

ONYX STUDIO 5

SKU: HKOS5BLKAM, HKOS5GRYAM, HKOS5BLUAM, HKOS5BLKEU, HKOS5GRYEY, HKOS5BLUEU, HKOS5BLKAS, HKOS5GRYAS, HKOS5BLUAS, HKOS5BLKCN, HKOS5GRYCN, HKOS5BLUCN, HKOS5BLKJN, HKOS5GRYJN, HKOS5BLUJN, HKOS5BLKSP, HKOS5GRYSP, HKOS5BLUSP, HKOS5BLKSG, HKOS5GRYSG, HKOS5BLUSG, HKOS5BLKBEP, HKOS5GRYBEP, HKOS5BLUEP, HKOS5BLKAR, HKOS5GRYAR, HKOS5BLUAR, HKOS5BLKBR, HKOS5GRYBR, HKOS5BLUBR, HKOS5BLKID, HKOS5GRYID, HKOS5BLUID



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TECHNICAL SPECIFICATIONS

- Model No.: ONYX 5
- Bluetooth version: 4.2
- Support: A2DP V1.3, AVRCP V1.6
- Transducer: Woofer 1 x 120mm, Tweeter 1 x 25mm
- Rated Power: 1 x 50W WRMS Bi-amo (AC mode)
- Frequency response:
50Hz-20kHz(-6dB)
- Signal-to-noise ratio: ≥ 80 dB A-weighted
- Power supply: 19V/2A
- Battery type: Lithium-ion polymer (3.7V, 3000mAh)
- Battery charge time:
5 hours @ 5V1A
- Music playing time: up to 8 hours
(varies by volume level and
audio content)
- Bluetooth transmitter power:
0 - 9dBm
- Bluetooth transmitter frequency
range: 2.402 – 2.480GHz
- Bluetooth transmitter modulation:
GFSK, $\pi/4$ -DQPSK, 8DPSK
- Dimensions (H x W x D):
284 x 291 x 128 (mm)
- Weight: 2980g

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.



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.

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:

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:



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.

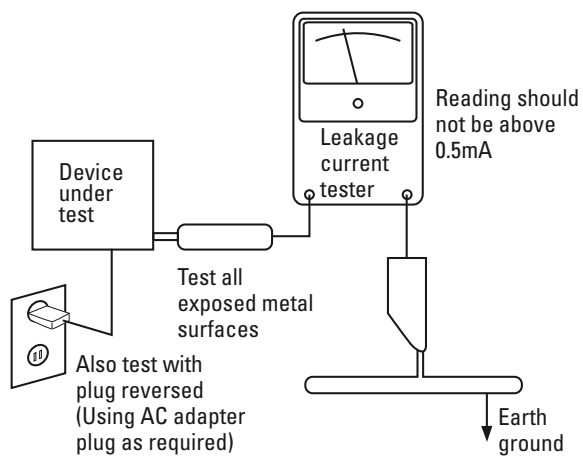
Components identified with the IEC symbol  in the parts list are of special significance to safety. When replacing a component identified with , use only the replacement parts designated, or parts with the same ratings or resistance, wattage, or voltage that are designated in the parts list in this manual. 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

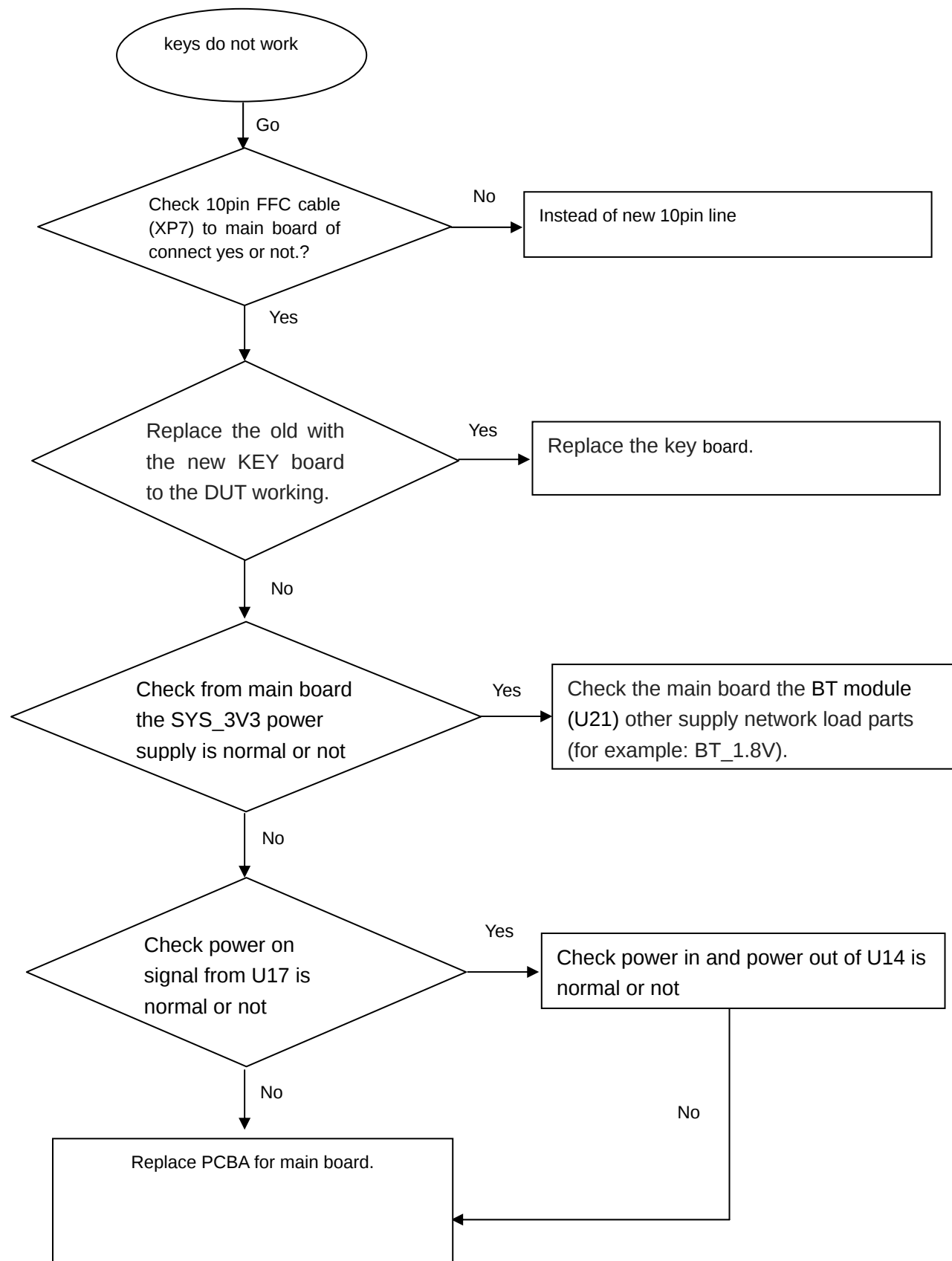
Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly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



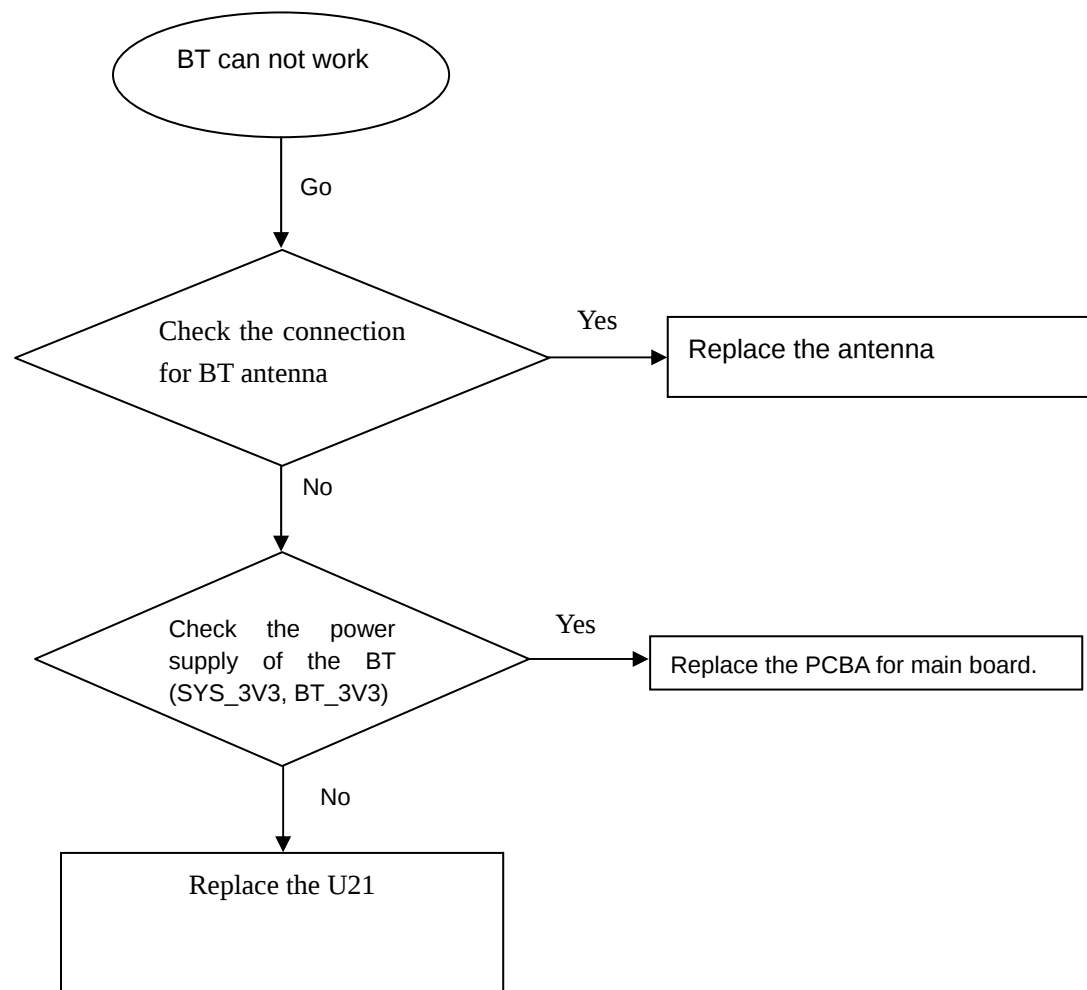
AC Leakage Test

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.

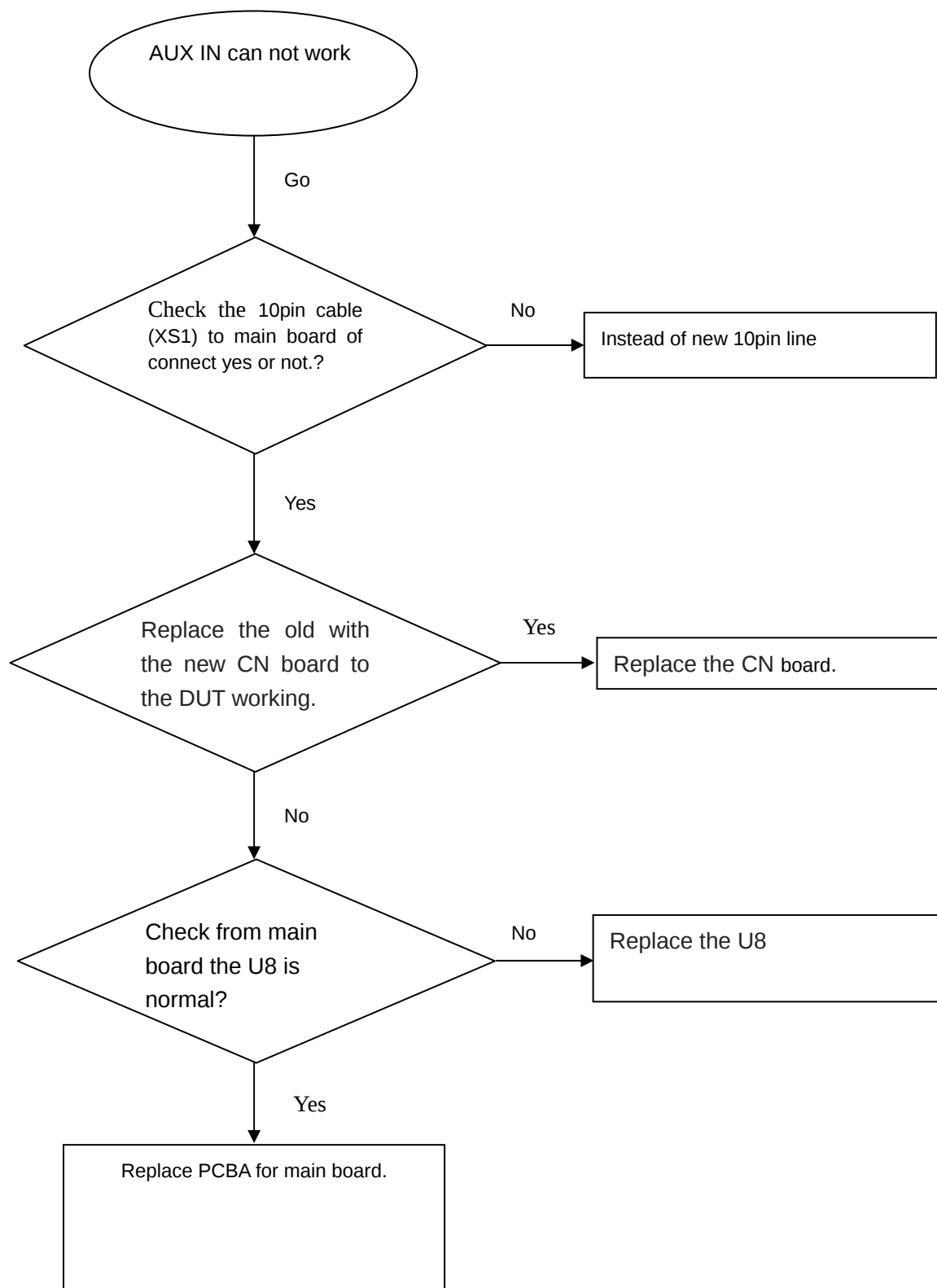
Keys do not work



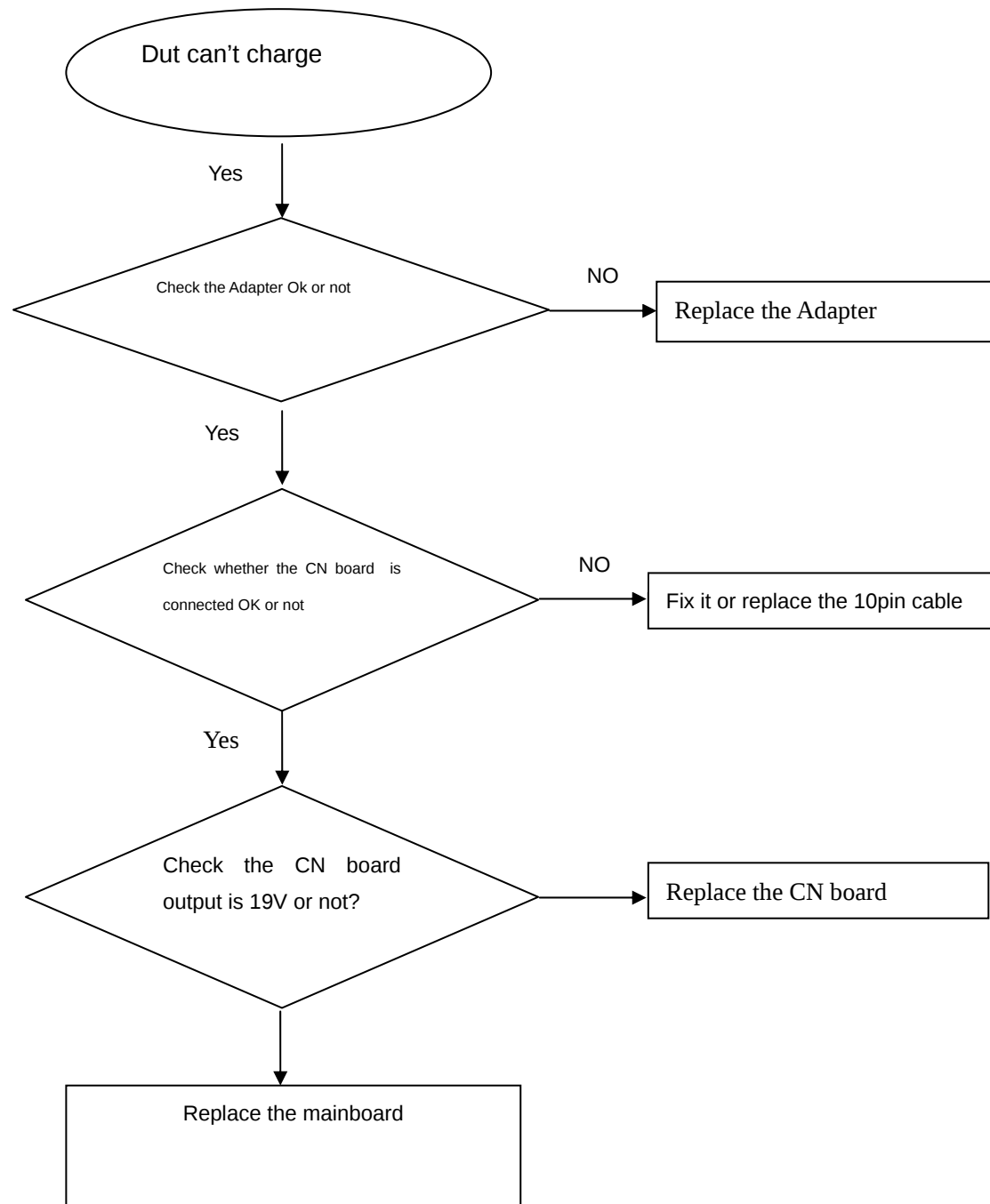
BT cannot work



AUX IN cannot work



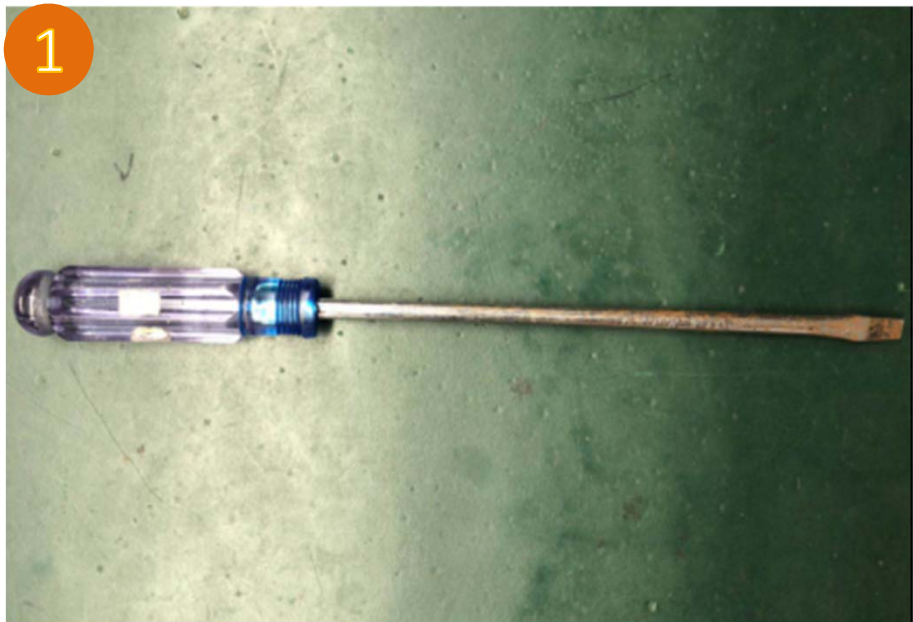
Dut can't charge



Dismantling Instructions

Tool list

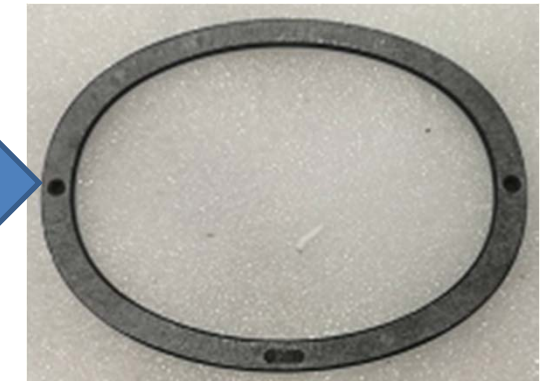
Item	Description	Remark
1	Screw driver	
2	Screw driver	



Dismantling Instructions



1. Open the rubber ring carefully by screwdriver following the direction



2. Open the rubber ring carefully by screwdriver following the direction



3. Take off the 6pcs screws as showed, then take out cover



4. Use a screwdriver to stop the hole and pry open the net cover

Dismantling Instructions



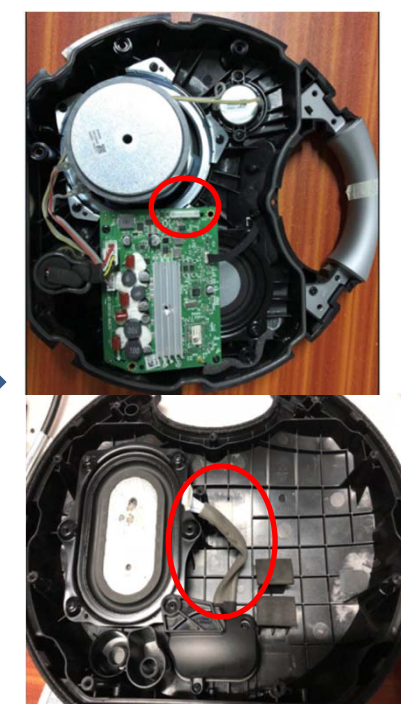
5. Take off the 6pcs sbolt as showed



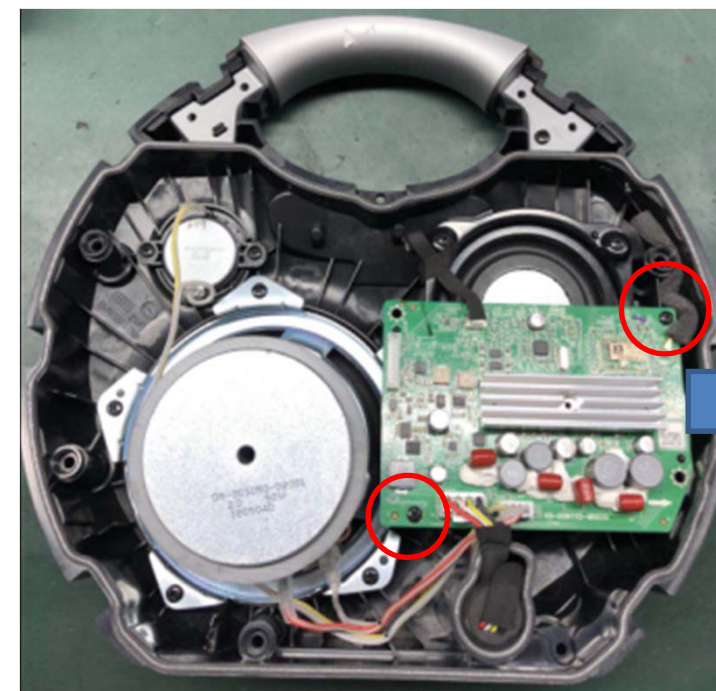
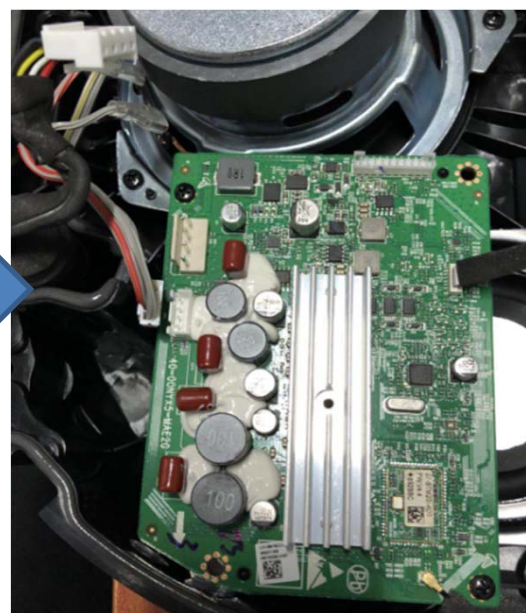
6. Take off the 12pcs screws as showed



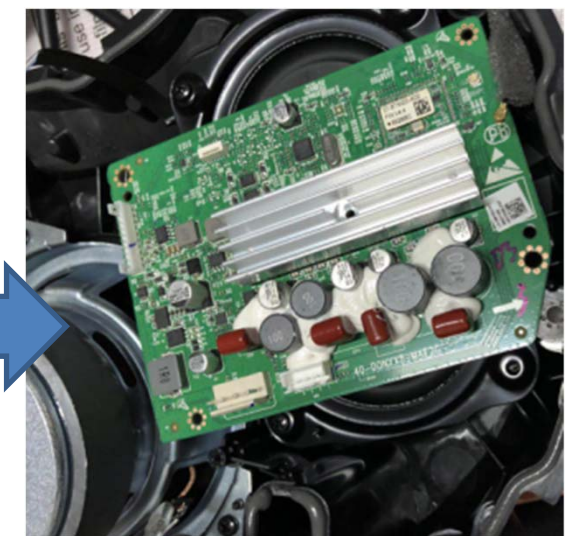
7. Unplug 1pcs cable on the main board, then take out cover



8. Unplug 2pcs cable on the main board



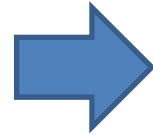
9. Take off 2pcs screws , then take out main board



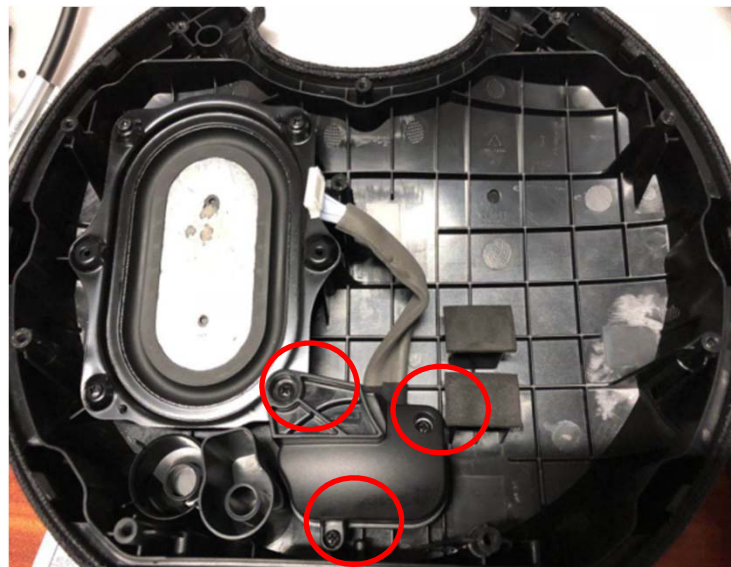
Dismantling Instructions



10. Take off 3pcs screws



11. take out cover , then
take out main board

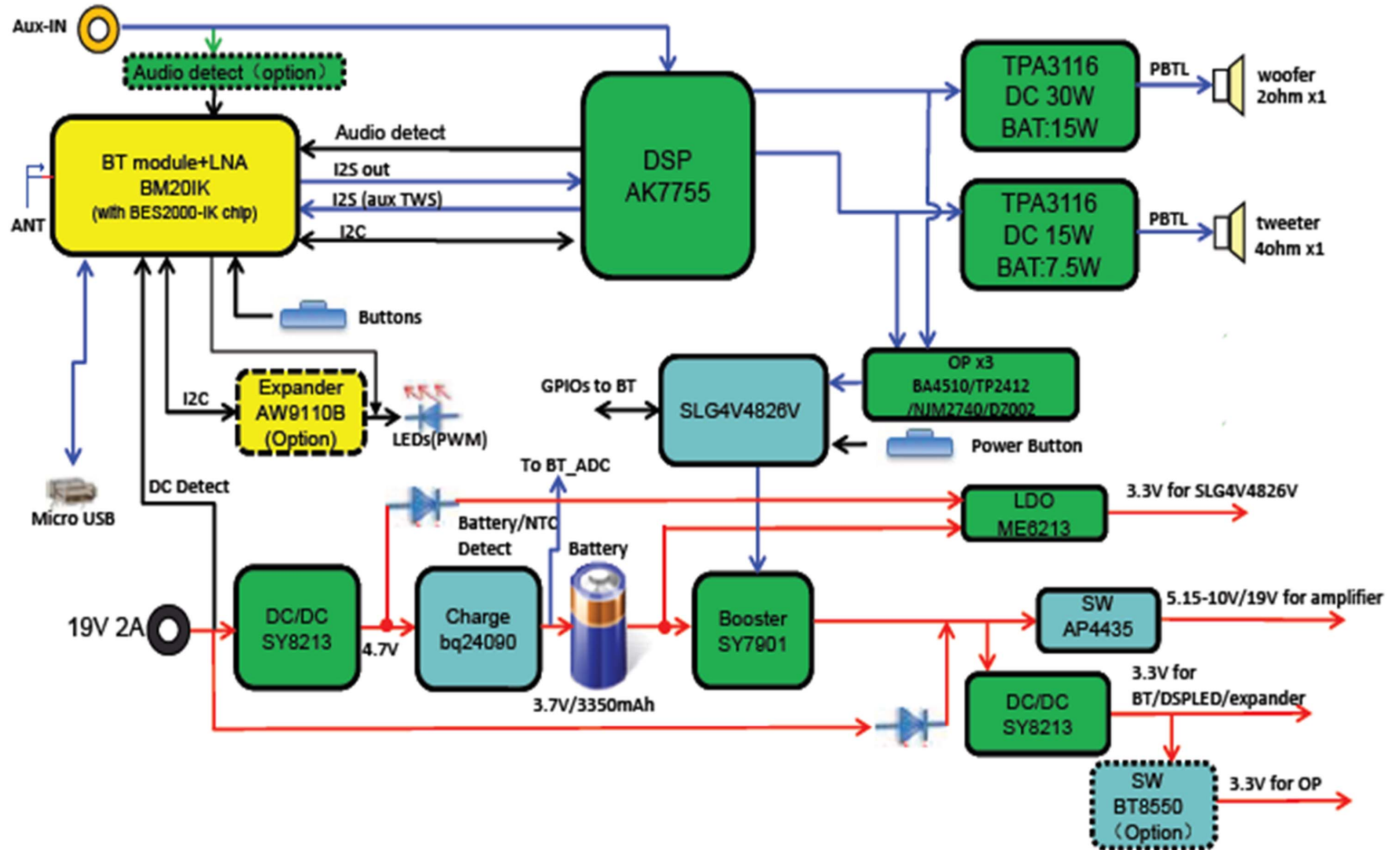


12. Take off 3pcs screws

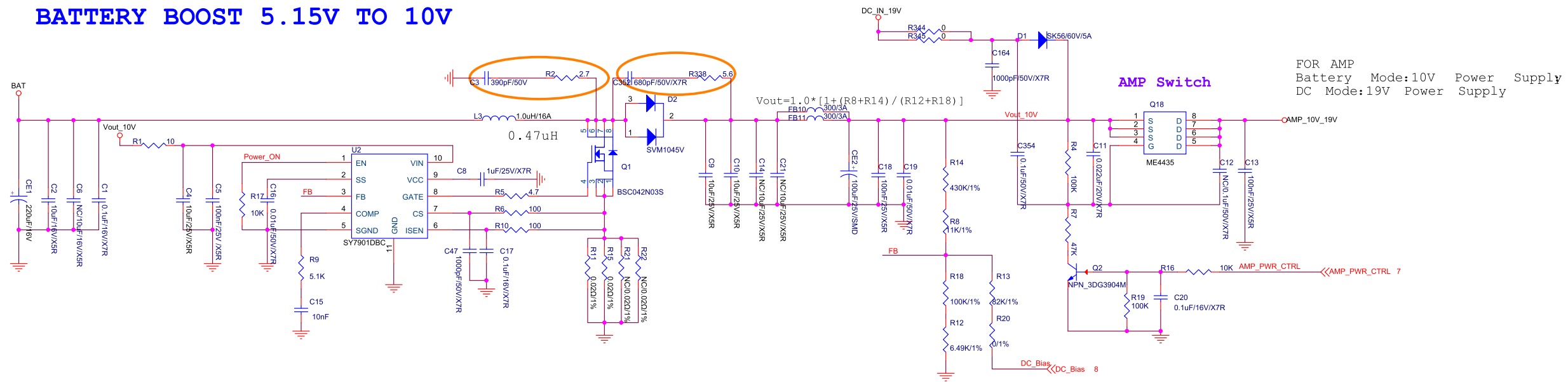


13. 11. take out cover , then
take out main board

SET BLOCK DIAGRAM

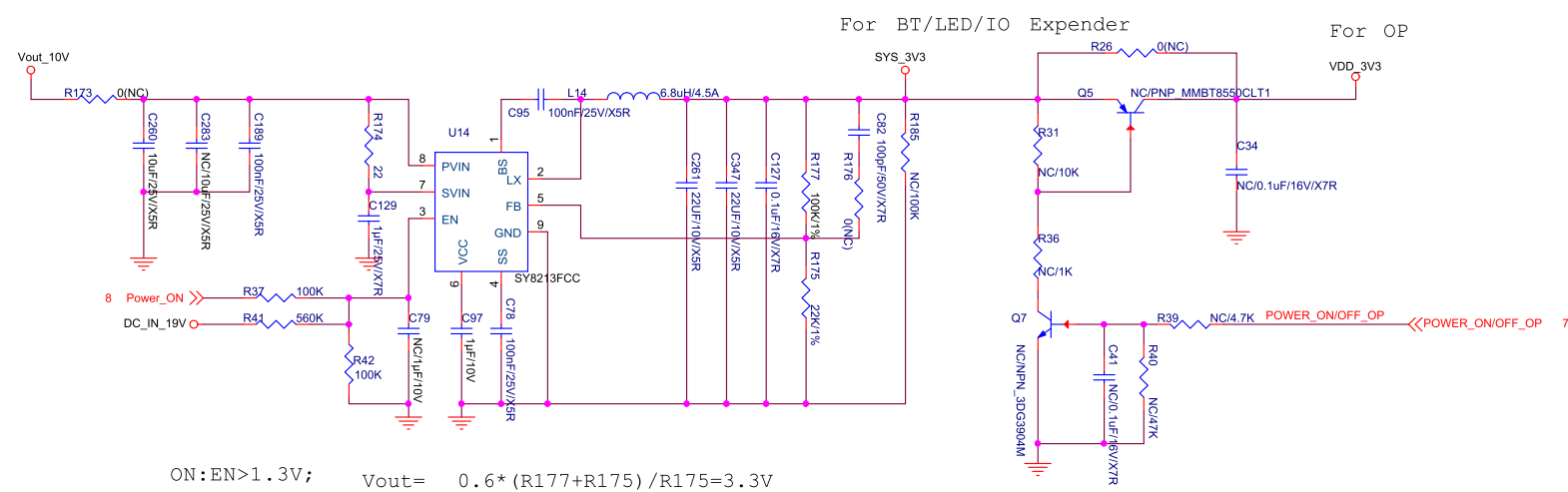


BATTERY BOOST 5.15V TO 10V

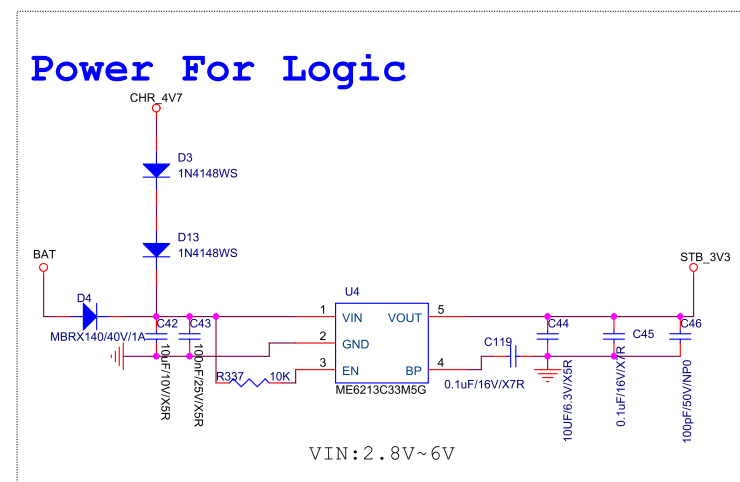


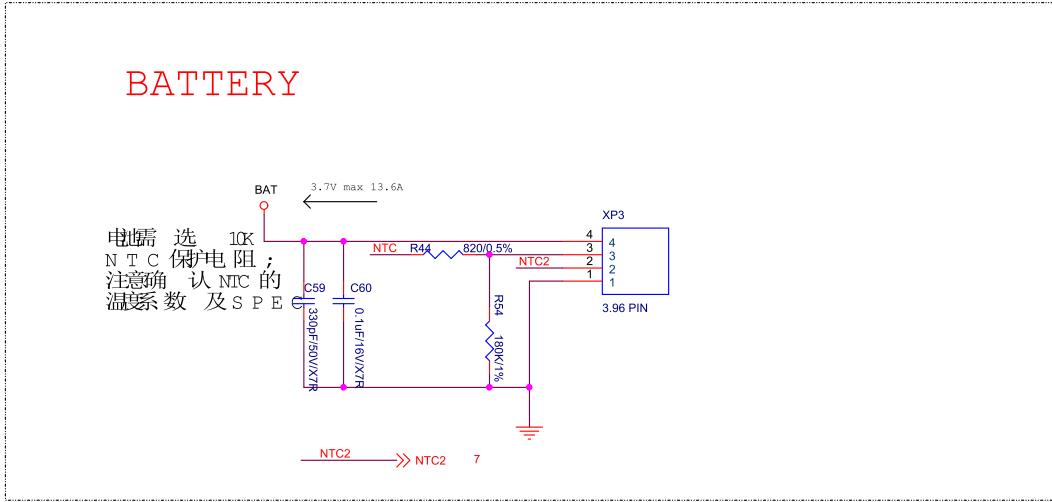
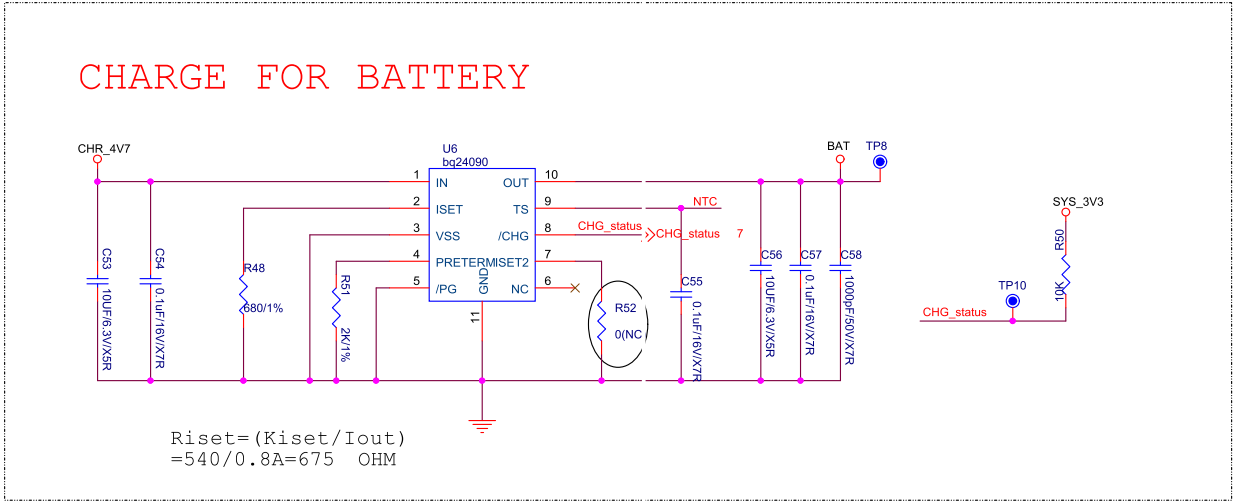
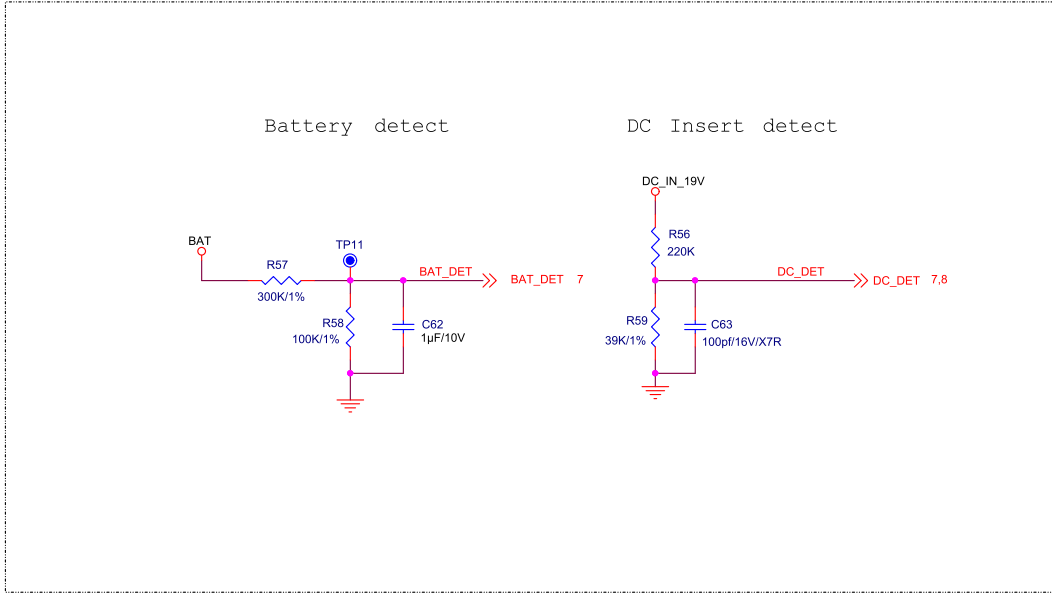
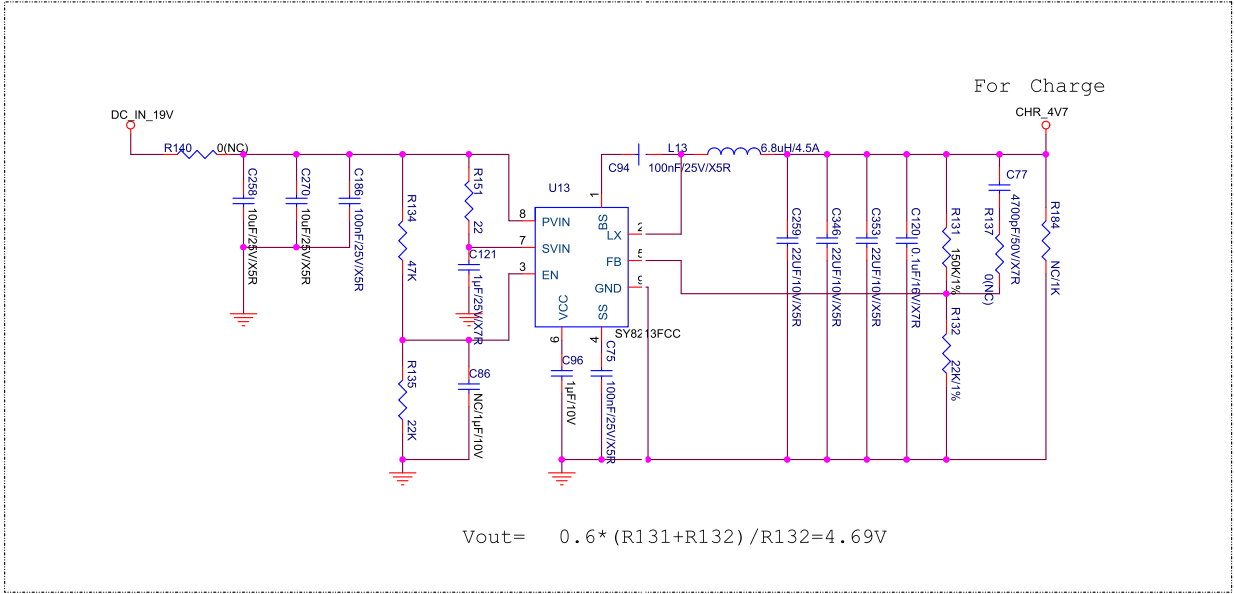
POWER ON/OFF Circuit

DC-DC 10V/19V TO 3.3V

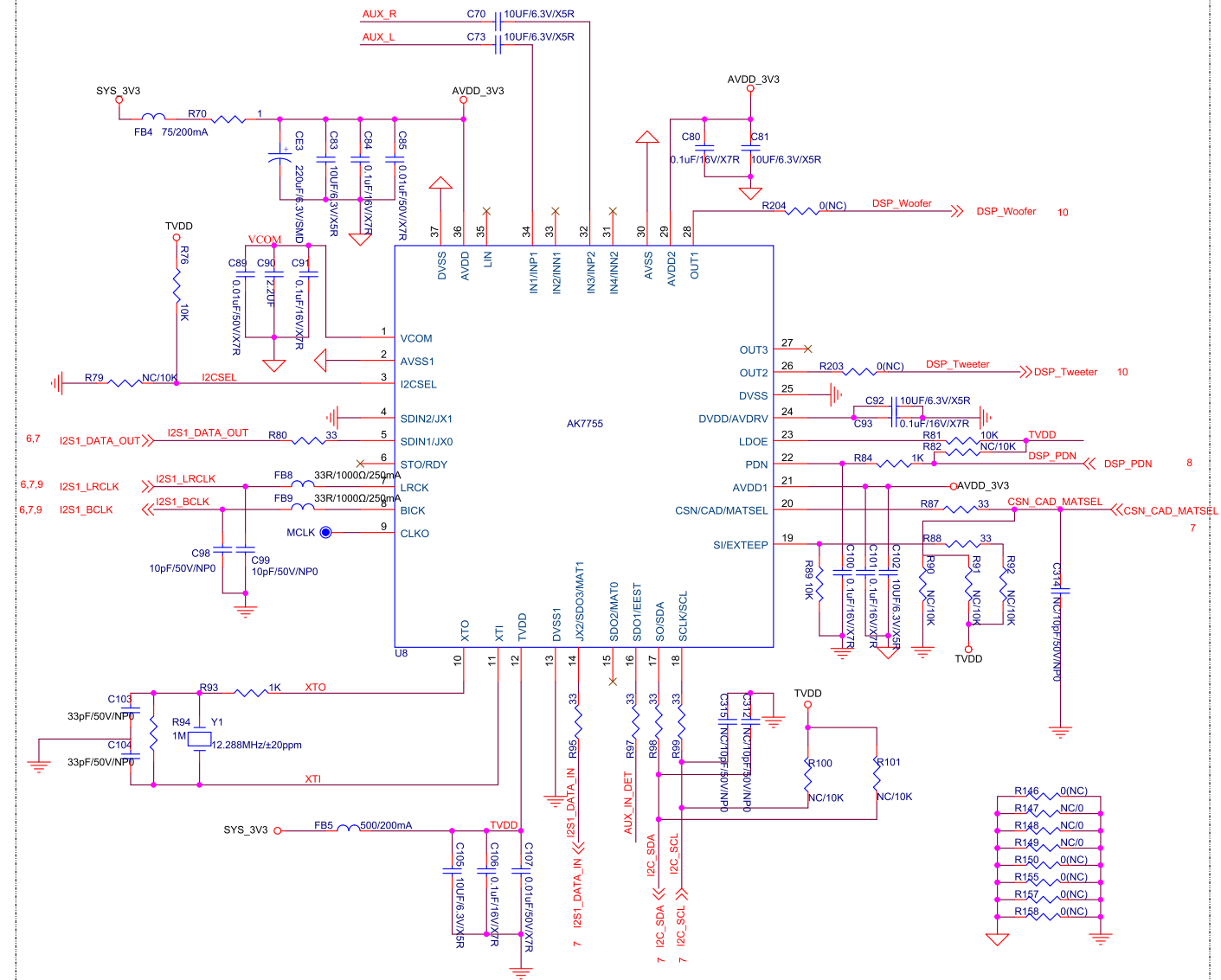


Power For Logic

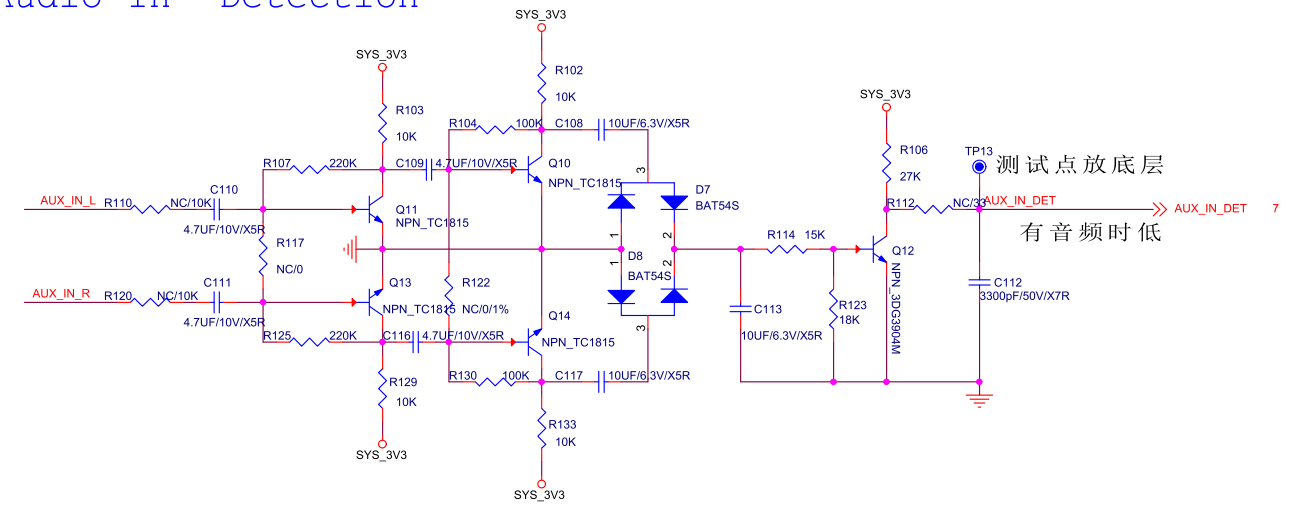




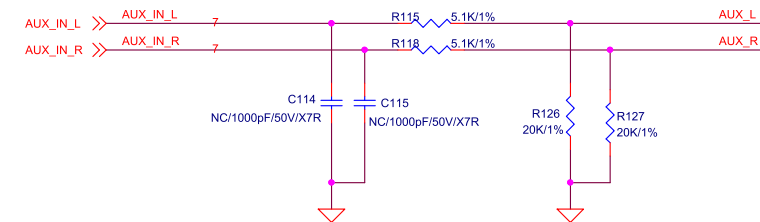
DSP Circuit

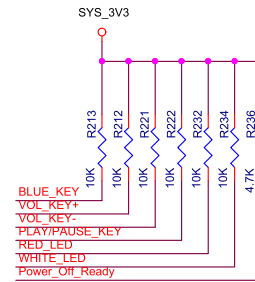
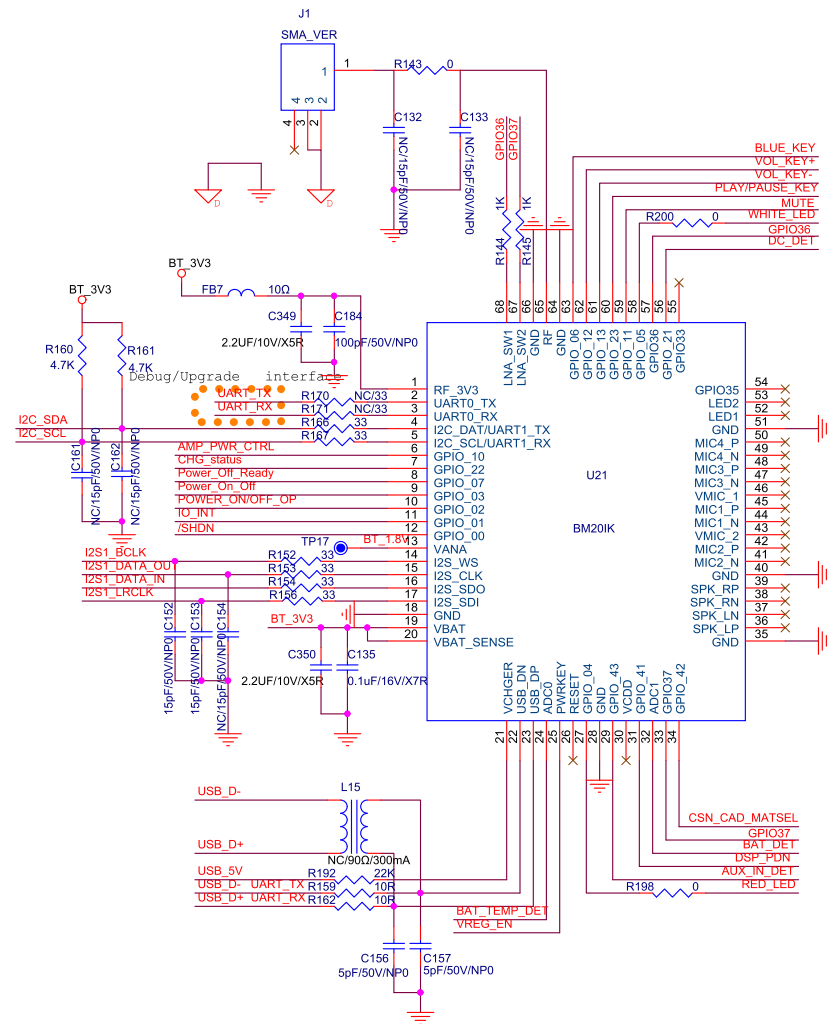


Audio In Detection

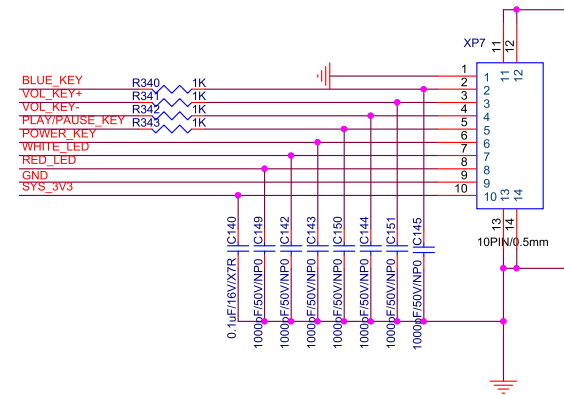


Audio IN Vlotage Divition Circuit

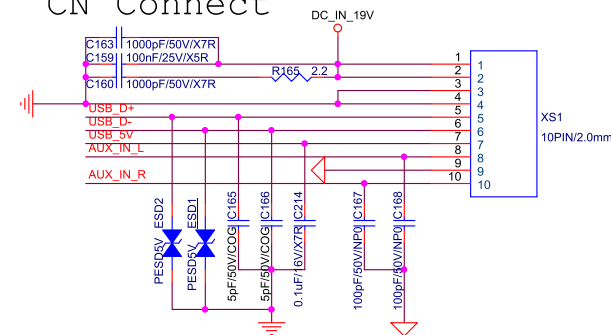




KEY &LED Connect

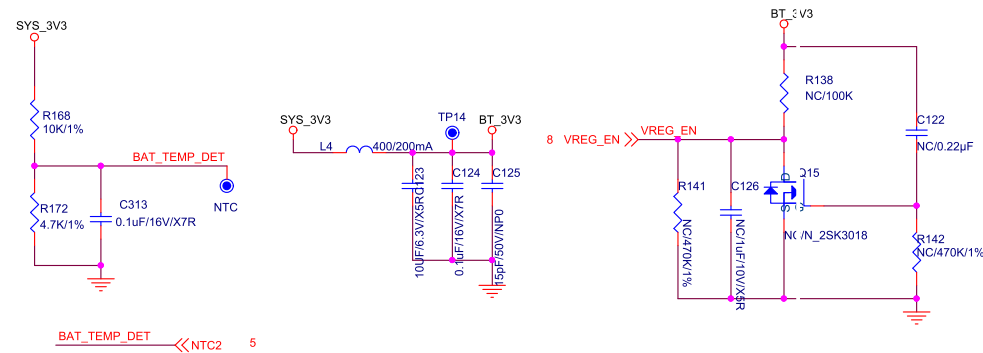


CN Connect



Power_Off_Ready	>>>Power_Off_Ready	8
Power_On_Off	>>>Power_On_Off	8
POWER_ON/OFF_OP	>>>AMP_PWR_CTRL	4
AMP_PWR_CTRL	>>>DC_DET	5,8
DC_DET	>>>BAT_DET	5
BAT_DET	>>>CHG_status	5
CHG_status	>>>WHITE_LED	9
WHITE_LED	>>>RED_LED	9
RED_LED	>>>POWER_KEY	9
POWER_KEY	>>>PLAY/PAUSE_KEY	9
PLAY/PAUSE_KEY	>>>BLUE_KEY	9
BLUE_KEY	>>>VOL_KEY-	9
VOL_KEY-	>>>VOL_KEY+	9
VOL_KEY+	>>>PLAY/PAUSE_KEY	9
PLAY/PAUSE_KEY	>>>AUX_IN_L	6
AUX_IN_L	>>>AUX_IN_R	6
AUX_IN_R	>>>AUX_IN_DET	6
AUX_IN_DET	>>>I2S1_DATA_IN	6
I2S1_DATA_IN	>>>I2S1_LRCLK	6
I2S1_LRCLK	>>>I2S1_DATA_OUT	6
I2S1_DATA_OUT	>>>I2S1_BCLK	6
I2S1_BCLK	>>>I2C_SDA	6,9
I2C_SDA	>>>I2C_SCL	6,9
I2C_SCL	>>>/SHDN	9
/SHDN	>>>MUTE	10
MUTE	>>>CSN_CAD_MATSEL	6
CSN_CAD_MATSEL	>>>DSP_PDN	6

ADC detect<1.2V



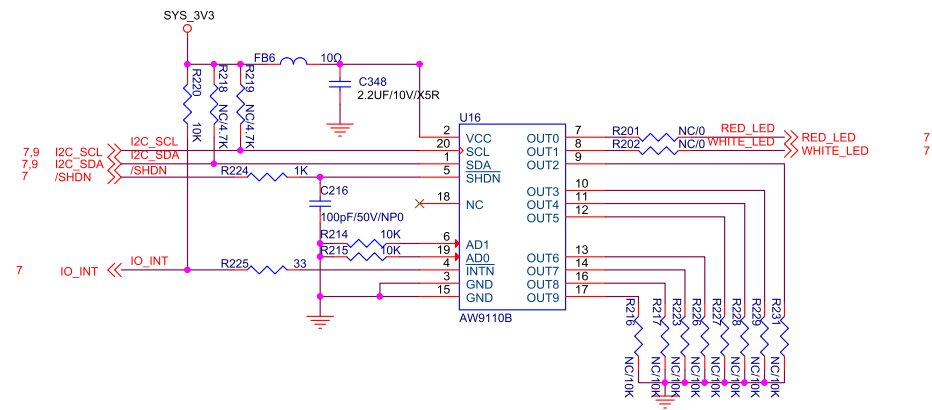
Dynamic Pressure Detection Circuit

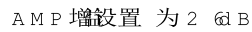
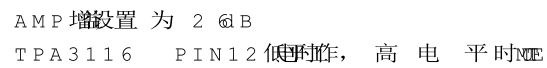
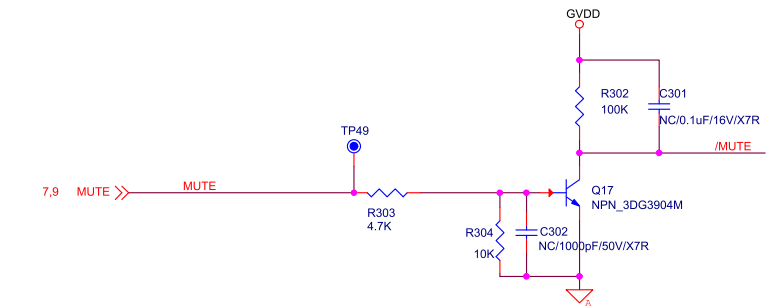
The circuit is a dynamic pressure detection circuit. It consists of two main stages of signal processing. The first stage uses two comparators (U10 and U11) to process two input signals: WF_OP and TW_OP. Each input signal is filtered by a 2.2uF/10V/X5R capacitor (C171, C181) and a 10k/1% resistor (R180, R189) before being connected to the non-inverting input (+IN) of the comparators. The comparators are powered by V_Bias1 and VDD_3V3. Their outputs (OUT A and OUT B) are connected to a network of resistors (R178, R179, R194, R195) and capacitors (C172, C174, C175, C182, C192, C193). The second stage uses two more comparators (U12 and U13) to process the outputs of the first stage. These comparators are also powered by V_Bias1 and VDD_3V3. Their outputs are connected to a network of resistors (R181, R183, R187, R188, R190, R191, R196, R199) and capacitors (C173, C177, C179, C180, C187, C188, C190, C191). The final output of the circuit is Audio_Detection_CTL, which is connected to a 1M/1% resistor (R195) and a 10uF/6.3V/X5R capacitor (C191).

Logic Control

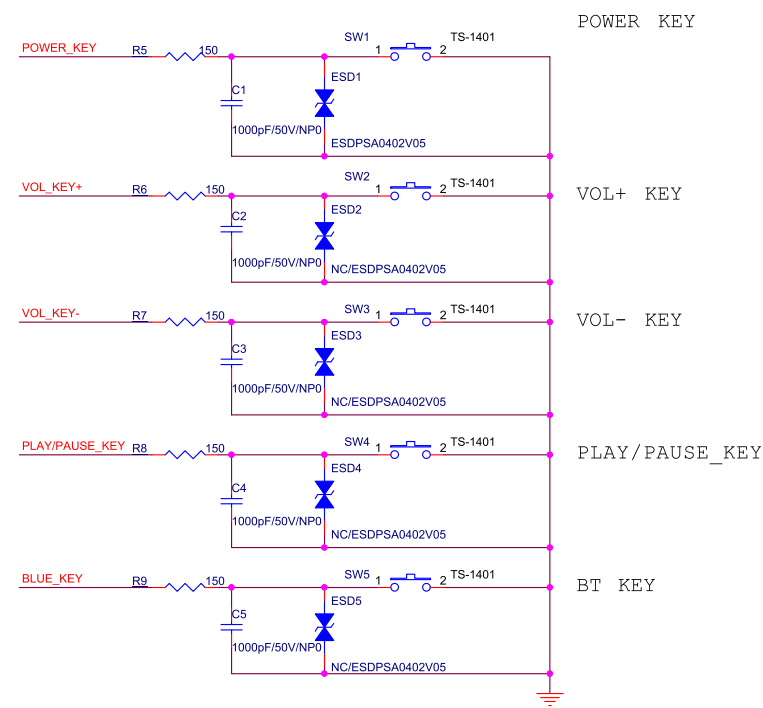
The Logic Control circuit diagram shows the SLG4V4826 microcontroller (U17) interfaced with various external components and signals. The circuit includes a power key input (Power_KEY) connected to pin 2, a DC bias input (DC_Bias) connected to pin 3, and a power on/off control signal (Power_On_Off) connected to pin 4. The power on/off ready signal (Power_Off_Ready) is connected to pin 5. The audio detection control signal (Audio_Detection_CTL) is connected to pin 6, and the audio input signal (Audio_Input) is connected to pin 7. The external Vref (367mV) is connected to pin 8. The VDD pin (pin 1) is connected to a 5V_DET signal and a DC_DET signal. The VREG_EN pin (pin 11) is connected to a VREG_EN signal. The Power_On pin (pin 9) is connected to a Power_On signal. The circuit also includes a 100nF/25V/X5R capacitor (C210) connected to the VDD pin, a 100nF/60V/NP0 capacitor (C211) connected to the VREG_EN pin, a 100nF/60V/NP0 capacitor (C212) connected to the Power_On pin, and a 100nF/60V/NP0 capacitor (C213) connected to the VDD pin. The DC_DET signal is connected to pin 14, and the VREG_EN signal is connected to pin 11. The Power_On signal is connected to pin 9. The circuit also includes a 10K resistor (R230) connected to the VDD pin, a 10K resistor (R233) connected to the DC_DET signal, a 1K resistor (R235) connected to the VREG_EN signal, a 100 resistor (R238) connected to the Power_On signal, a 0 (NC) resistor (R240) connected to the Power_Off_Ready signal, a 100 resistor (R242) connected to the Power_On signal, a 10K/1% resistor (R244) connected to the VDD pin, a 15.4K/1% resistor (R246) connected to the VDD pin, and a 604/1% resistor (R247) connected to the VDD pin. The VDD pin is also connected to a 5V_DET signal and a DC_DET signal. The VREG_EN pin is connected to a VREG_EN signal. The Power_On pin is connected to a Power_On signal. The circuit also includes a 100nF/25V/X5R capacitor (C210) connected to the VDD pin, a 100nF/60V/NP0 capacitor (C211) connected to the VREG_EN pin, a 100nF/60V/NP0 capacitor (C212) connected to the Power_On pin, and a 100nF/60V/NP0 capacitor (C213) connected to the VDD pin.

IO Expender (Option)

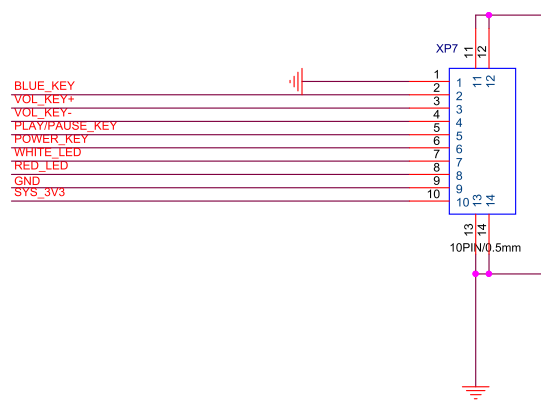
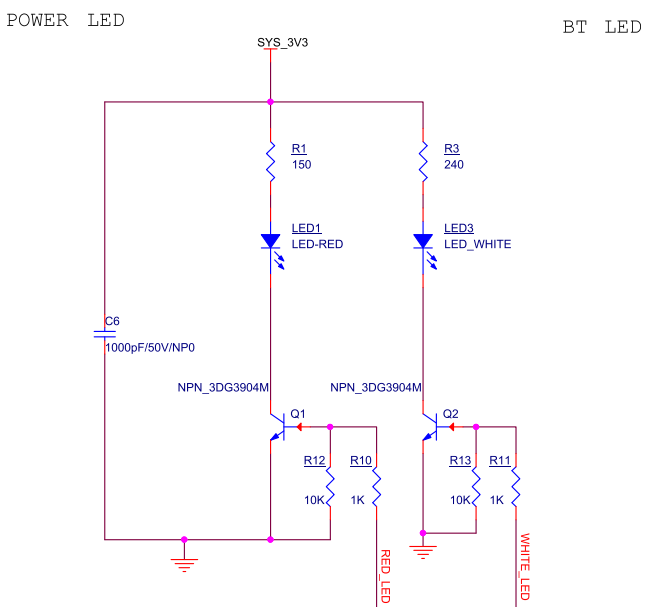




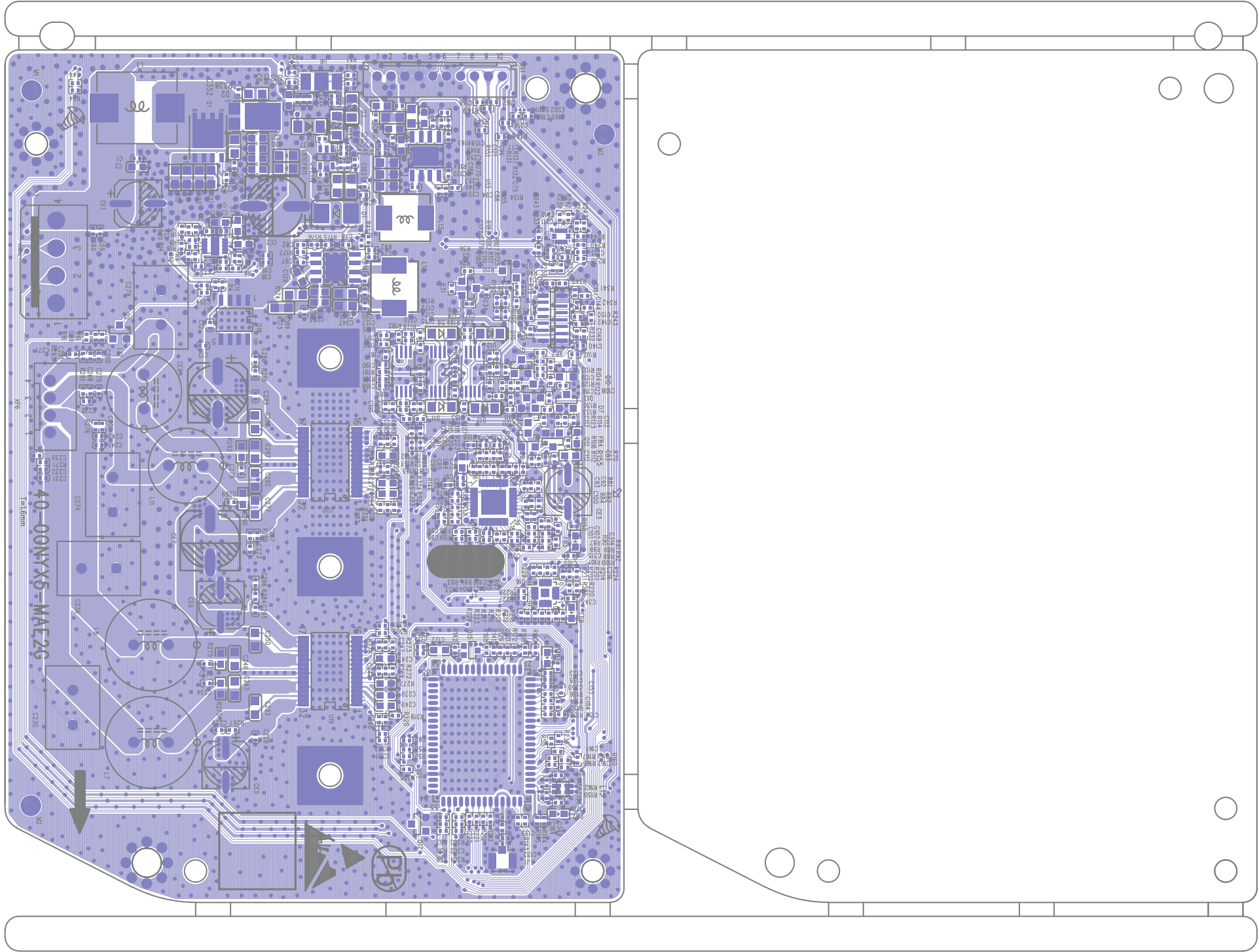
KEY



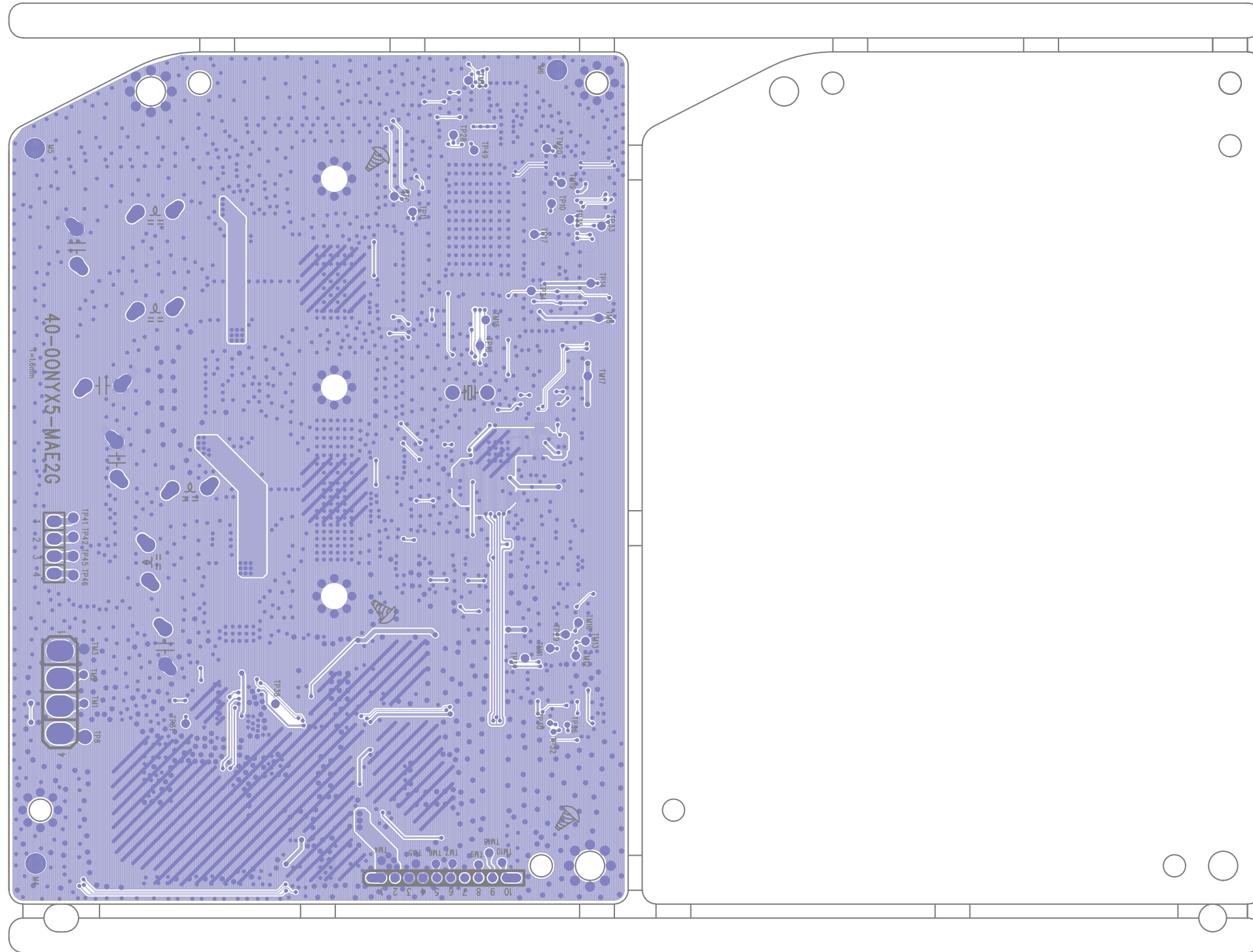
LED

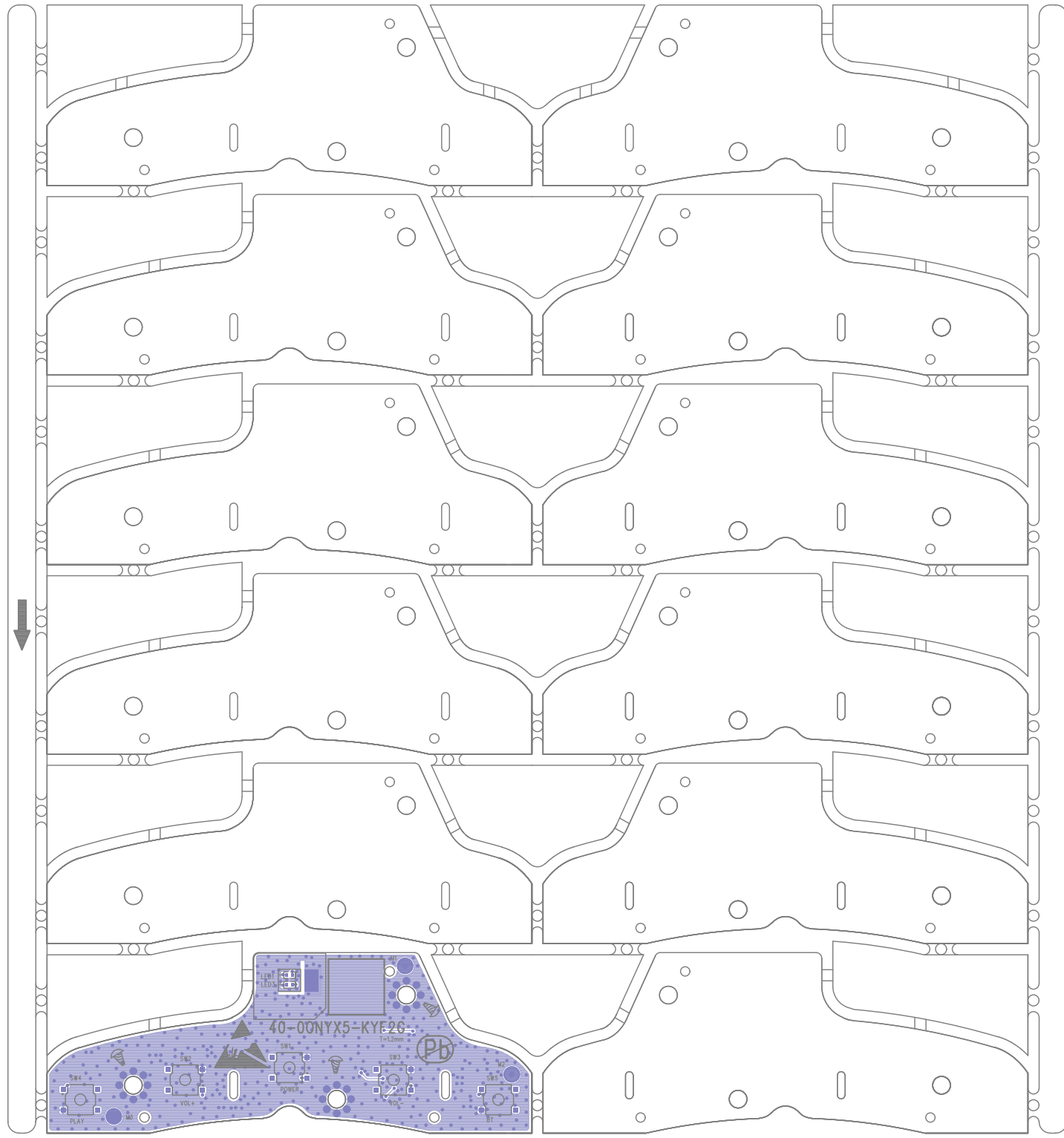


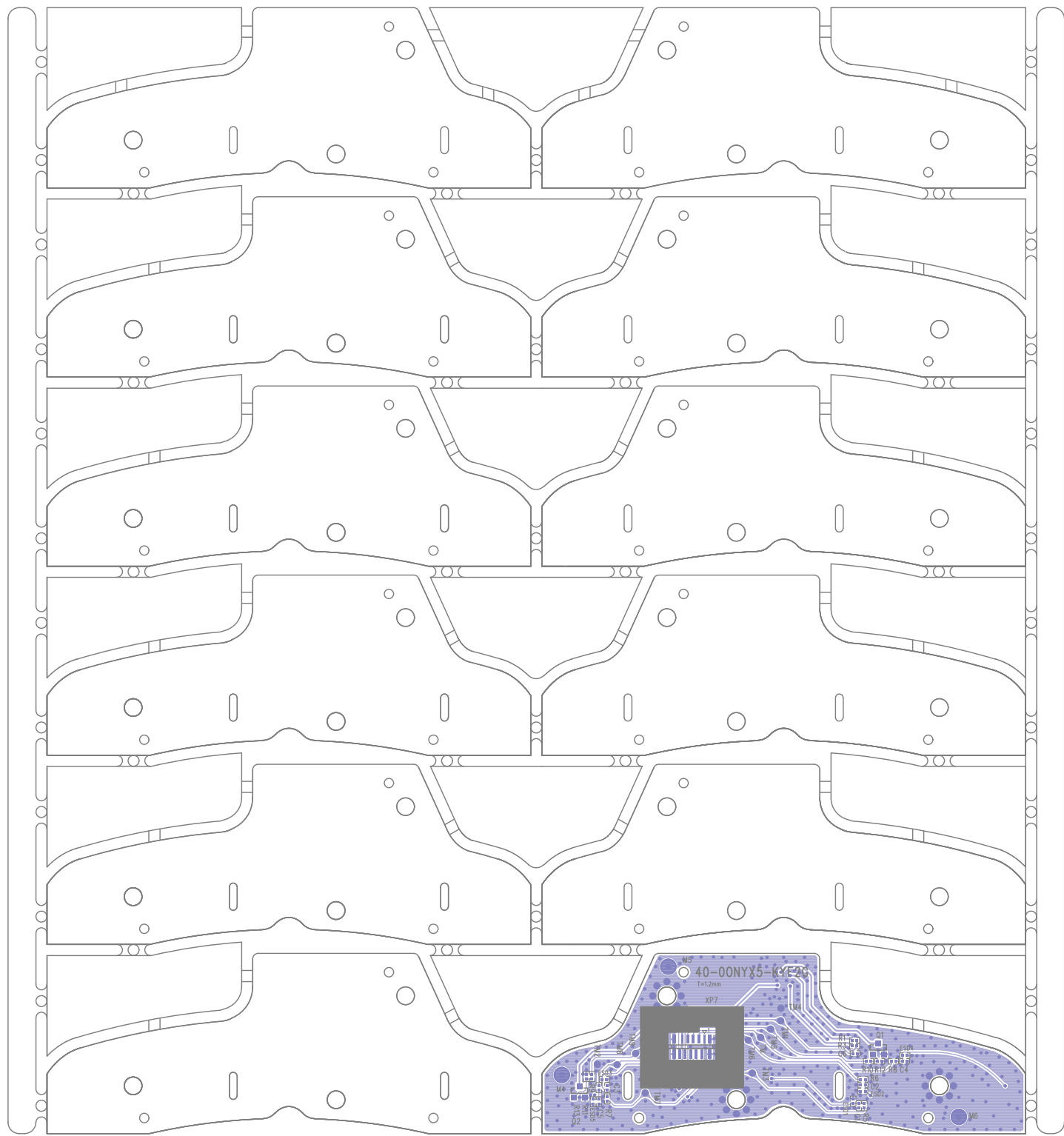
LAYOUT DIAGRAM - MAIN BOARD TOP VIEW

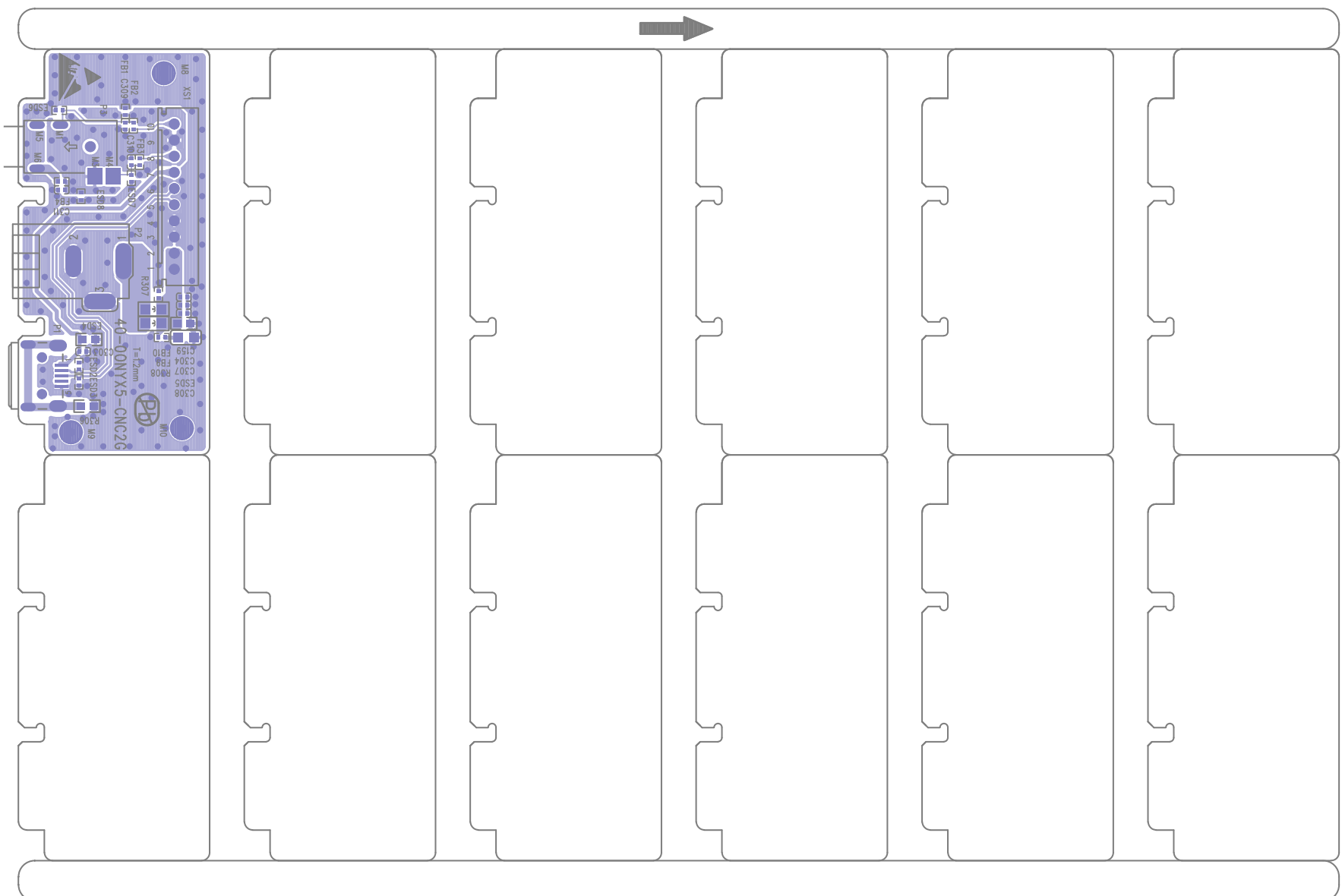


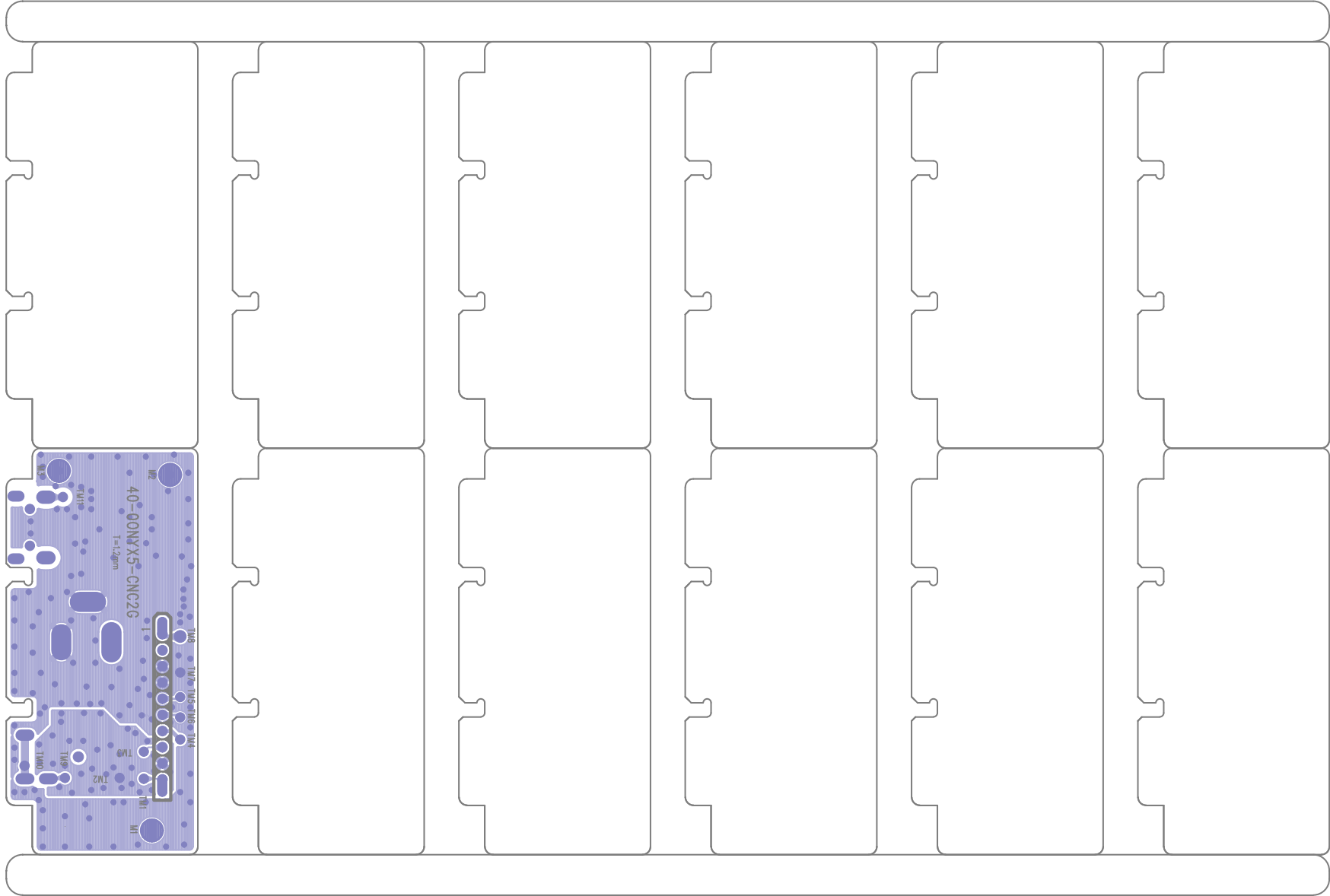
LAYOUT DIAGRAM - MAIN BOARD BOTTOM VIEW



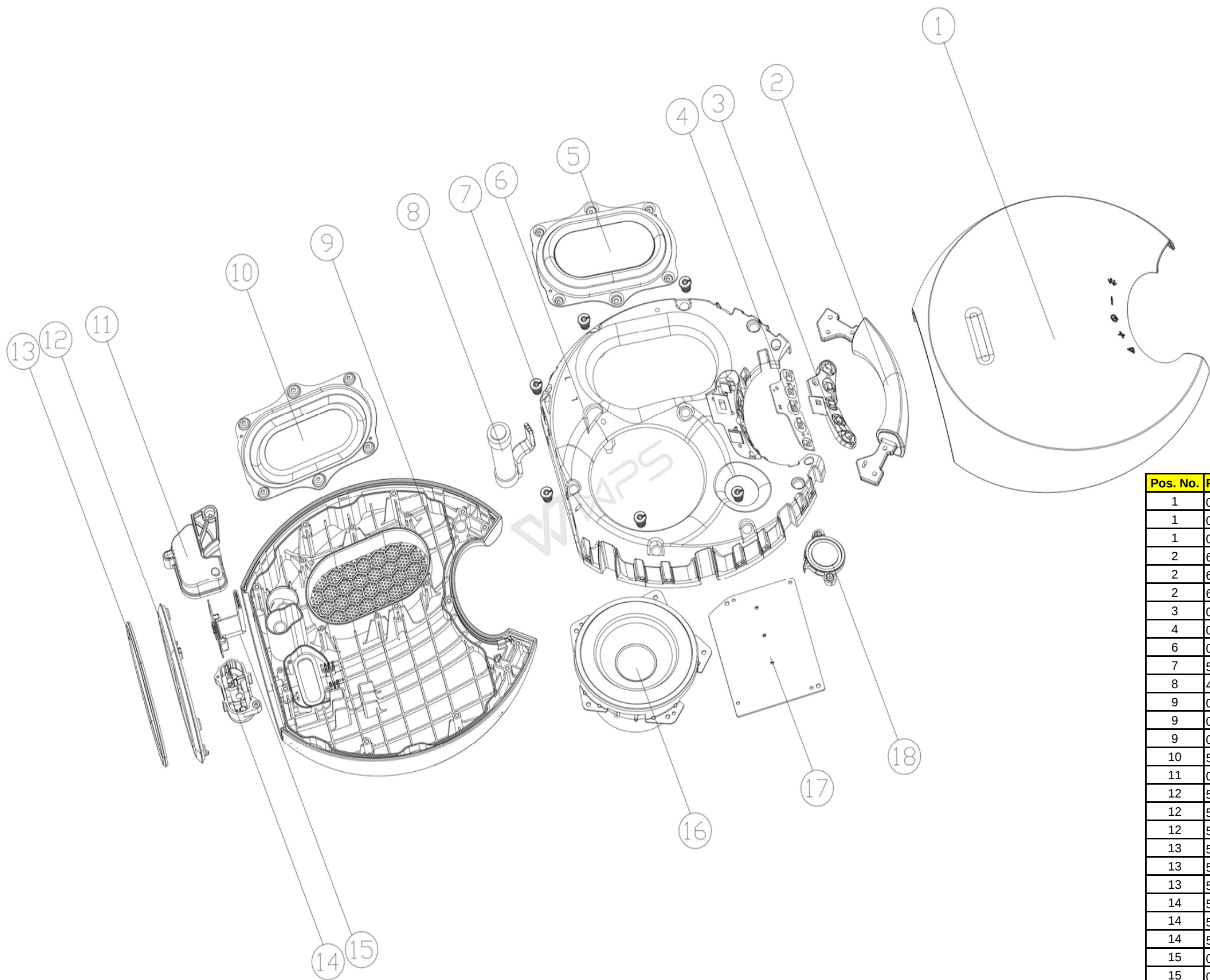








MECHANICAL EXPLODED VIEW



Pos. No.	Part Number	Description	Usage
1	08-ONYX5L-FG1	FRONT GRILLE ASSY BLK OS5	1
1	08-ONYX5L-FG3	FRONT GRILLE ASSY BLU OS5	1
1	08-ONYX5L-FG2	FRONT GRILLE ASSY GRY OS5	1
2	67-HKS5H0-0A0B1	ALUMINUM HANDLE BLK OS5	1
2	67-HKS5H0-0A0B3	ALUMINUM HANDLE BLU OS5	1
2	67-HKS5H0-0A0B2	ALUMINUM HANDLE GRY OS5	1
3	02-HKS5S0-0UA	PLASTIC BNTTONS OS5	1
4	08-ONYX5L-KY1	KEY BOARD OS5	1
6	08-ONYX5L-FR1	FRONT COVER ASSY OS5	1
7	56-0MN1W6-2UEB1	TPU RUBBER PLUG OS5	6
8	49-363430-BAT6-M	LI-ION BATTERY 3430MAH 3.635V OS5	1
9	08-ONYX5L-BG1	REAR GRILLE ASSY BLK OS5	1
9	08-ONYX5L-BG3	REAR GRILLE ASSY BLU OS5	1
9	08-ONYX5L-BG2	REAR GRILLE ASSY GRY OS5	1
10	54-NE1318-00002	PASSIVE RADIATOR OS5	2
11	08-ONYX5L-BT1	SEALED CAP ASSY OS5	1
12	55-HKS5C0-0UAB4	BOTTOM COVER BLK OS5	1
12	55-HKS5C0-0UAB6	BOTTOM COVER BLU OS5	1
12	55-HKS5C0-0UAB5	BOTTOM COVER GRY OS5	1
13	59-285730-000B1	FOOT PAD BLK OS5	1
13	59-285730-000B3	FOOT PAD BLU OS5	1
13	59-285730-000B2	FOOT PAD GRY OS5	1
14	55-HKS5U0-0UAB1	TERMINAL COVER BLK OS5	1
14	55-HKS5U0-0UAB3	TERMINAL COVER BLU OS5	1
14	55-HKS5U0-0UAB2	TERMINAL COVER GRY OS5	1
15	08-ONYX5L-CN1	CN BOARD BLK OS5	1
15	08-ONYX5L-CN3	CN BOARD BLU OS5	1
15	08-ONYX5L-CN2	CN BOARD GRY OS5	1
16	08-055050-02002	WOOFER 5" SPEAKER OS5	1
17	08-ONYX5L-MA0	MAIN BOARD OS5	1
18	08-011010-04006	TWEETER 1" SPEAKER OS5	1

HK Onyx Studio 5 Spare Parts List v1.0

Pos. No.	Part Number	Description	Usage
1	08-ONYX5L-FG1	FRONT GRILLE ASSY BLK OS5	1
1	08-ONYX5L-FG3	FRONT GRILLE ASSY BLU OS5	1
1	08-ONYX5L-FG2	FRONT GRILLE ASSY GRY OS5	1
2	67-HKS5H0-0A0B1	ALUMINUM HANDLE BLK OS5	1
2	67-HKS5H0-0A0B3	ALUMINUM HANDLE BLU OS5	1
2	67-HKS5H0-0A0B2	ALUMINUM HANDLE GRY OS5	1
3	02-HKS5S0-0UA	PLASTIC BNTTIONS OS5	1
4	08-ONYX5L-KY1	KEY BOARD OS5	1
6	08-ONYX5L-FR1	FRONT COVER ASSY OS5	1
7	56-0MN1W6-2UEB1	TPU RUBBER PLUG OS5	6
8	49-363430-BAT6-M	LI-ION BATTERY 3430MAH 3.635V OS5	1
9	08-ONYX5L-BG1	REAR GRILLE ASSY BLK OS5	1
9	08-ONYX5L-BG3	REAR GRILLE ASSY BLU OS5	1
9	08-ONYX5L-BG2	REAR GRILLE ASSY GRY OS5	1
10	54-NE1318-00002	PASSIVE RADIATOR OS5	2
11	08-ONYX5L-BT1	SEALED CAP ASSY OS5	1
12	55-HKS5C0-0UAB4	BOTTOM COVER BLK OS5	1
12	55-HKS5C0-0UAB6	BOTTOM COVER BLU OS5	1
12	55-HKS5C0-0UAB5	BOTTOM COVER GRY OS5	1
13	59-285730-000B1	FOOT PAD BLK OS5	1
13	59-285730-000B3	FOOT PAD BLU OS5	1
13	59-285730-000B2	FOOT PAD GRY OS5	1
14	55-HKS5U0-0UAB1	TERMINAL COVER BLK OS5	1
14	55-HKS5U0-0UAB3	TERMINAL COVER BLU OS5	1
14	55-HKS5U0-0UAB2	TERMINAL COVER GRY OS5	1
15	08-ONYX5L-CN1	CN BOARD BLK OS5	1
15	08-ONYX5L-CN3	CN BOARD BLU OS5	1
15	08-ONYX5L-CN2	CN BOARD GRY OS5	1
16	08-055050-02002	WOOFER 5" SPEAKER OS5	1
17	08-ONYX5L-MA0	MAIN BOARD OS5	1
18	08-011010-04006	TWEETER 1" SPEAKER OS5	1
U10,U11,U12	13-DZ002T-SS03	IC DZ002 TSSOP-8 OS5	3
U13,U14	13-SY8213-FCC3	IC SY8213FCC POWER DC-DC OS5	2
U17	13-SLG4V4-8263	IC SLG4V4 OS5	1
U19,U20	13-TPA311-6D22	IC TPA3116D2 AMP OS5	2
U2	13-SY7901-DBC3	IC SY7901DBC QFN10 BOOST OS5	1
U21	07-BTM20I-K00	BT MODULE BM20IK OS5	1
U4	13-ME6213-C333-M	IC LDO ME6213C33M5G OS5	1
U6	13-BQ2409-0DR3	IC BQ24090DGQR OS5	1
U8	13-AK7755-ENQ3	IC AK7755EN DSP OS5	1
	81-ADT190-210GC-M	ADAPTOR 19V 2A BLK GLOBAL OS5	1
	54-285790-000B1	D-BOX BLK HANDLE BUCKLE PAD OS5	1
	54-285800-000B1	D-BOX BLK HANDLE BUCKLE PAD OS5	1
	74-285850-50HB1	PE BAG OS5	1
	76-285750-0BTB4	GIFT BOX EUROPE BLK OS5	1
	76-285750-0BTB6	GIFT BOX EUROPE BLU OS5	1
	76-285750-0BTB5	GIFT BOX EUROPE GRY OS5	1
	76-285750-0BTC3	GIFT BOX CHINA BLU OS5	1
	76-285750-0BTC1	GIFT BOX CHINA BLK OS5	1
	76-285750-0BTC2	GIFT BOX CHINA GRY OS5	1

	76-285750-0BTE9	GIFT BOX USA BLU OS5	1
	76-285750-0BTE7	GIFT BOX USA BLK OS5	1
	76-285750-0BTE8	GIFT BOX USA GRY OS5	1
	76-285750-0BTE3	GIFT BOX AR BLU OS5	1
	76-285750-0BTE1	GIFT BOX AR BLK OS5	1
	76-285750-0BTE2	GIFT BOX AR GRY OS5	1
	76-285750-0BTB9	GIFT BOX ASIA BLU OS5	1
	76-285750-0BTB7	GIFT BOX ASIA BLK OS5	1
	76-285750-0BTB8	GIFT BOX ASIA GRY OS5	1
	76-285750-0BTE6	GIFT BOX BRAZIL BLU OS5	1
	76-285750-0BTE4	GIFT BOX BRAZIL BLK OS5	1
	76-285750-0BTE5	GIFT BOX BRAZIL GRY OS5	1
	76-285750-0BTD4	GIFT BOX SG BLK OS5	1
	76-285750-0BTD6	GIFT BOX SG BLU OS5	1
	76-285750-0BTD5	GIFT BOX SG GRY OS5	1
	76-285750-0BTD9	GIFT BOX EP BLU OS5	1
	76-285750-0BTD7	GIFT BOX EP BLK OS5	1
	76-285750-0BTD8	GIFT BOX EP GRY OS5	1
	76-285750-0BTC9	GIFT BOX INDIA BLU OS5	1
	76-285750-0BTC7	GIFT BOX INDIA BLK OS5	1
	76-285750-0BTC8	GIFT BOX INDIA GRY OS5	1
	76-285750-0BTC6	GIFT BOX JAPAN BLU OS5	1
	76-285750-0BTC4	GIFT BOX JAPAN BLK OS5	1
	76-285750-0BTC5	GIFT BOX JAPAN GRY OS5	1
	76-285750-0BTD3	GIFT BOX SP BLU OS5	1
	76-285750-0BTD1	GIFT BOX SP BLK OS5	1
	76-285750-0BTD2	GIFT BOX SP GRY OS5	1
	51-D71000-0CR05-M	POWER CORD 1M VDE EU OS5	1
	51-D71000-0AR01-M	POWER CORD 1M UK OS5	1
	51-D71000-0DR01-M	POWER CORD 1M THAILAND OS5	1
	51-D71000-0KR01-M	POWER CORD 1M KOREA OS5	1
	51-D71000-0PR05-M	POWER CORD 1M AUSTRALIA OS5	1
	51-B81000-02R01-M	POWER CORD 1M UL AM OS5	1
	51-R71000-02R01-M	POWER CORD 1M JN OS5	1
	47-ANT374-XX0	BT ANTENNA BLK L95MM OS5	1
	46-EL030T-04Q	SPK CABLE 4P/2.5mm L120/300MM OS5	1
	46-FF008C-10BUF	FFC CABLE 10P/80MM OS5	1
	51-G71000-0GR03-M	POWER CORD CN OS5	1
	51-D71000-01R03-M	POWER CORD BR OS5	1
	51-D70100-0QR03-M	POWER CORD AR OS5	1

Revision List

Version 1.0

* Initial release for HK OS5. 2018 -7