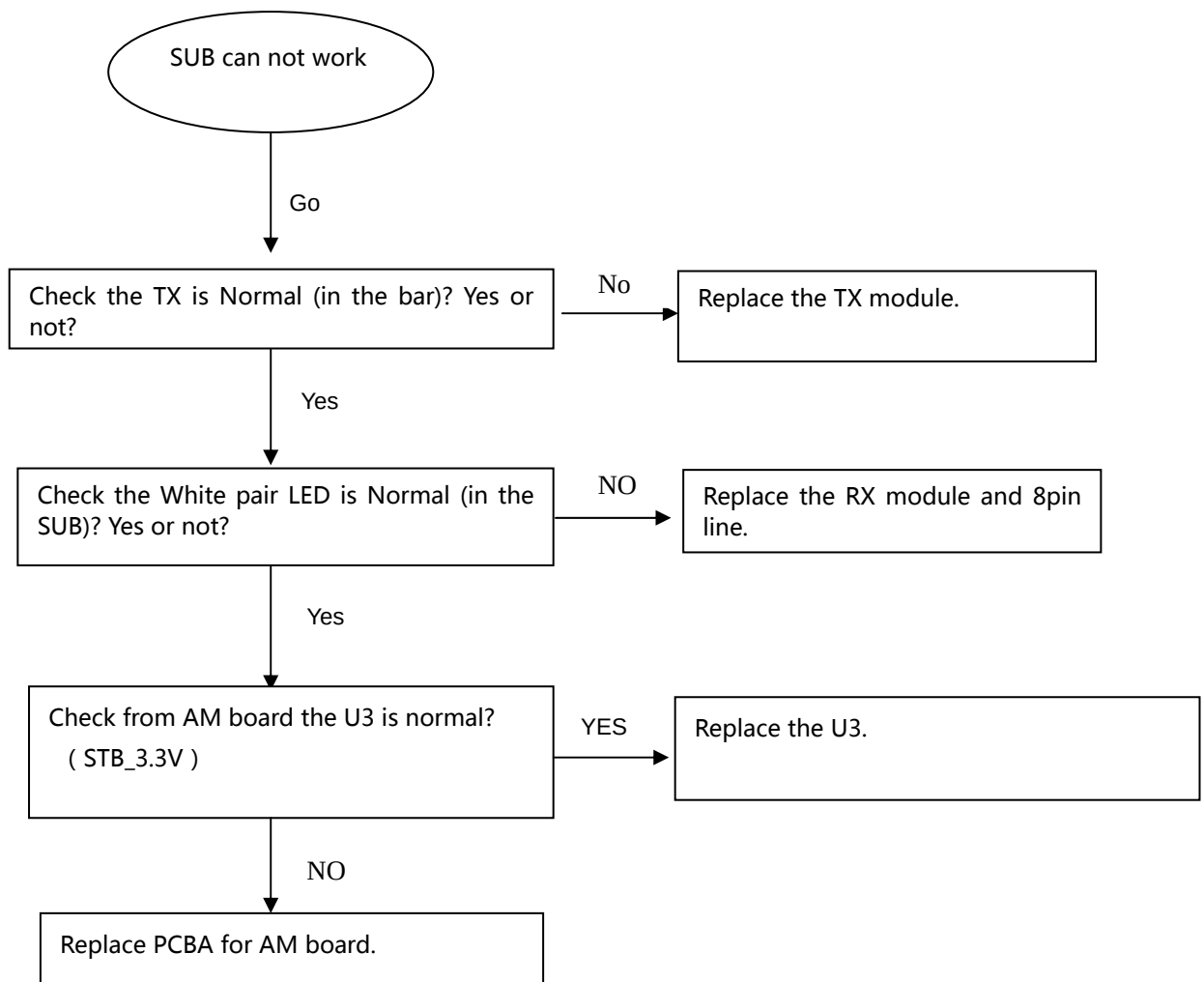
Software Upgrade Procedure

JBL SW10 need to upgrade with Bar together, need to connect with bar first, use BAR3.1 for

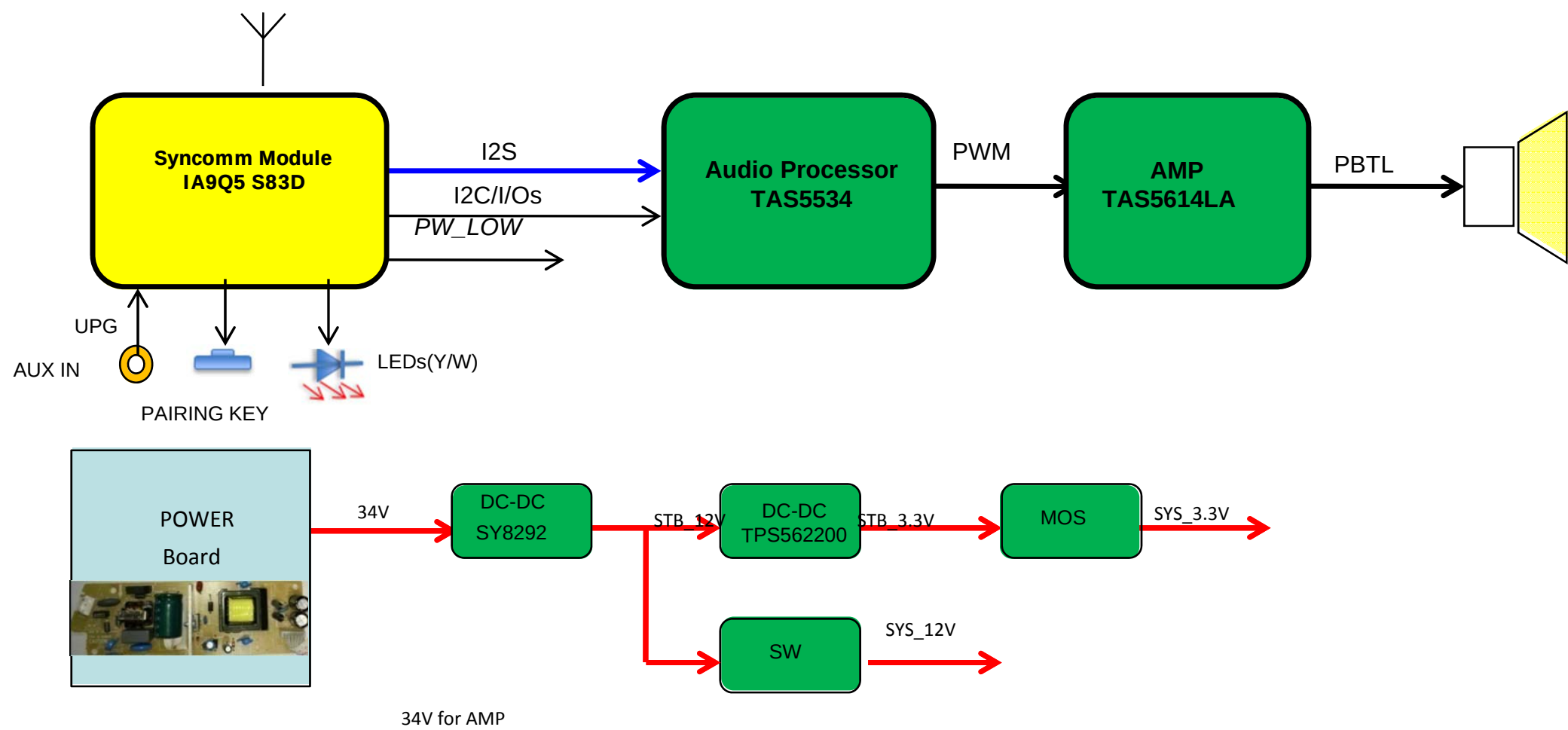
example:

1. Put the "JBLBAR3_1.HUI" to the root directory of U disk, and step the U disk in Bar USB port.
2. Make sure your Bar connect with your Subwoofer by AUX cables.
3. Turn on your Bar and Subwoofer, make sure there are working.
4. Press down and hold the "Power" key and "Vol-" key until the VFD show "Updata mode".
5. Wait a minute, it is updating when the vfd show "Wait". When it failed to upgrade VFDS will show "Fail". You need to check the step 1 and step 2.
6. The VFD will show that "Done" and reset when it update successfully.
7. You need to power off the Bar and Subwoofer, then power on they.

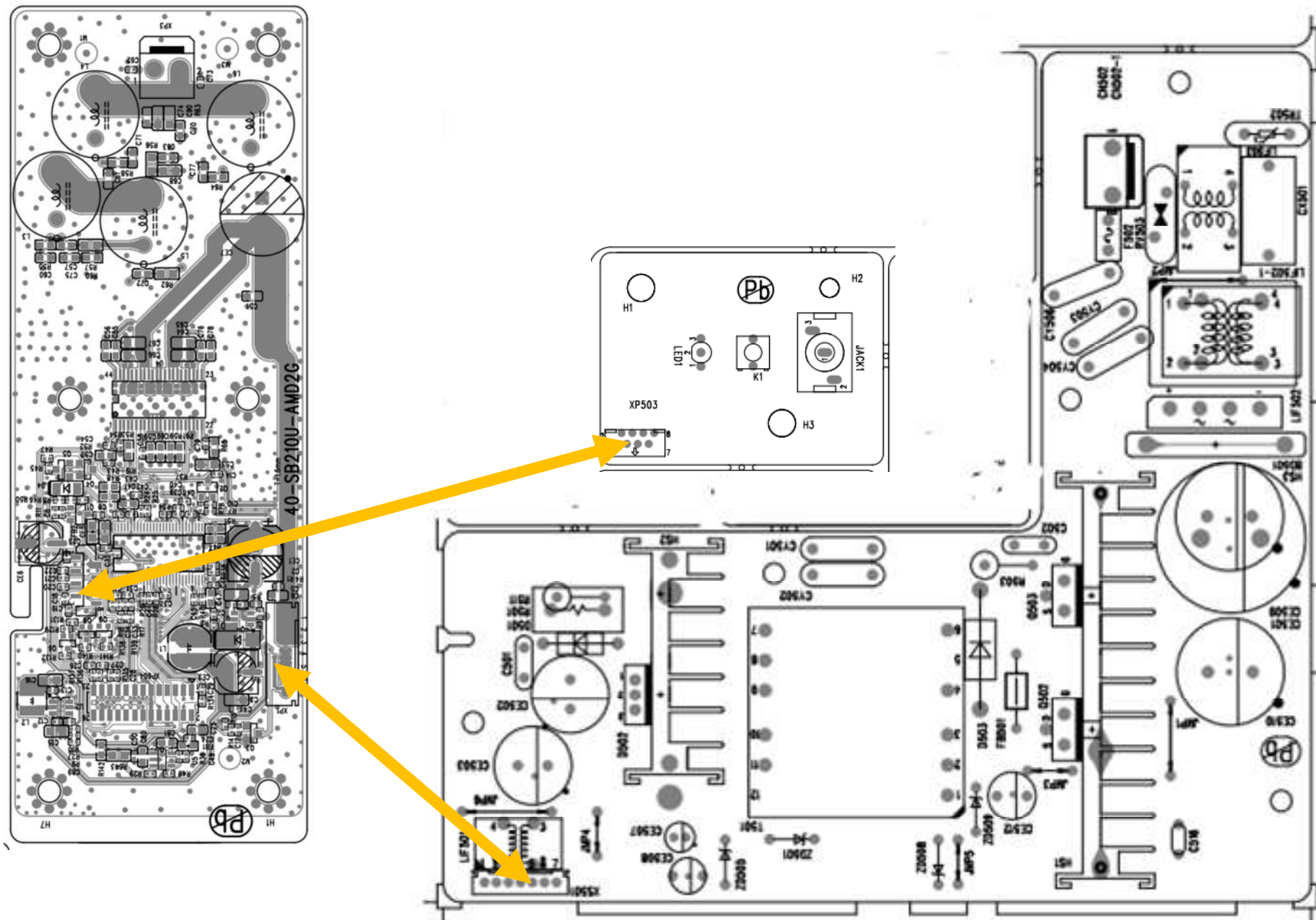
SUB cannot work



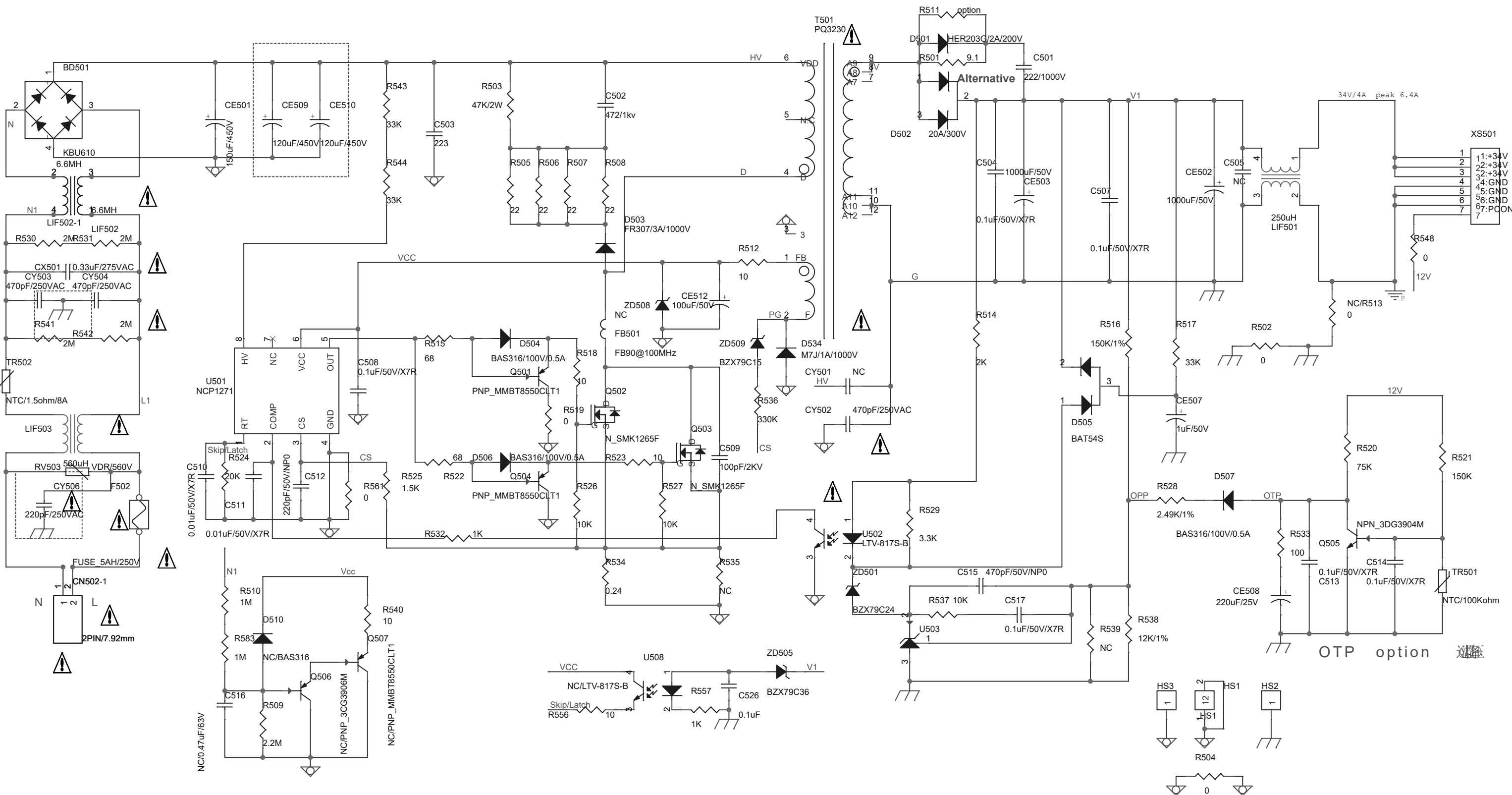
Set Block Diagram



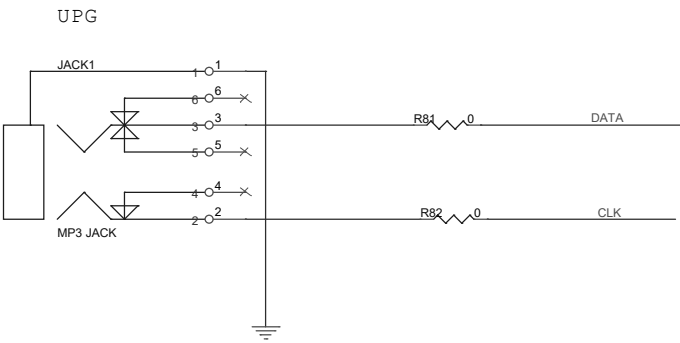
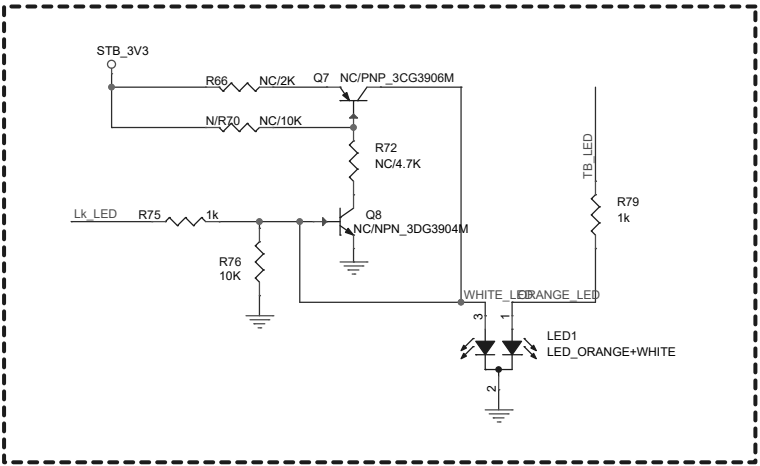
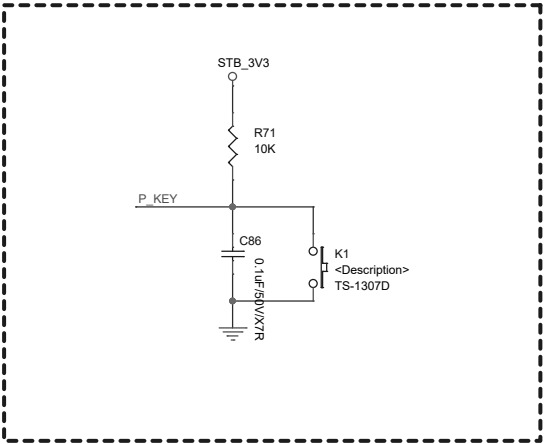
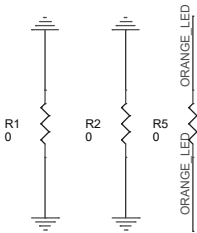
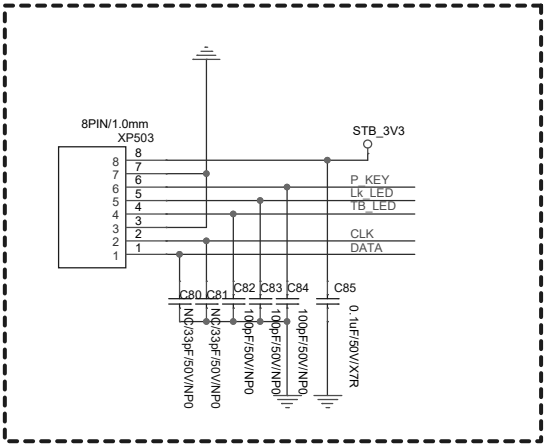
Wiring Diagram – SUB



Schematic Diagrams - POWER SUB

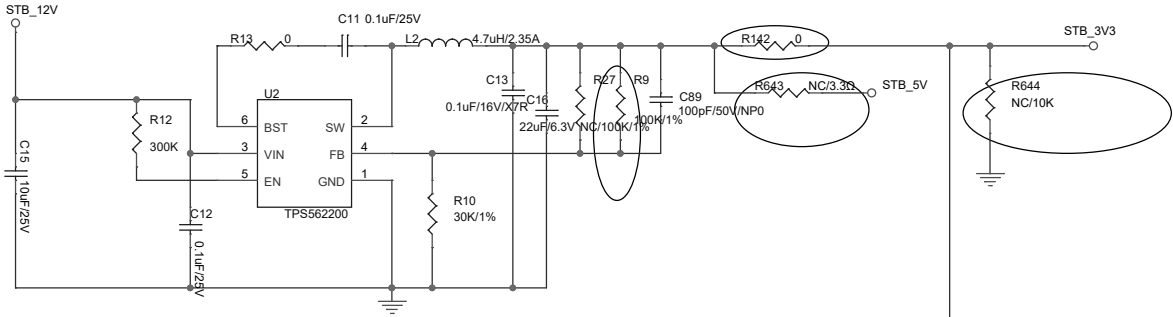
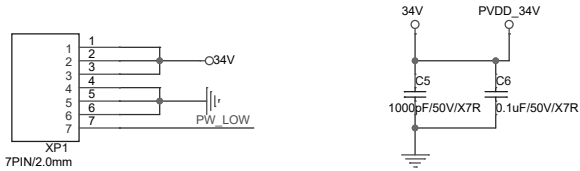


Schematic Diagrams - KEY SUB



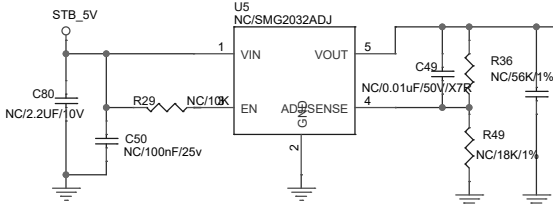
Schematic Diagrams -AMP SUB

POWER INPUT

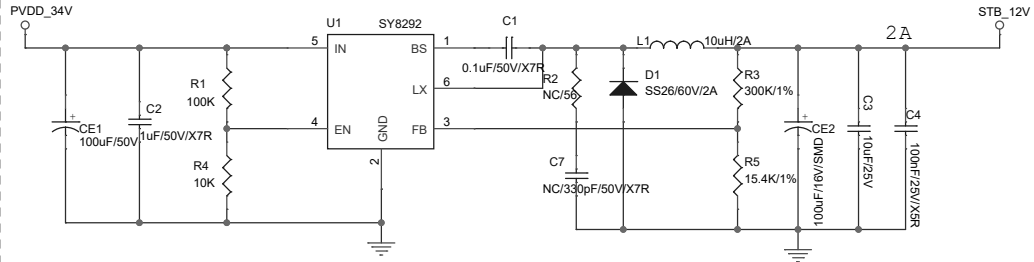


$$V_{OUT} = 0.765 * (100 + 30) / 30 = 3.31V$$
$$V_{OUT2} = 0.765 * (168 + 30) / 30 = 5.049 V$$

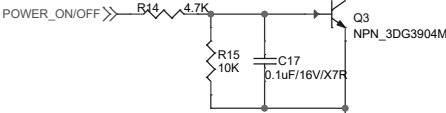
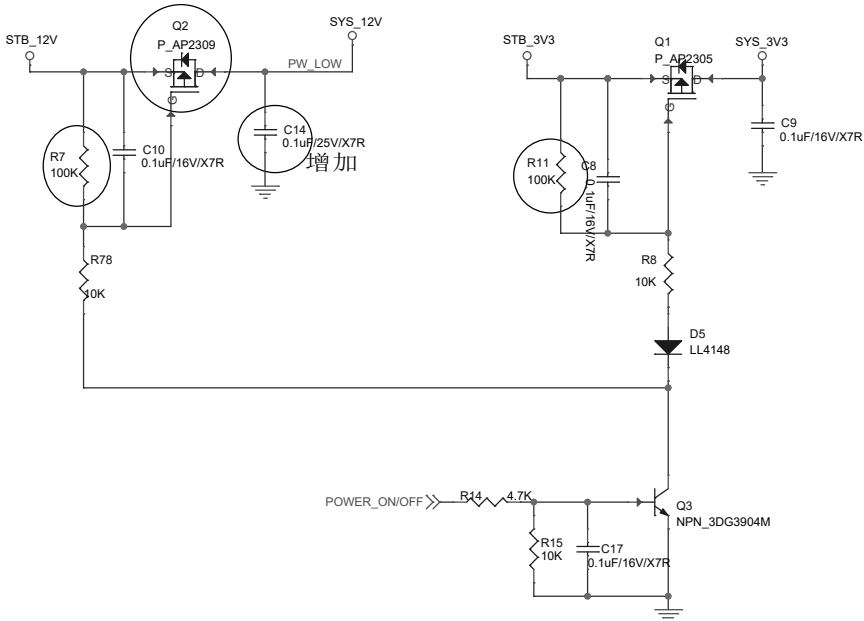
$$0.8 * (R11 + R13) / R13 = 3.288V$$



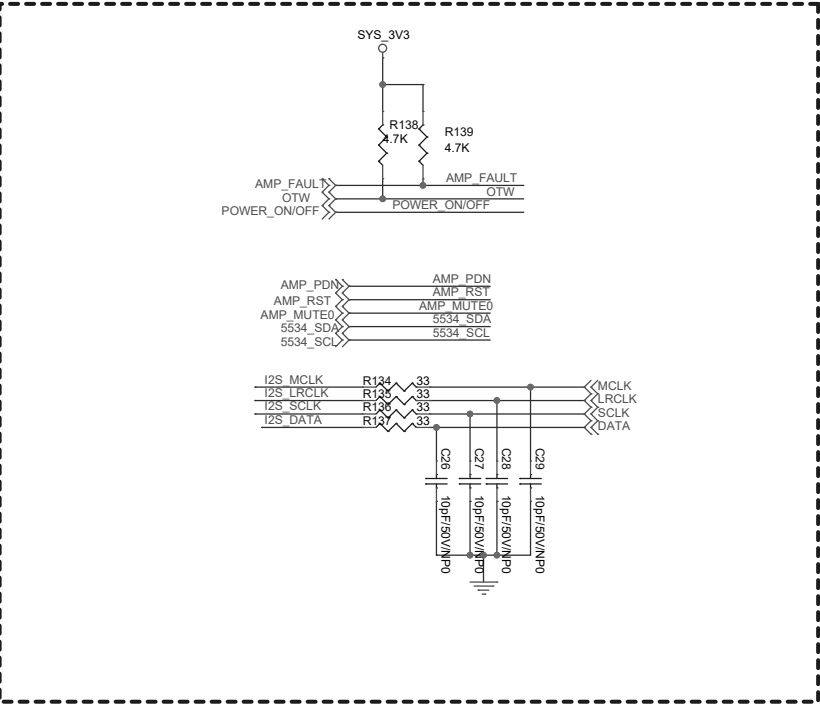
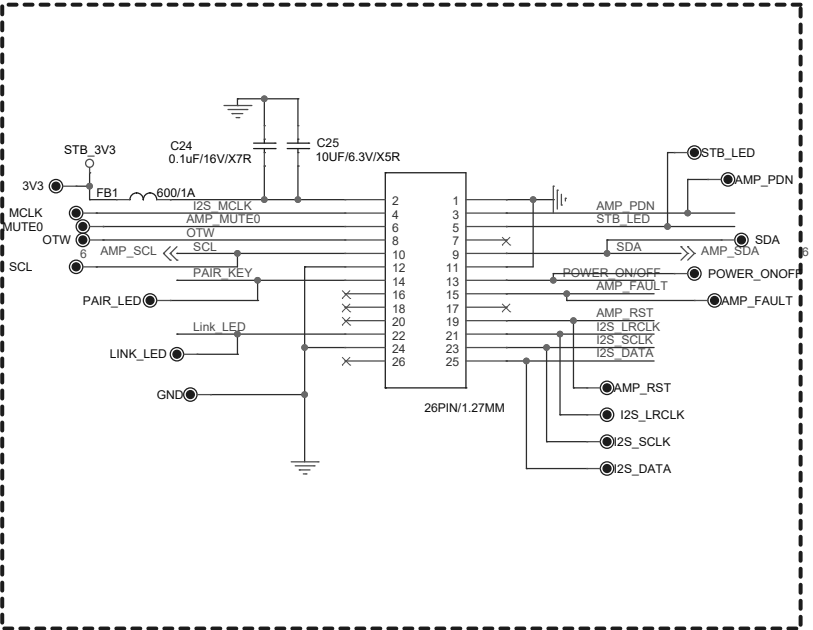
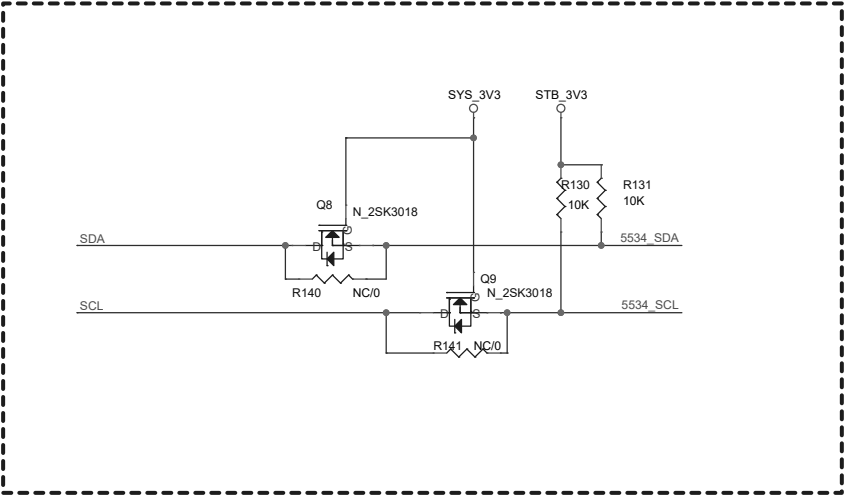
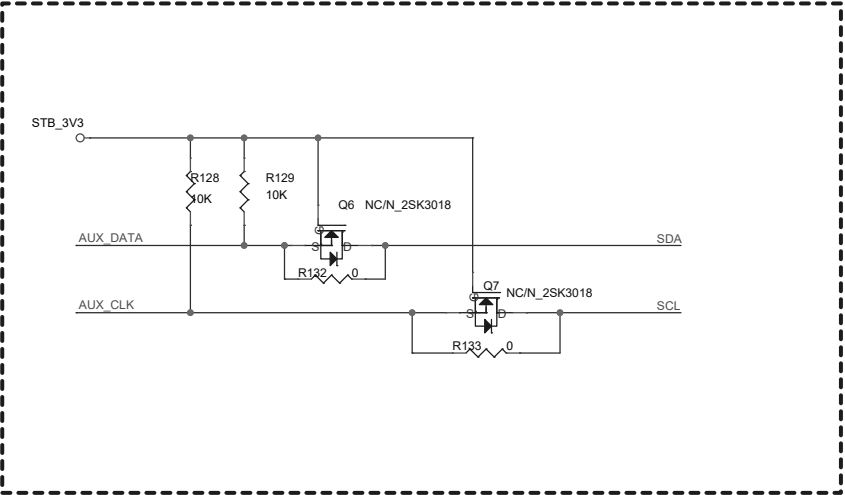
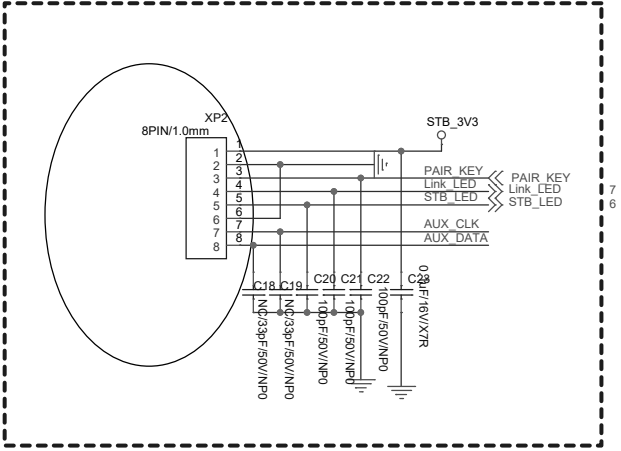
Reference circuit01-S301BU-AM300



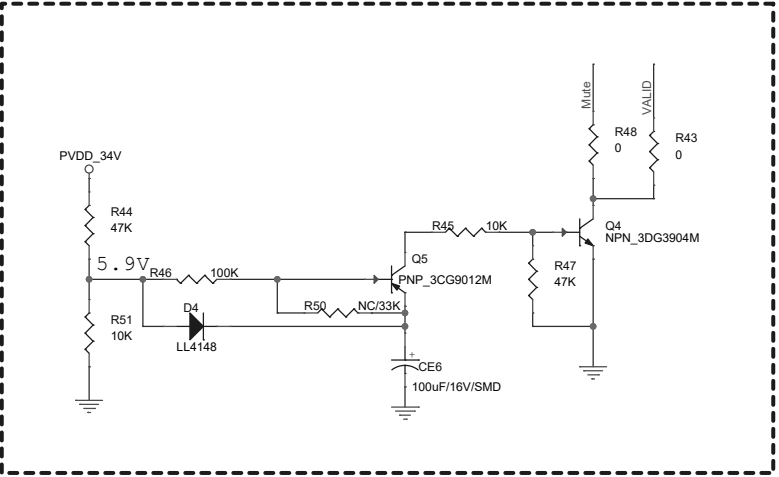
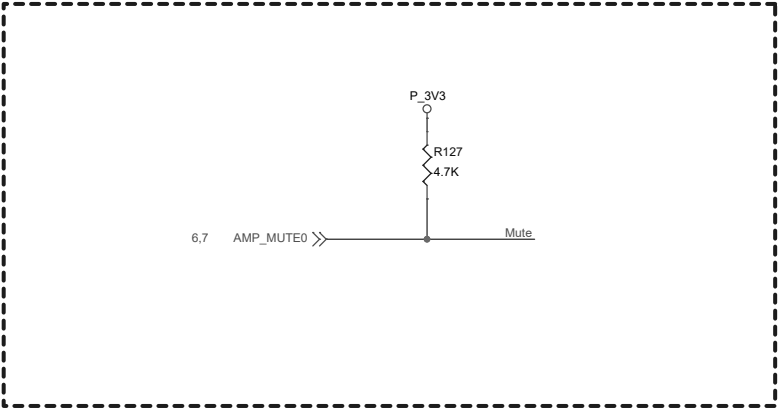
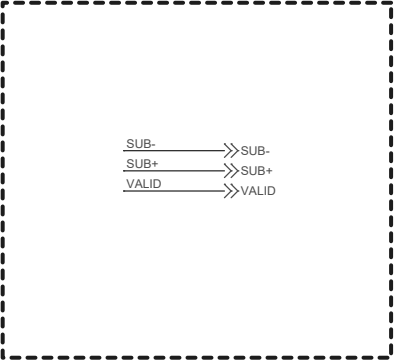
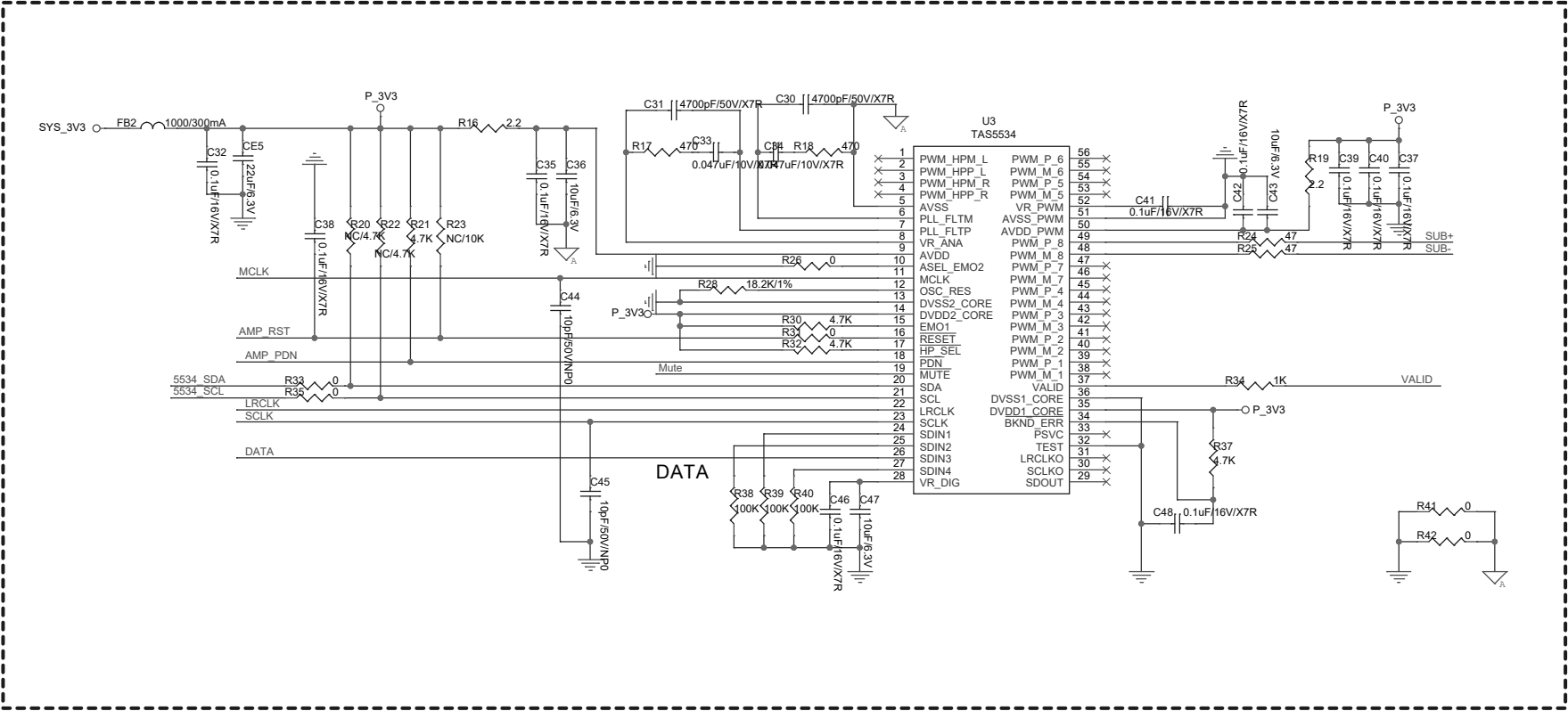
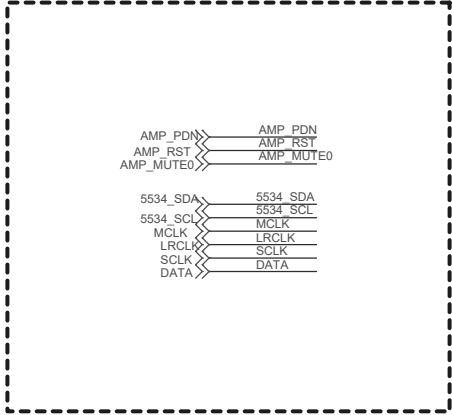
$$V_{OUT} = 0.6V * (1 + 300K / 15.4K) = 12.3V$$



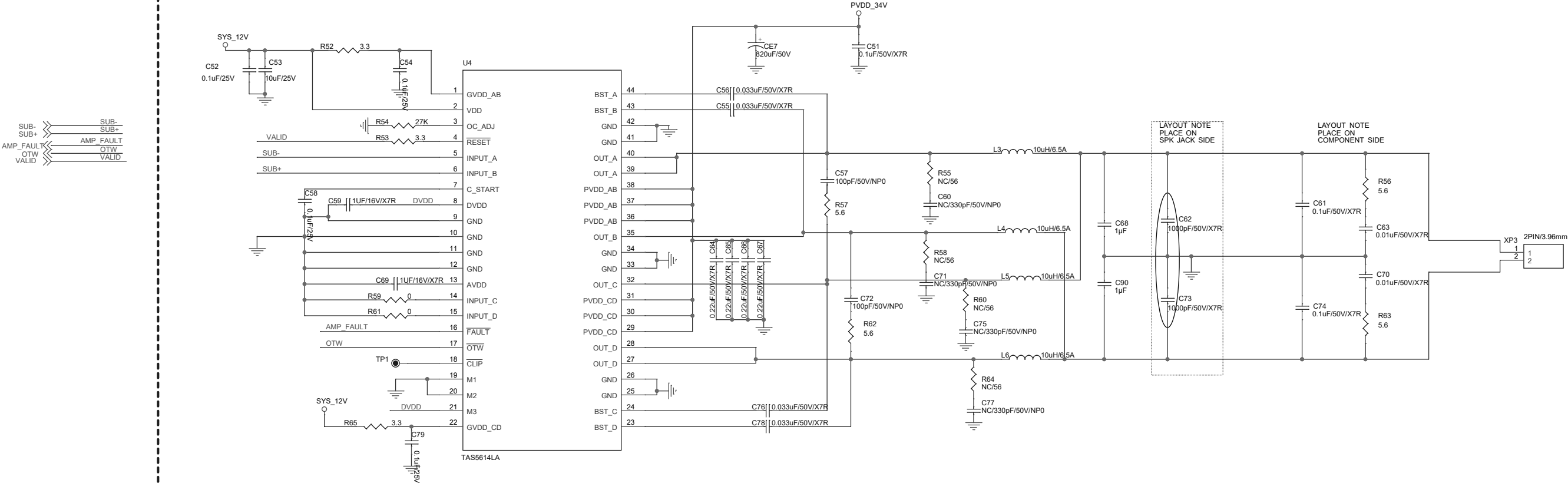
Schematic Diagrams -AMP SUB

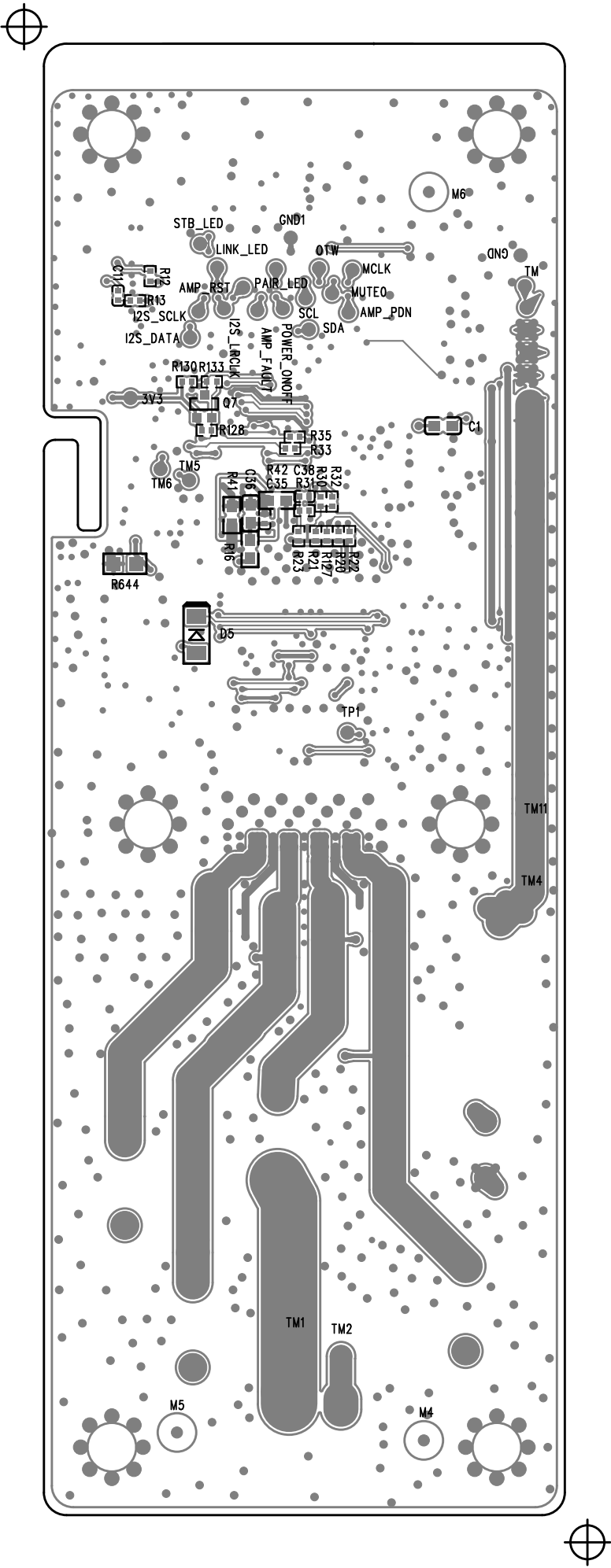


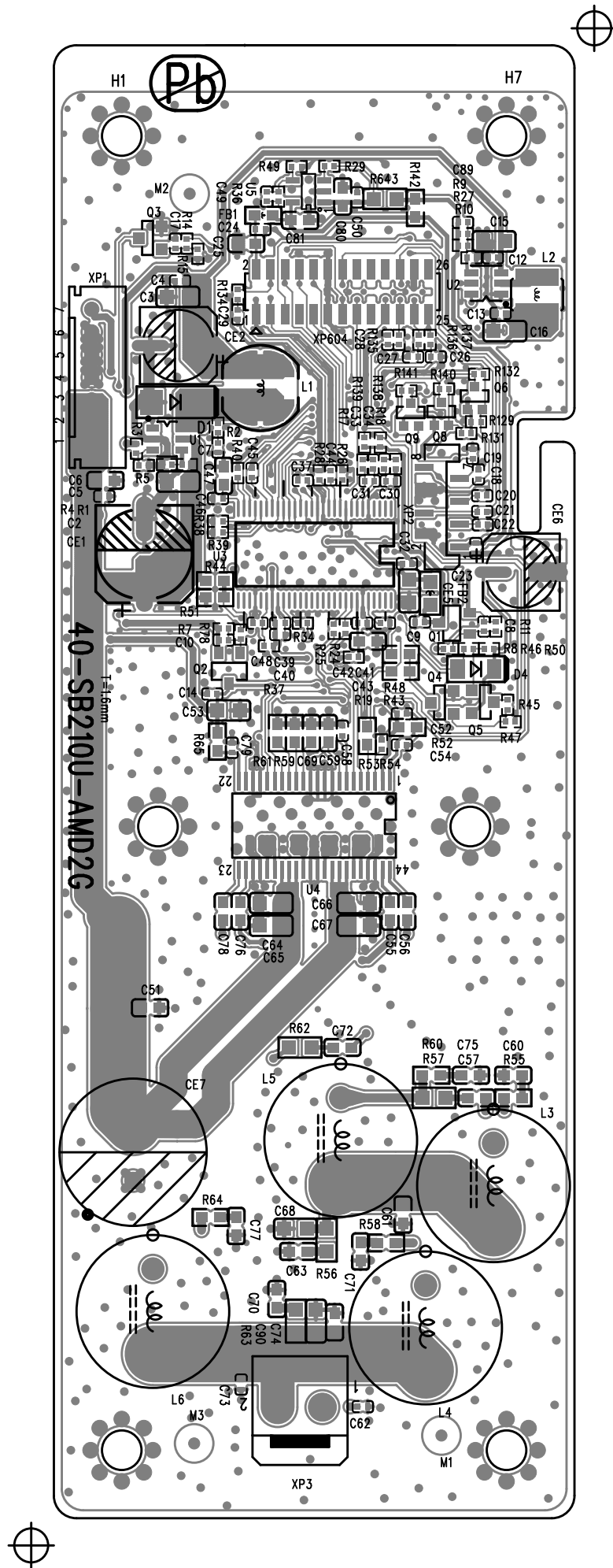
Schematic Diagrams - AMP SUB

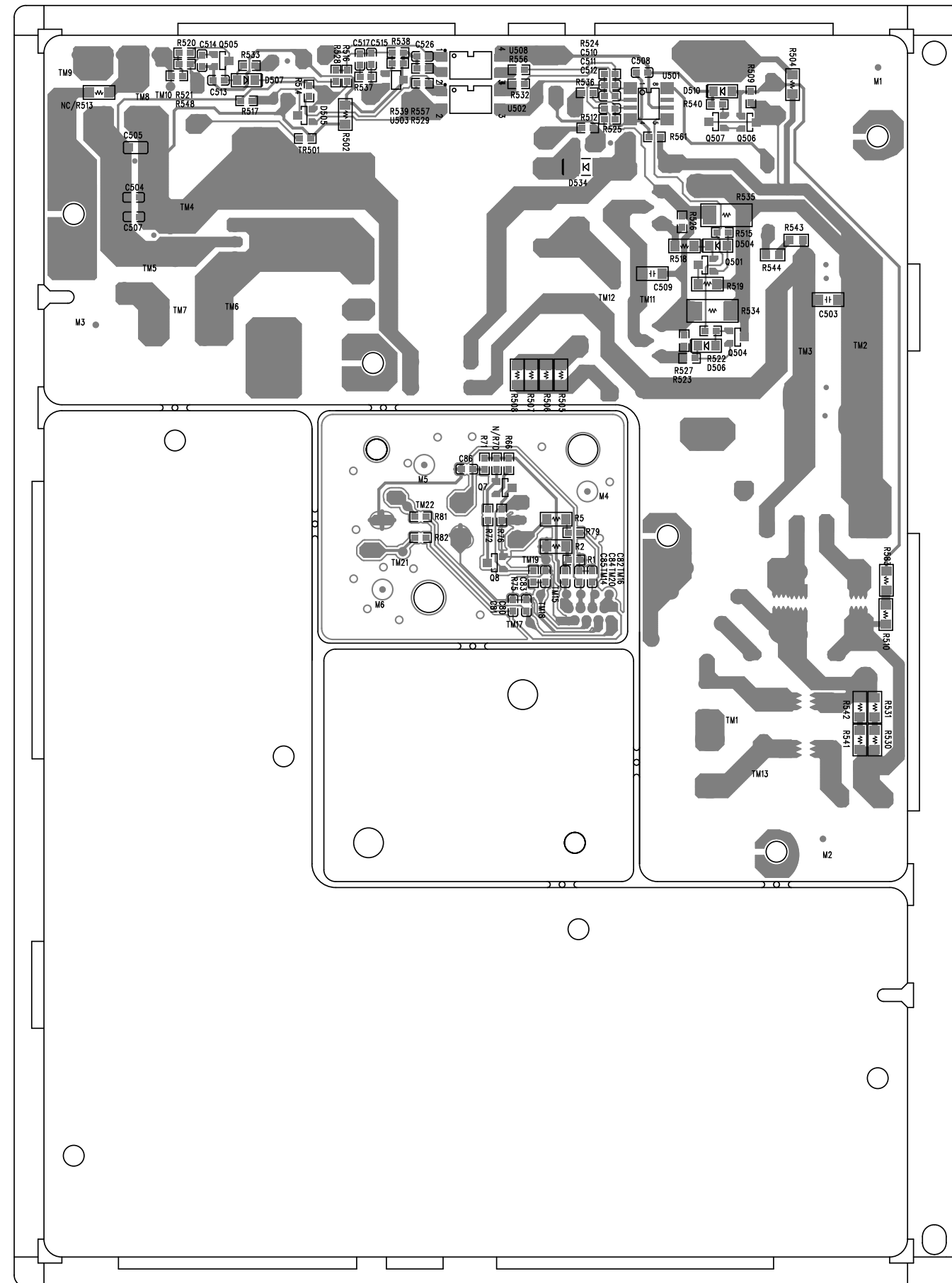


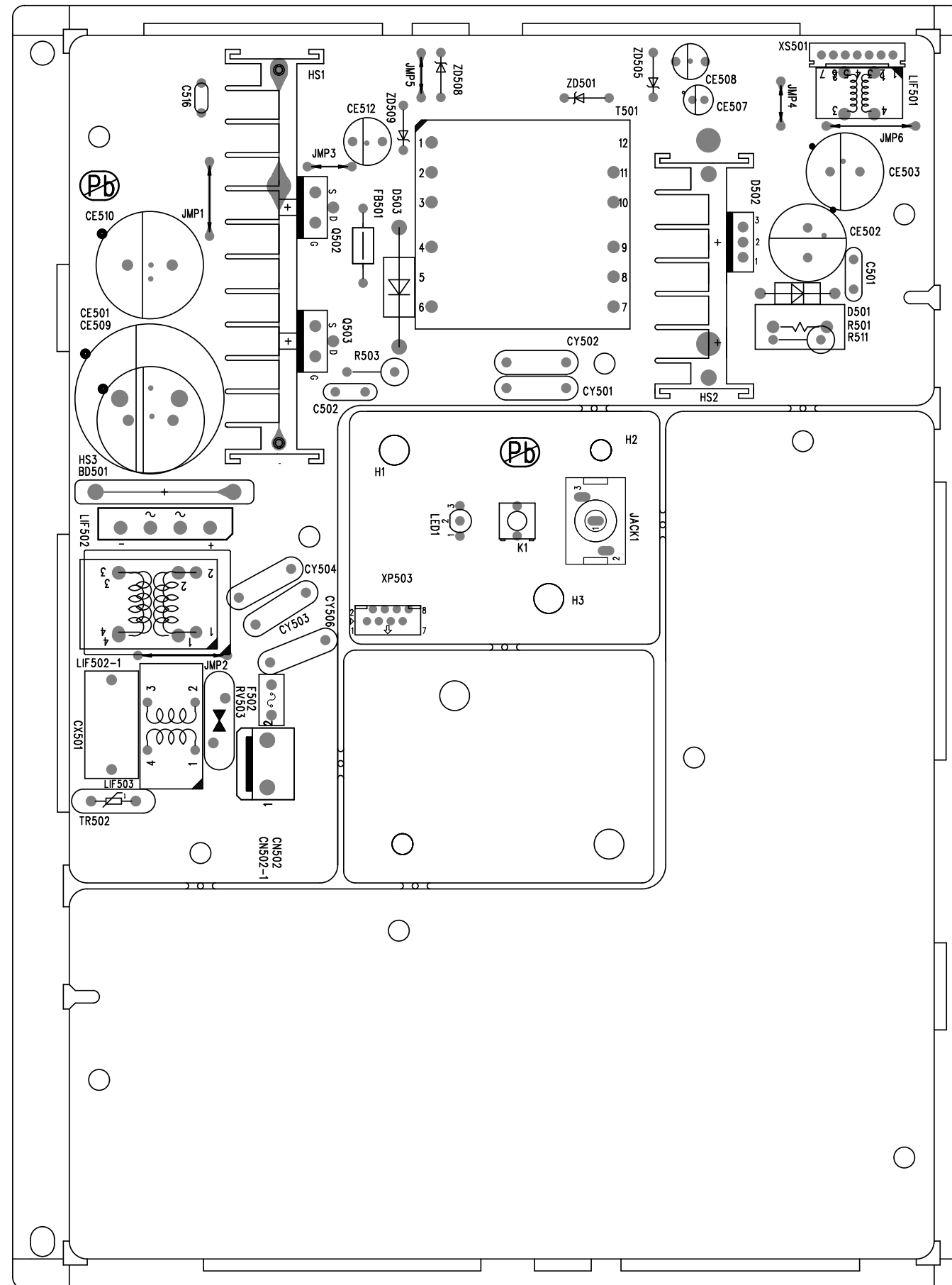
Schematic Diagrams -AMP SUB



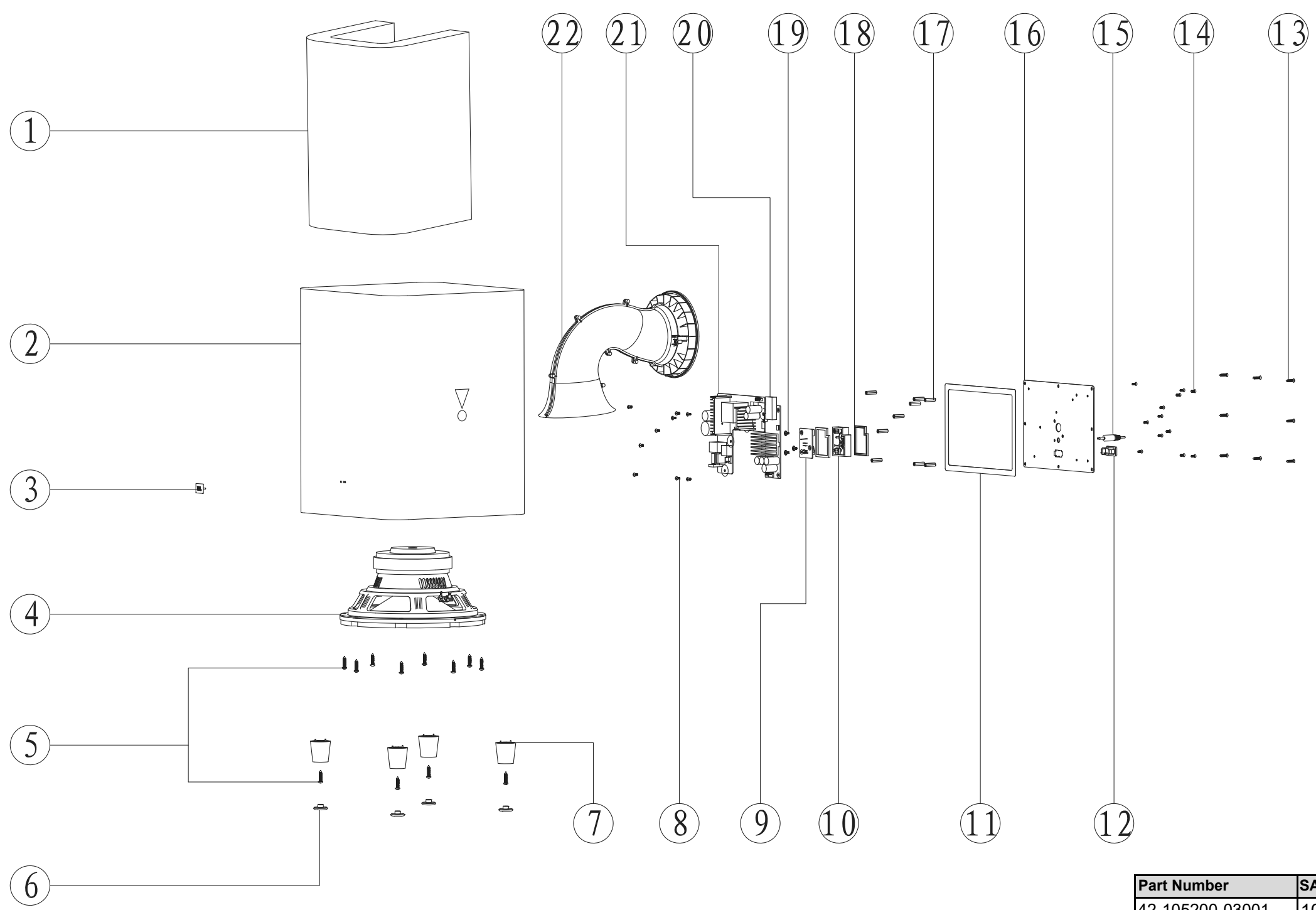








MECHANICAL EXPLODED VIEW OF SUBWOOFER



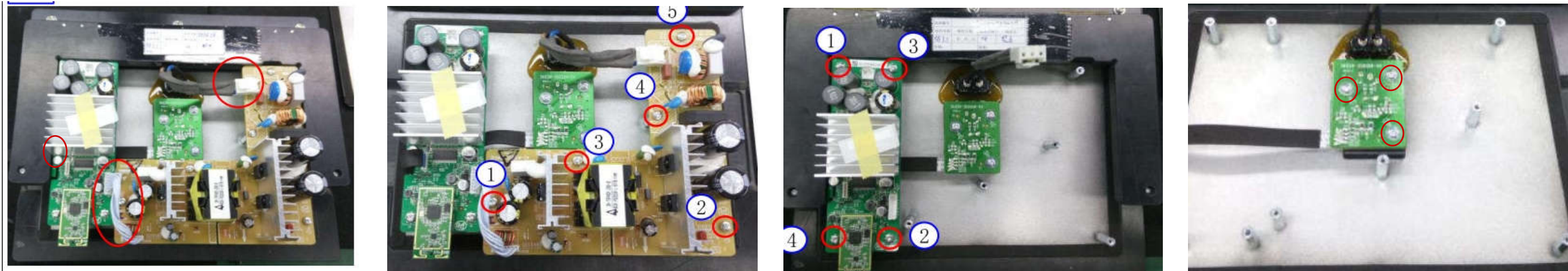
Part Number	SAP Description	Usage	Pos. No.
42-105200-03001	10" WOOFER SW10	1	4
56-SB31E1-0HAB1	FOOT BRACKET SW10	4	7
59-252580-000B1	RUBBER FOOT SW10	4	6
08-SB310U-BP0	GUIDE DUCT ASSY SW10	1	22
08-HMSB31-000	BUTTON ASSY SW10	1	10+18
08-SB310U-AC1	POWER SOCKET ASSY SW10	1	12
08-SB310U-AM0	AMP BOARD SW10	1	20
08-SB310U-KE0	LAMP BOARD SW10	1	9
08-SB310U-PW0	POWER BOARD SW10	1	21
67-SB31B0-0A3C3	REAR PANEL SW10	1	16

DISMANTLING INSTRUCTIONS

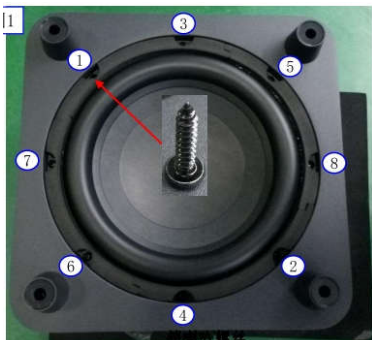
1. Remove 8pcs screws on the back cover, then carefully separate the back cover and remove the speaker cable, take off the back cover.



2. Disconnect the 3pcs cables of the boards, remove 5pcs screws of the power board and take off the power board carefully, remove the 4pcs screws of the AMP board and take off the AMP board. Remove 3pcs screws of the key board and take off the key board.



3. Remove 8pcs screws of the speaker, than take off the speaker.



Spare Parts List

Brand	Product Name	Part Number	SAP Description	Usage	Pos. No.
JBL	SW10	42-105200-03001	10" WOOFER SW10	1	4
JBL	SW10	56-SB31E1-0HAB1	FOOT BRACKET SW10	4	7
JBL	SW10	59-252580-000B1	RUBBER FOOT SW10	4	6
JBL	SW10	76-307500-0ATB5	GIFT BOX AM SW10	1	
JBL	SW10	76-307500-0ATB3	GIFT BOX AS SW10	1	
JBL	SW10	76-307500-0ATB2	GIFT BOX EMEA SW10	1	
JBL	SW10	46-KL016T-03J	SPK WIRE 2P 22# L160MM SW10	1	
JBL	SW10	08-SB310U-BP0	GUIDE DUCT ASSY SW10	1	22
JBL	SW10	08-HMSB31-000	BUTTON ASSY SW10	1	10+18
JBL	SW10	08-SB310U-AC1	POWER SOCKET ASSY SW10	1	12
JBL	SW10	08-SB310U-AM0	AMP BOARD SW10	1	20
JBL	SW10	08-SB310U-CN1	RX MODULE SW10	1	
JBL	SW10	08-SB310U-KE0	LAMP BOARD SW10	1	9
JBL	SW10	08-SB310U-PW0	POWER BOARD SW10	1	21
JBL	SW10	46-KK014C-08AVF	FFC 8P/140MM/1.0MM SW10	1	
JBL	SW10	67-SB31B0-0A3C3	REAR PANEL SW10	1	16
JBL	SW10	51-B80150-0LR01-A	POWER CORD 1.5M AM UL SW10	1	
JBL	SW10	51-DC0120-0KR09-C	POWER CORD 1.2M KOREA SW10	1	
JBL	SW10	51-JC0120-0PNC7-M	POWER CORD 1.2M AUSTRALIA SW10	1	
JBL	SW10	51-DC0120-0CRA3-M	POWER CORD 1.2M EU VDE SW10	1	
JBL	SW10	51-D50120-0CR03-M	POWER CORD 1.2M THAILAND SW10	1	
JBL	SW10	51-D70120-0AR01-A	POWER CORD 1.2M UK SW10	1	

REVISION LIST

Version 1.0

*Initial release for JBL SW10	2019-10
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