

**M22**

**STEREO  
AMPLIFIER**

# **SERVICE MANUAL**

**M22**

**STEREO  
AMPLIFIER**



# TABLE OF CONTENTS

DESCRIPTION	PAGE
SERVICE CAUTION.....	3-4
SPECIFICATIONS.....	5
WIRING DIAGRAM.....	6
BLOCK DIAGRAM.....	7-9
TROUBLE SHOOTING A GUIDE.....	10
TROUBLE SHOOTING B GUIDE.....	11
CIRCUIT DIAGRAMS .....	12-24
PCB LAYOUT.....	25-30
ELECTRICAL PARTS LIST.....	31-50
EXPLODED VIEW.....	51-54
EXPLODED VIEW PARTS LIST.....	55

# PRODUCT SAFETY SERVICING GUIDELINES FOR AUDIO PRODUCTS

**CAUTION** : DO NOT ATTEMPT TO MODIFY THIS PRODUCT IN ANY WAY, NEVER PERFORM CUSTOMIZED INSTALLATIONS WITHOUT MANUFACTURER'S APPROVAL. UNAUTHORIZED MODIFICATIONS WILL NOT ONLY VOID THE WARRANTY, BUT MAY LEAD TO YOUR BEING LIABLE FOR ANY RESULTING PROPERTY DAMAGE OR USER INJURY.

SERVICE WORK SHOULD BE PERFORMED ONLY AFTER YOU ARE THOROUGHLY FAMILIAR WITH ALL OF THE FOLLOWING SAFETY CHECKS AND SERVICING GUIDELINES. TO DO OTHERWISE, INCREASES THE RISK OF POTENTIAL HAZARDS AND INJURY TO THE USER.

WHILE SERVICING, USE AN ISOLATION TRANSFORMER FOR PROTECTION FROM A.C. LINESHOCK.

## SAFETY CHECKS

AFTER THE ORIGINAL SERVICE PROBLEM HAS BEEN CORRECTED. A CHECK SHOULD BE MADE OF THE FOLLOWING.

### SUBJECT : FIRE & SHOCK HAZARD

1. BE SURE THAT ALL COMPONENTS ARE POSITIONED IN SUCH A WAY AS TO AVOID POSSIBILITY OF ADJACENT COMPONENT SHORTS. THIS IS ESPECIALLY IMPORTANT ON THOSE MODULES WHICH ARE TRANSPORTED TO AND FROM THE REPAIR SHOP.

2. NEVER RELEASE A REPAIR UNLESS ALL PROTECTIVE DEVICES SUCH AS INSULATORS, BARRIERS, COVERS, SHIELDS, STRAIN RELIEFS, POWER SUPPLY CORDS, AND OTHER HARDWARE HAVE BEEN REINSTALLED PER ORIGINAL DESIGN. BE SURE THAT THE SAFETY PURPOSE OF THE POLARIZED LINE PLUG HAS NOT BEEN DEFEATED.

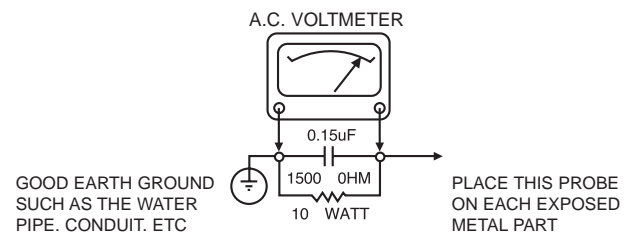
3. SOLDERING MUST BE INSPECTED TO DISCOVER POSSIBLE COLD SOLDER JOINTS, SOLDER SPLASHES OR SHARP SOLDER POINTS. BE CERTAIN TO REMOVE ALL LOOSE FOREIGN PARTICLES.

4. CHECK FOR PHYSICAL EVIDENCE OF DAMAGE OR DETERIORATION TO PARTS AND COMPONENTS. FOR FRAYED LEADS, DAMAGED INSULATION (INCLUDING A.C. CORD). AND REPLACE IF NECESSARY.

5. NO LEAD OR COMPONENT SHOULD TOUCH A RECEIVING TUBE OR A RESISTOR RATED AT 1 WATT OR MORE. LEAD TENSION AROUND PROTRUDING METAL SURFACES MUST BE AVOIDED.

6. ALL CRITICAL COMPONENTS SUCH AS FUSES, FLAMEPROOF RESISTORS, CAPACITORS, ETC. MUST BE REPLACED WITH EXACT FACTORY TYPES, DO NOT USE REPLACEMENT COMPONENTS OTHER THAN THOSE SPECIFIED OR MAKE UNRECOMMENDED CIRCUIT MODIFICATIONS.

7. AFTER RE-ASSEMBLY OF THE SET ALWAYS PERFORM AN A.C. LEAKAGE TEST ON ALL EXPOSED METALLIC PARTS OF THE CABINET, (THE CHANNEL SELECTOR KNOB, ANTENNA TERMINALS. HANDLE AND SCREWS) TO BE SURE THE SET IS SAFE TO OPERATE WITHOUT DANGER OF ELECTRICAL SHOCK. DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST USE AN A.C. VOLTMETER, HAVING 5000 OHMS PER VOLT OR MORE SENSITIVITY, IN THE FOLLOWING MANNER; CONNECT A 1500 OHM 10 WATT RESISTOR, PARALLELED BY A .15 MFD. 150.V A.C TYPE CAPACITOR BETWEEN A KNOWN GOOD EARTH GROUND (WATER PIPE, CONDUIT, ETC.) AND THE EXPOSED METALLIC PARTS, ONE AT A TIME. MEASURE THE A.C. VOLTAGE ACROSS THE COMBINATION OF 1500 OHM RESISTOR AND .15 MFD CAPACITOR. REVERSE THE A.C. PLUG AND REPEAT A.C. VOLTAGE MEASUREMENTS FOR EACH EXPOSED METALLIC PART. VOLTAGE MEASURED MUST NOT EXCEED 75 VOLTS R.M.S. THIS CORRESPONDS TO 0.5 MILLIAMPS A.C ANY VALUE EXCEEDING THIS LIMIT CONSTITUTES A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED IMMEDIATELY.



### SUBJECT: GRAPHIC SYMBOLS



THE LIGHTNING FLASH WITH APROWHEAD SYMBOL. WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE SERVICE PERSONNEL TO THE PRESENCE OF IMPORTANT SAFETY INFORMATION IN SERVICE LITERATURE.

# SERVICING PRECAUTIONS

**CAUTION:** Before servicing the Stereo amplifier covered by this service data and its supplements and addends, read and follow the SAFETY PRECAUTIONS. NOTE: if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First:

## General Servicing Precautions

1. Always unplug the Stereo amplifier AC power cord from the AC power source before:
  - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
  - (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
  - (3) Connecting a test substitute in parallel with an electrolytic capacitor.Caution: A wrong part substitute or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this Stereo amplifier or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cottontipped swab, or comparable soft applicator. Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this Stereo amplifier and/or any of its electrical assemblies unless all solid-state device heat sinks are correctly installed.
6. Always connect test instrument ground lead to the appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

## Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter (500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1 M-ohm. Note 1: Accessible Conductive Parts including Metal panels, Input terminals, Earphone jacks, etc.

## 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 reason 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 buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified a "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freonpropelled 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. (Normally 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 device.)

## SPECIFICATIONS

### OVERALL SPECIFICATIONS

Continuous output power into 8 ohms and 4 ohms	≥ 250 W (ref. rated THD, 20 Hz – 20 kHz, both channels driven)
Rated THD (250 mW to rated power, CCIF IMD, DIM 100)	≤0.005 % (ref. 20 Hz - 20 kHz)
IHF dynamic power	8 ohms : 355 W
	4 ohms :640 W
	2 ohms : 620 W
Damping factor	>800 (ref. 8 ohms, 50 Hz and 1 kHz)
Input sensitivity	1.6 V (ref. rated power)
Signal-to-noise ratio, A- weighted	> 98 dB (ref. 1W)
Signal-to-noise ratio, A- weighted	> 120 dB (ref. rated power)
Frequency response	± 0.1 dB (ref. 20 Hz - 20 kHz)
	- 2.5 dB at 3 Hz and 100 kHz
Time to go to Standby mode at no input signal	≤ 30 minutes

### POWER CONSUMPTION

Rated power	640 W (120V 60Hz, 230V 50Hz)
Standby power	< 0.5 W
Idle power	< 40 W

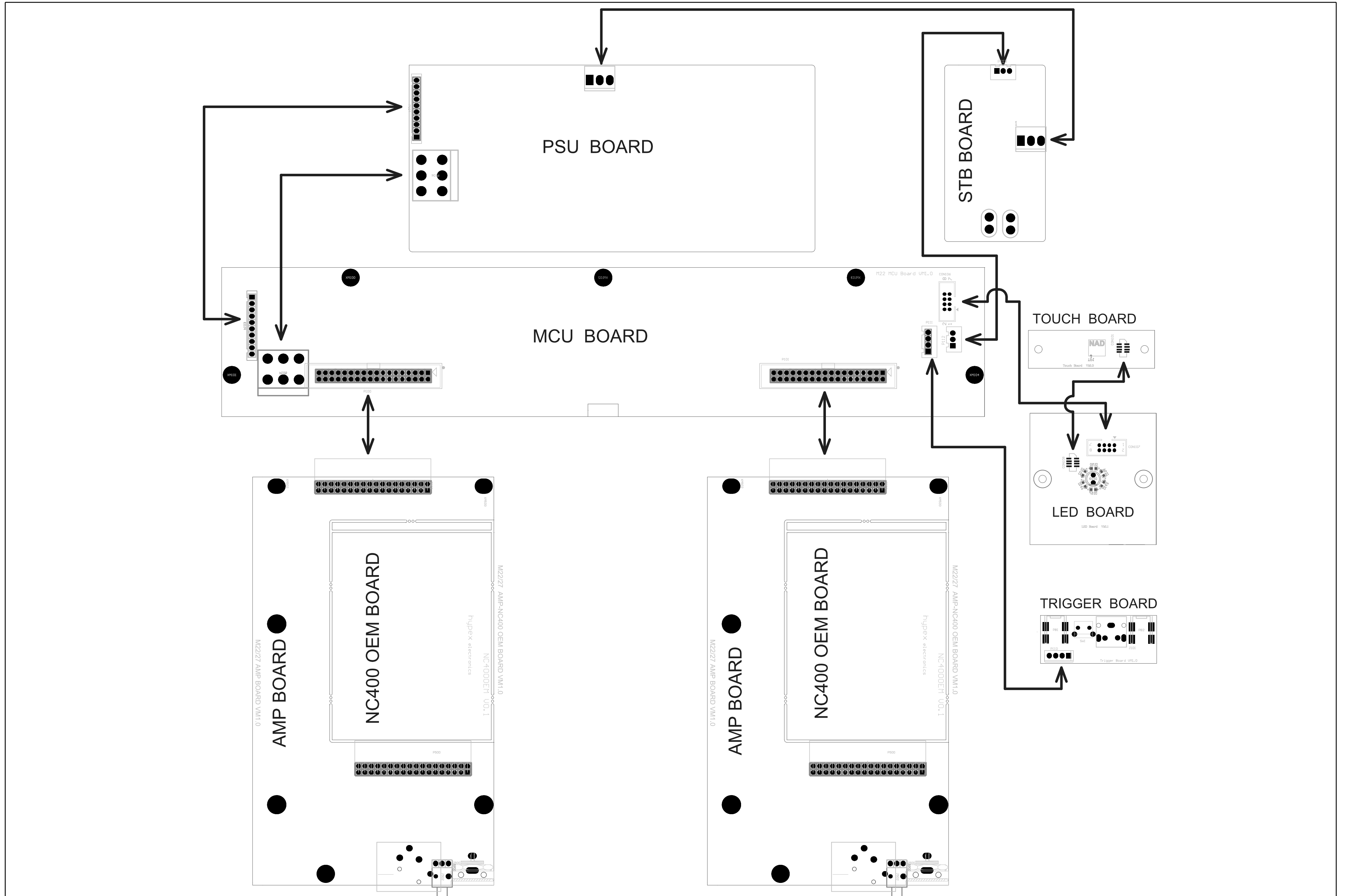
### DIMENSION AND WEIGHT

Unit dimensions (W x H x D) *	435 x 103 x 379 mm
	17 1/8 x 4 1/16 x 14 15/16 inches
Shipping weight	15.0 kg (33.1 lbs)

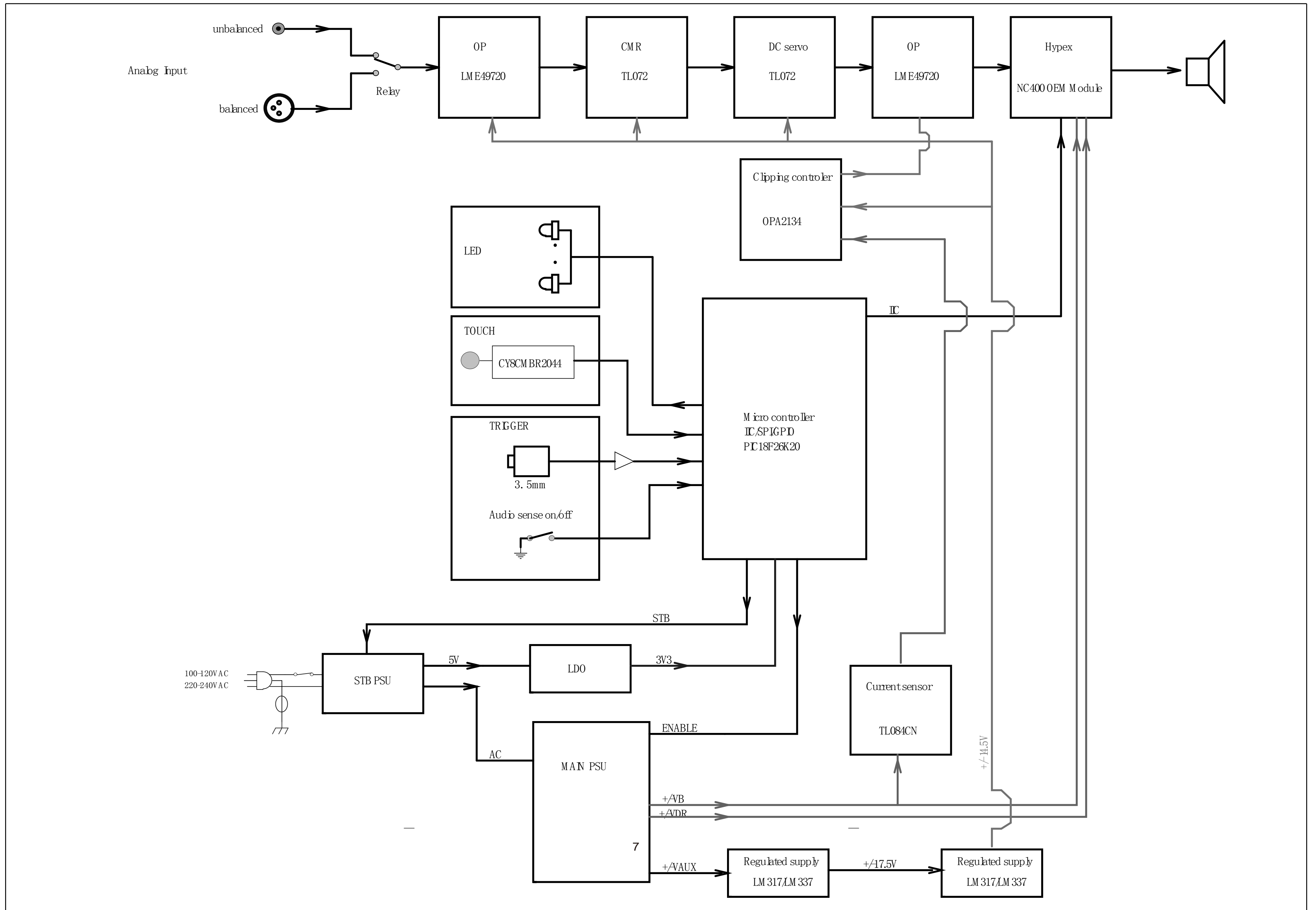
\* - Gross dimension include feet, front panel and rear panel extensions (knobs, buttons, speaker terminals, sub fascia, etc.)

NAD SHALL NOT BE HELD LIABLE FOR ANY TECHNICAL OR USER INTERFACE DISCREPANCIES IN THIS MANUAL. THE M22 SERVICE MANUAL MAY BE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE. CHECK OUT [WWW.NADELECTRONICS.COM](http://WWW.NADELECTRONICS.COM) FOR THE LATEST VERSION OF THE M22 SERVICE MANUAL.

# Wiring diagram

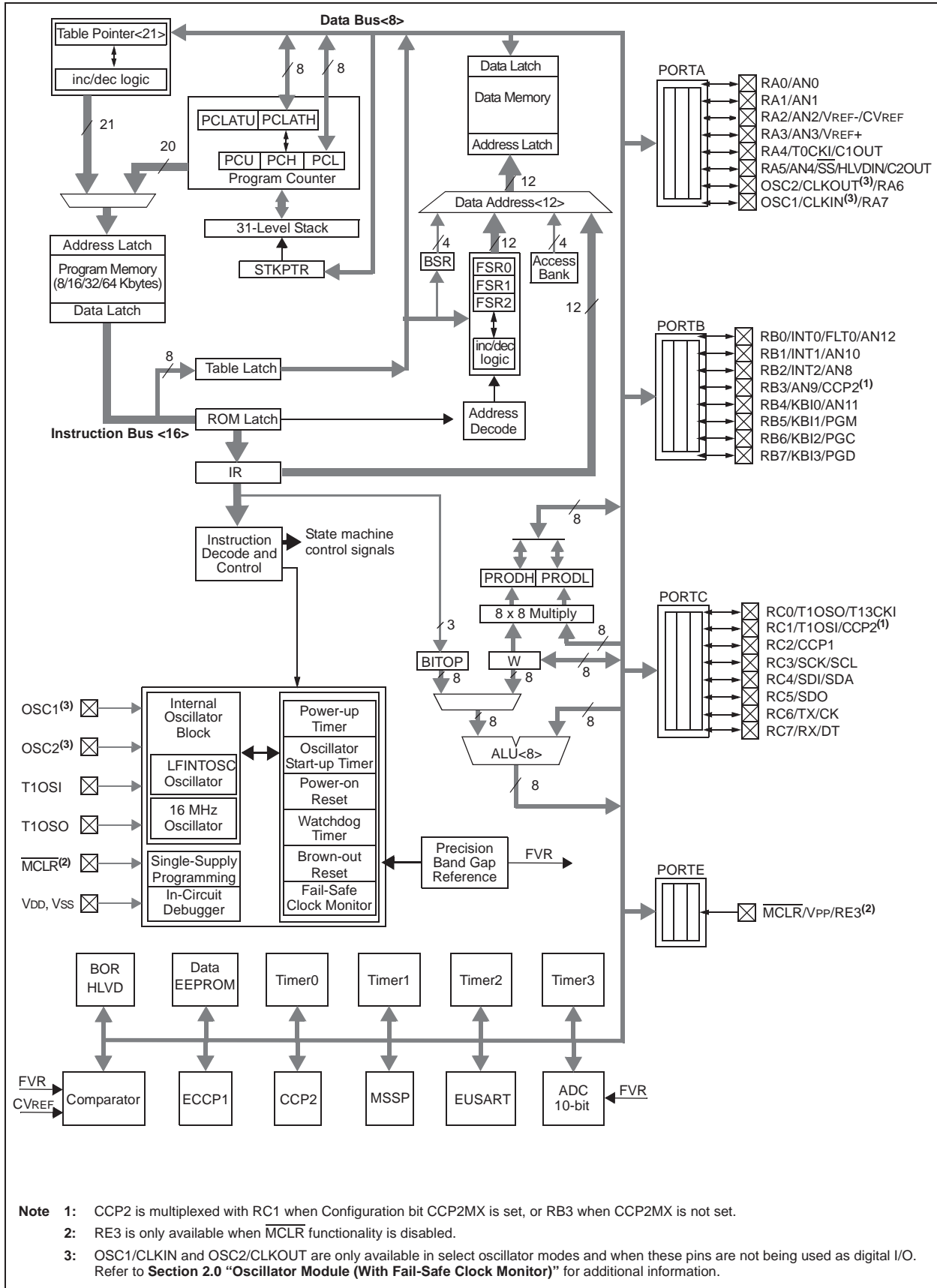


# Block diagram



# PIC18F26K20

## MCU BOARD

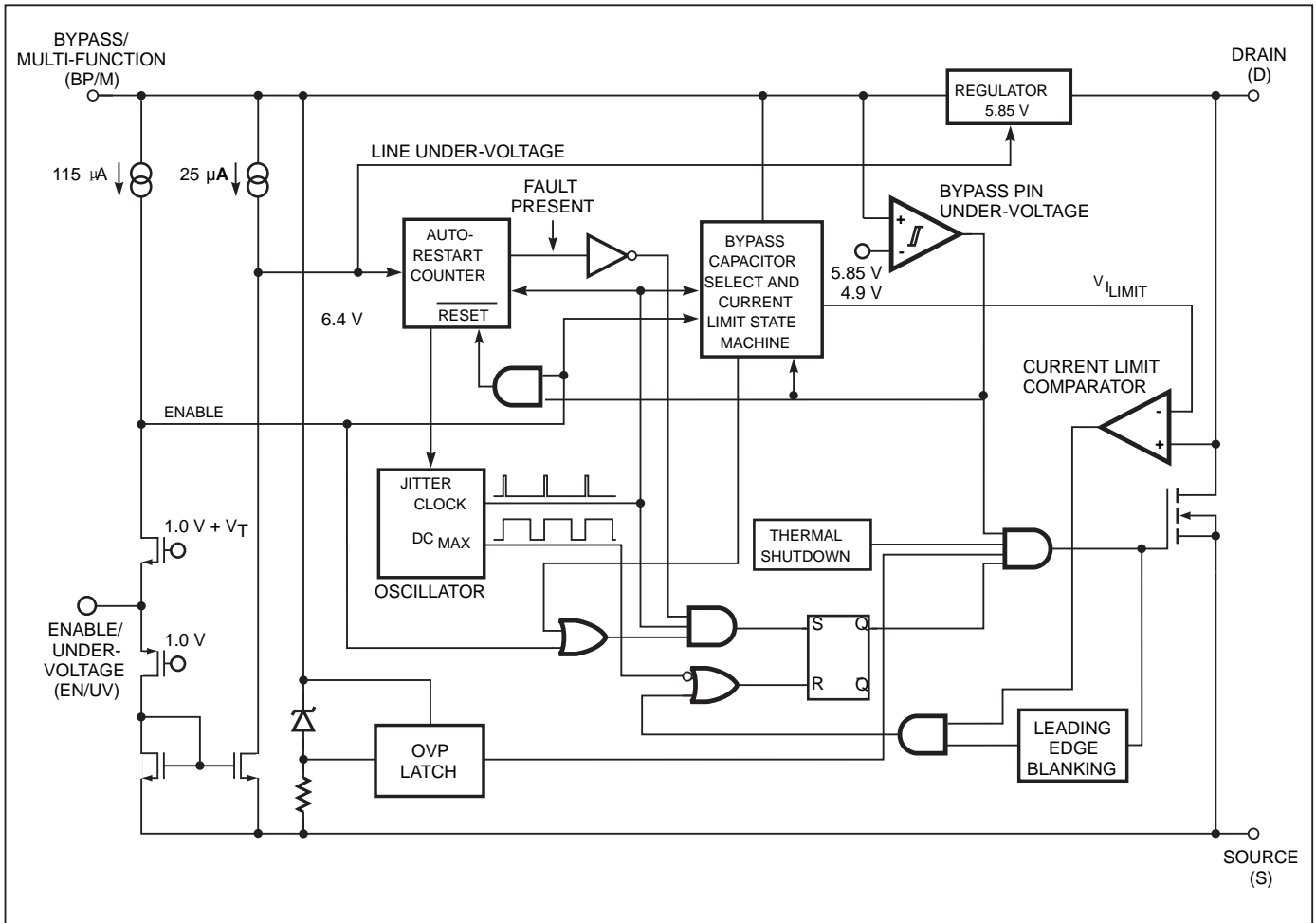


**Note** 1: CCP2 is multiplexed with RC1 when Configuration bit CCP2MX is set, or RB3 when CCP2MX is not set.  
 2: RE3 is only available when MCLR functionality is disabled.  
 3: OSC1/CLKIN and OSC2/CLKOUT are only available in select oscillator modes and when these pins are not being used as digital I/O. Refer to **Section 2.0 "Oscillator Module (With Fail-Safe Clock Monitor)"** for additional information.

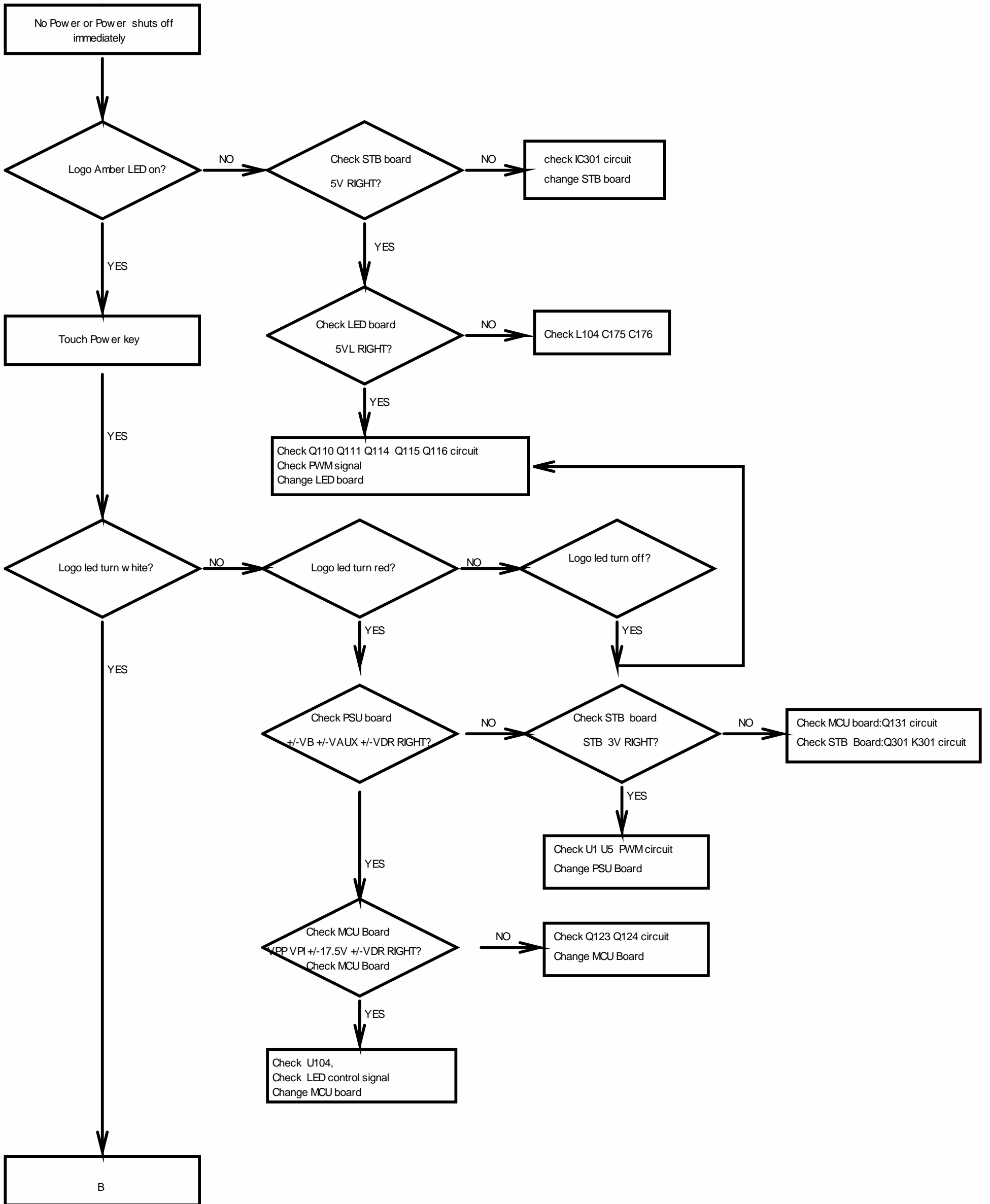


# TNY274

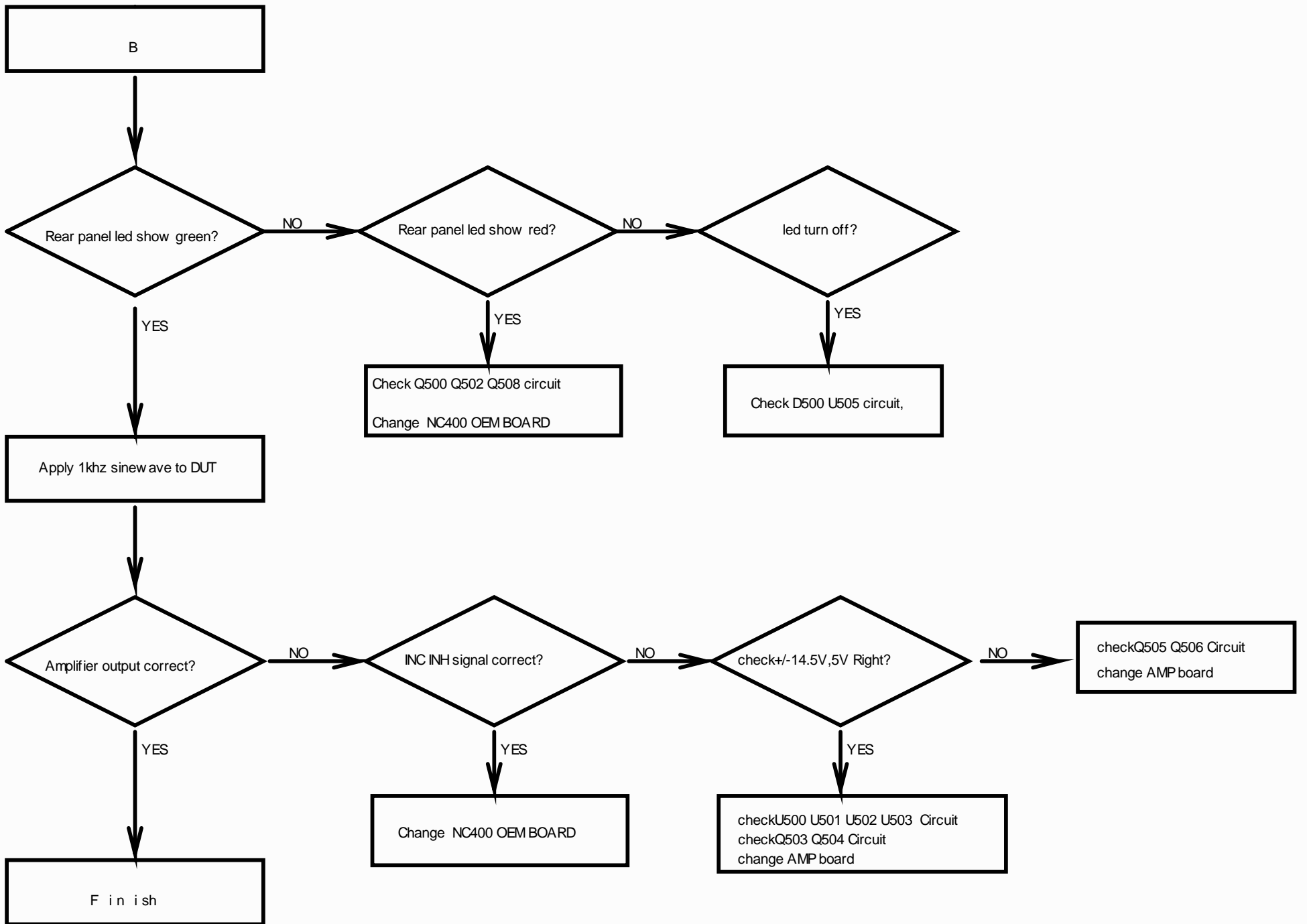
## SMPS STB BOARD



# TROUBLESHOOTING A GUIDE

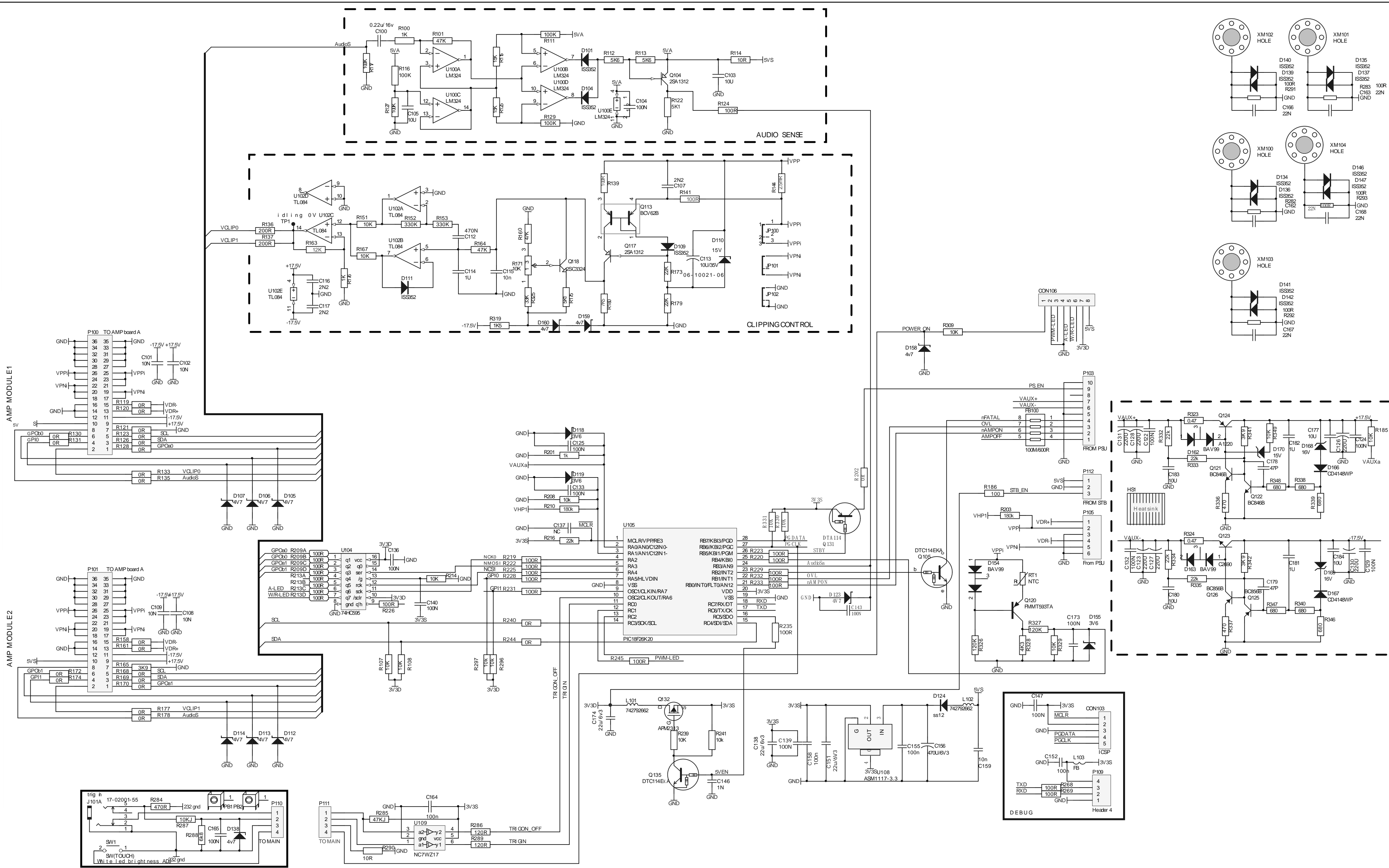


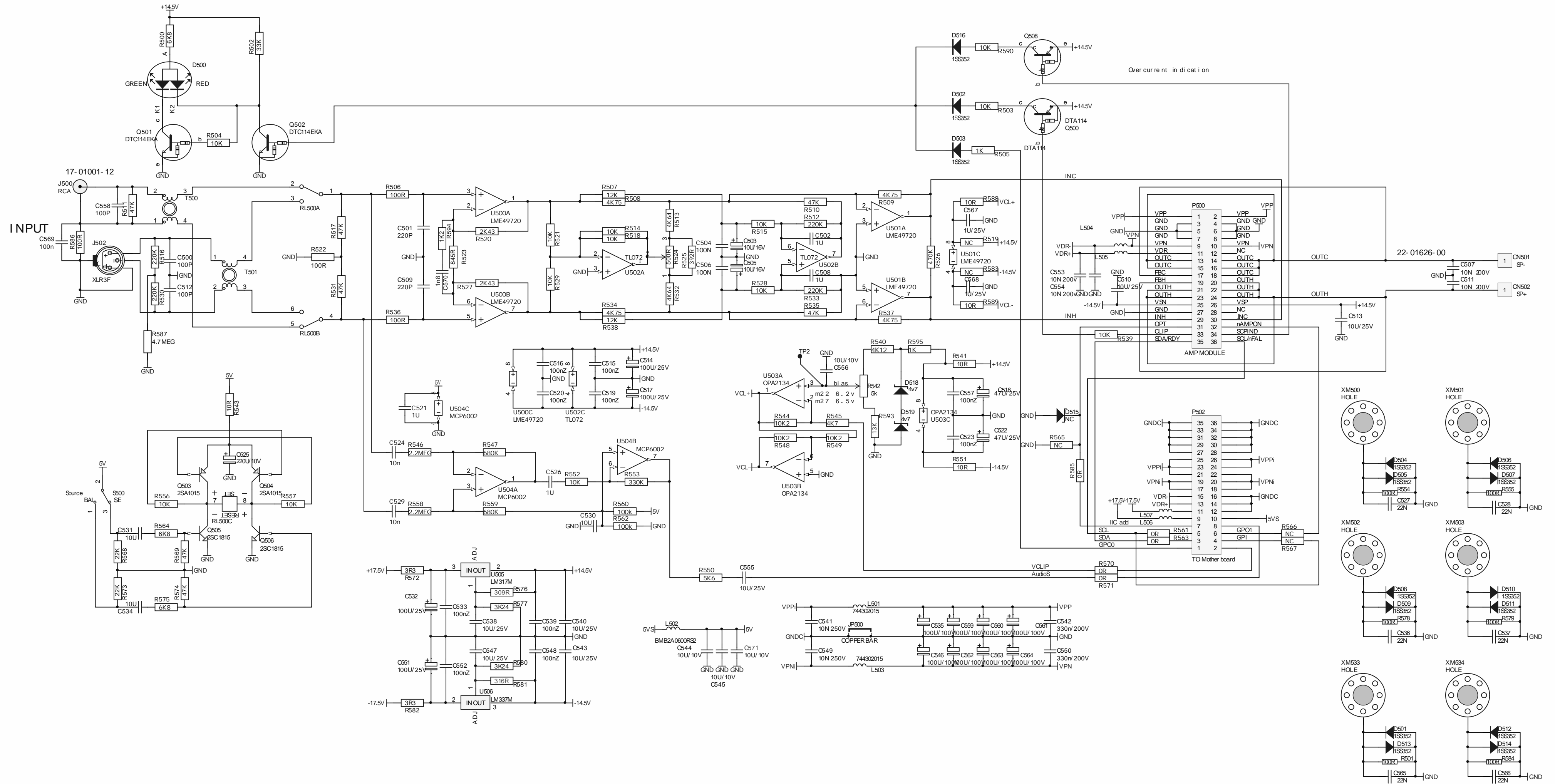
# TROUBLESHOOTING B GUIDE



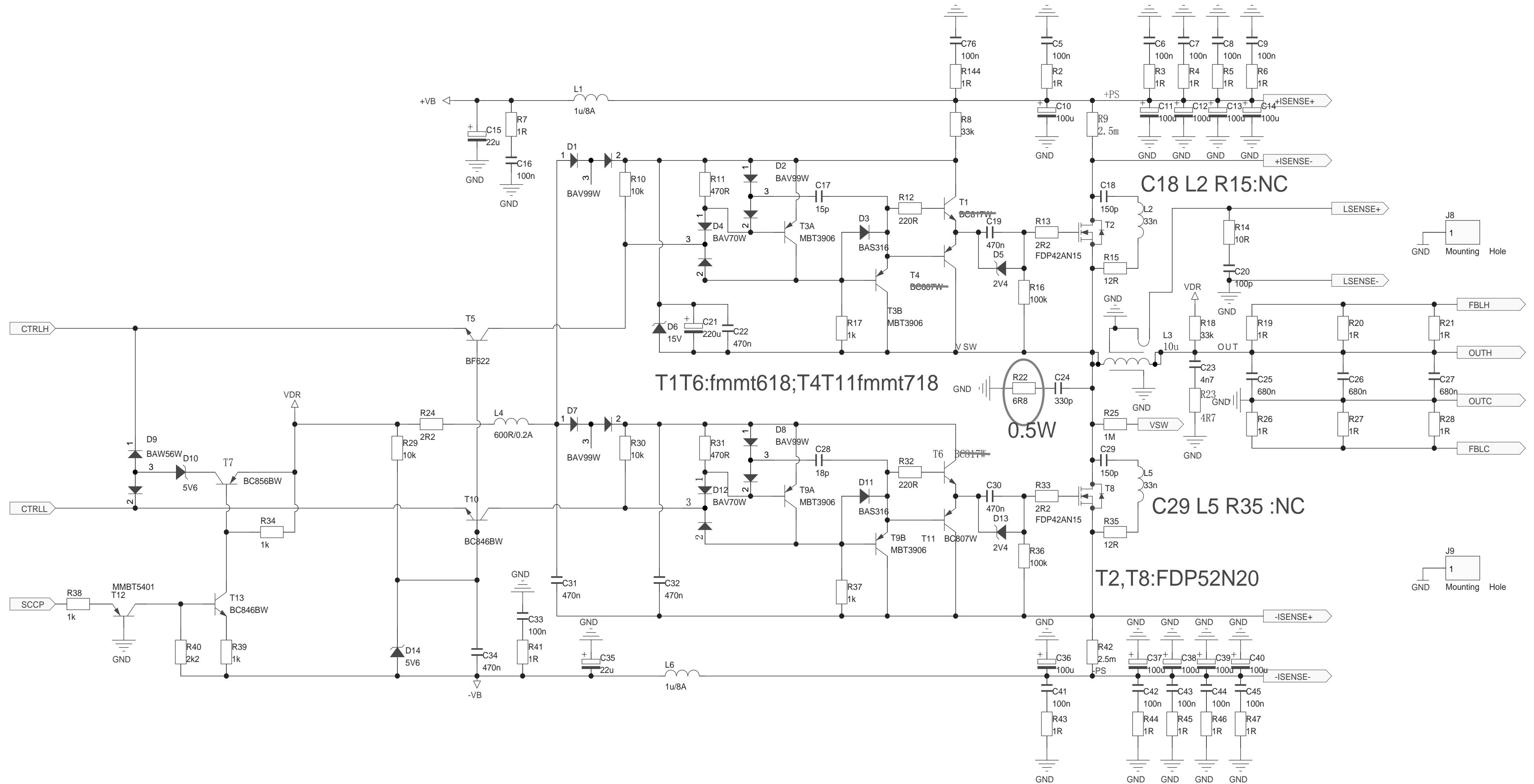
# CIRCUIT DIAGRAM

1.MCU VM1.0

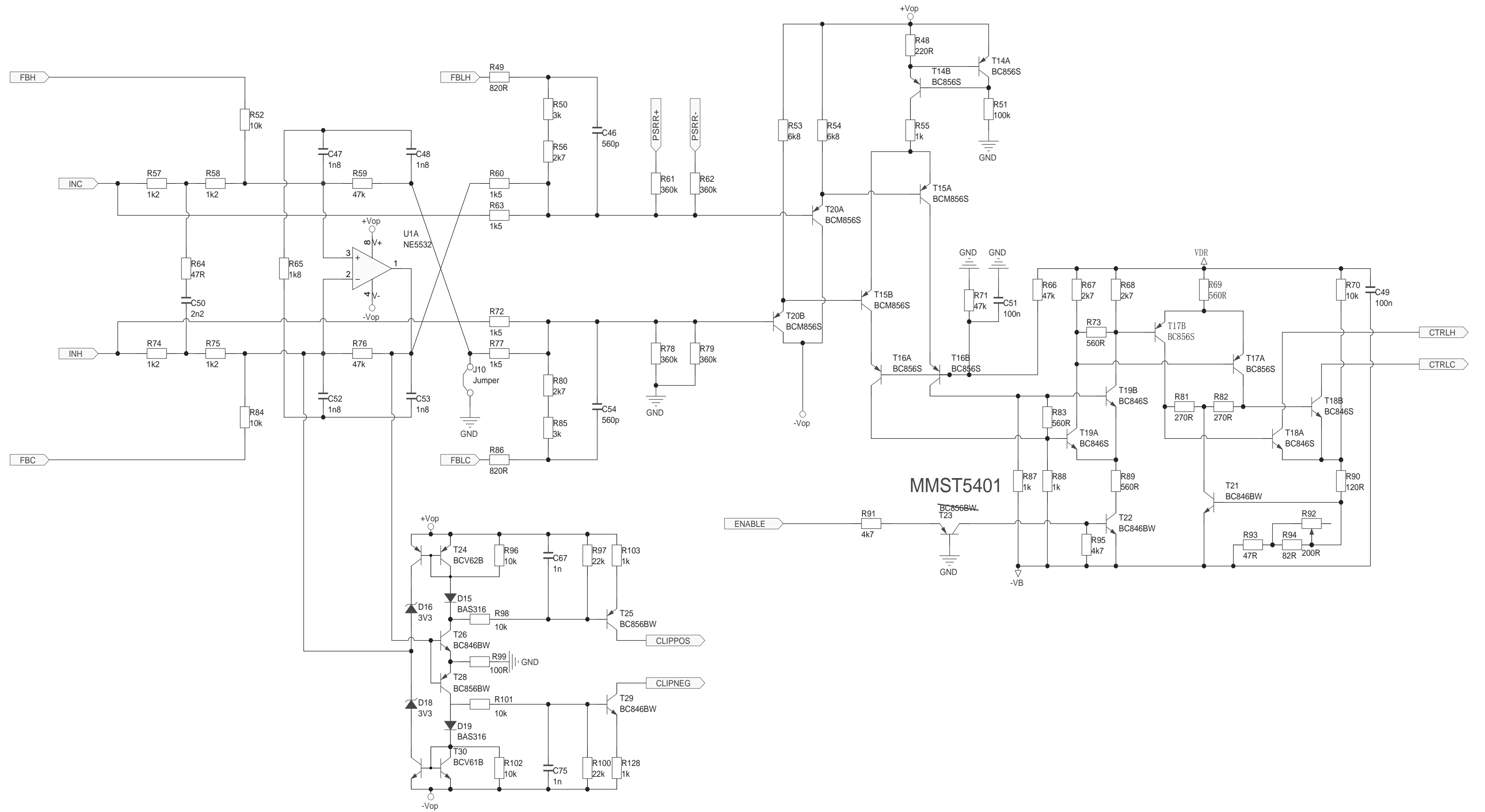




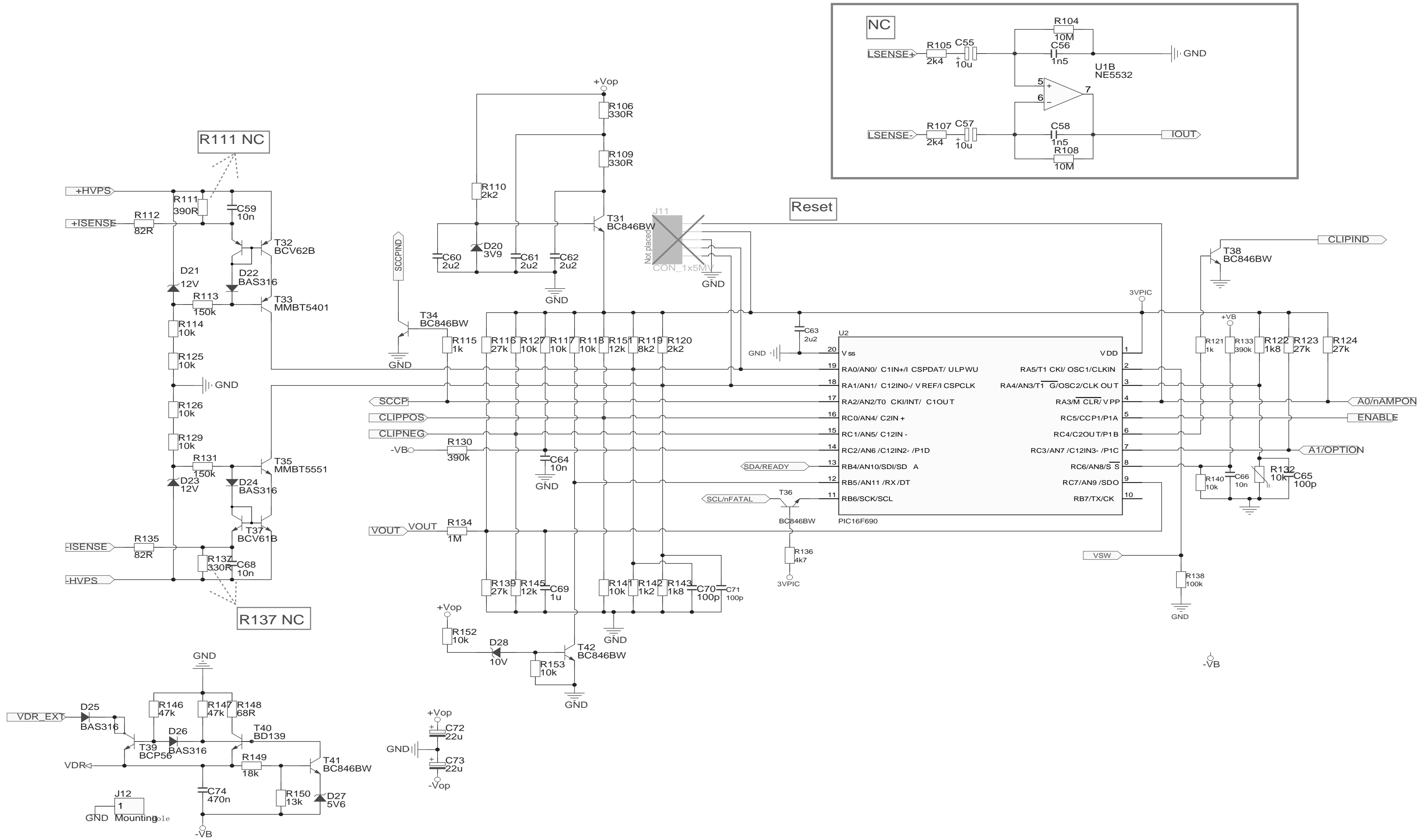


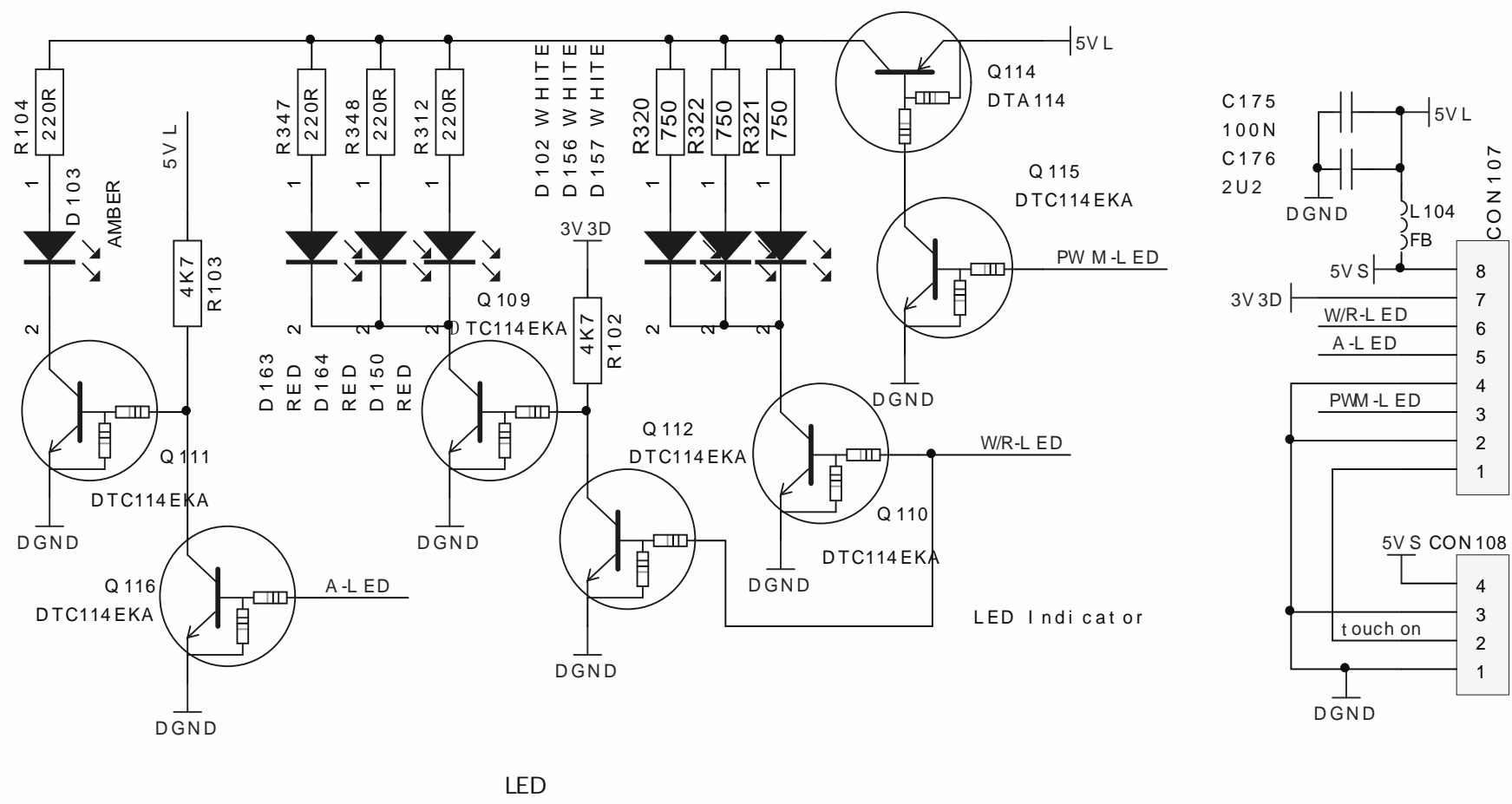




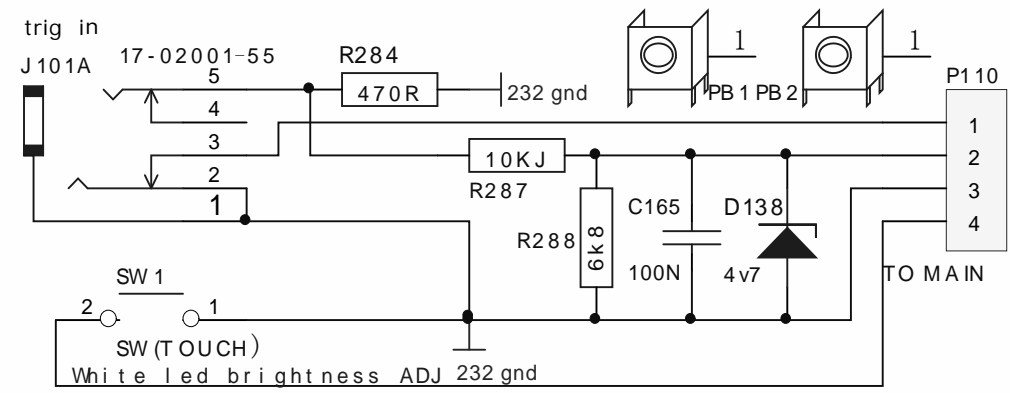




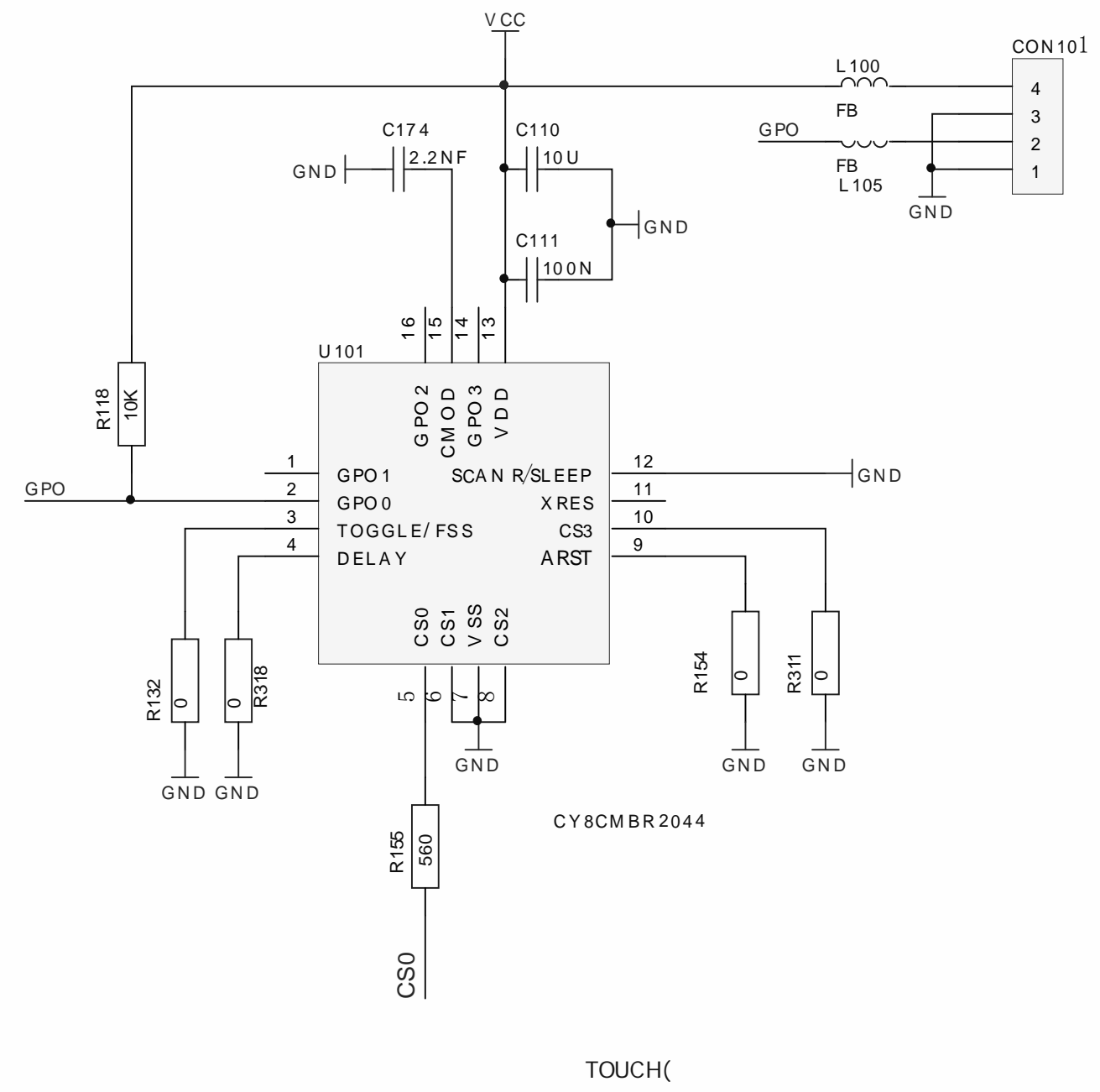




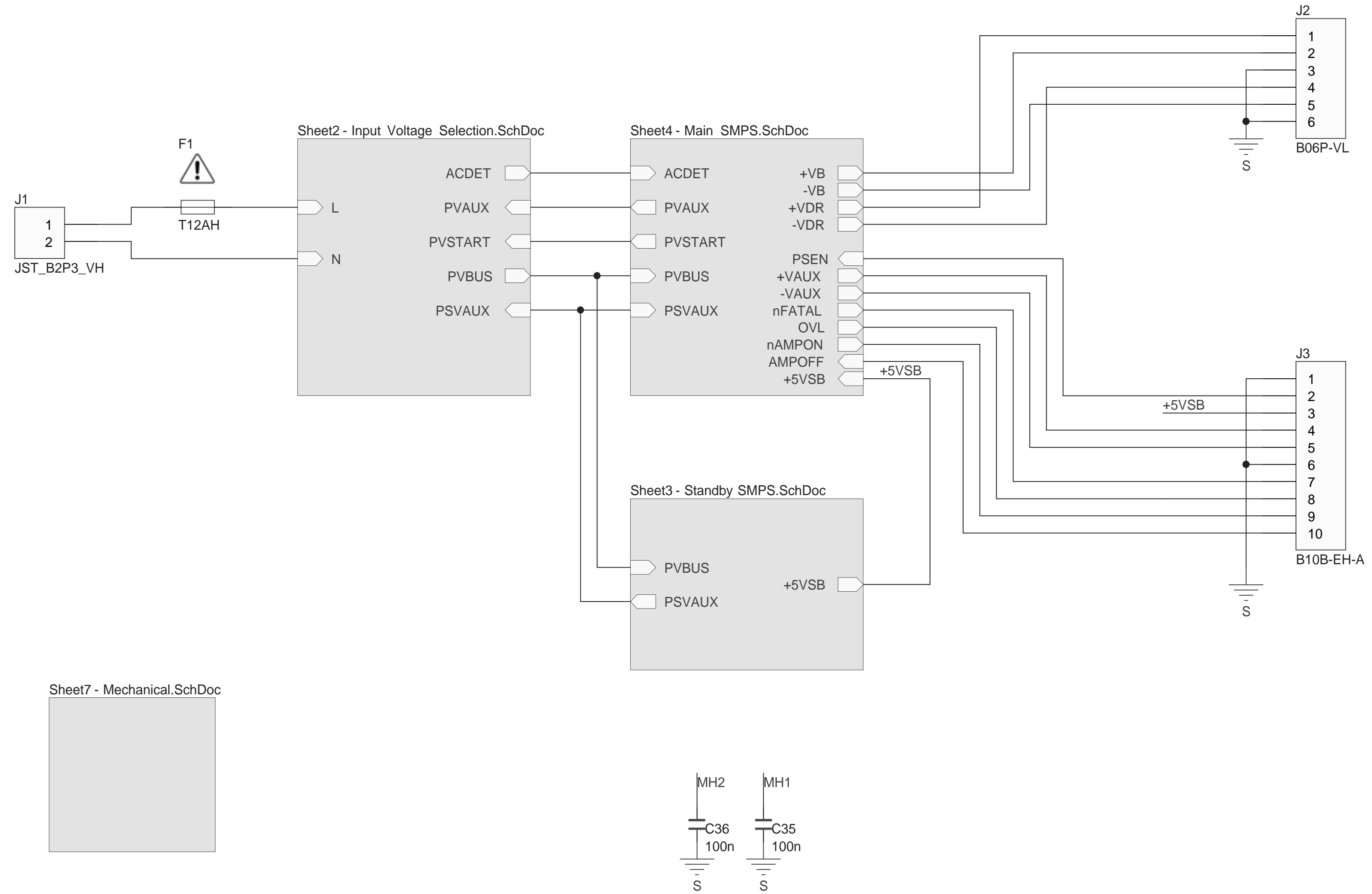
LED

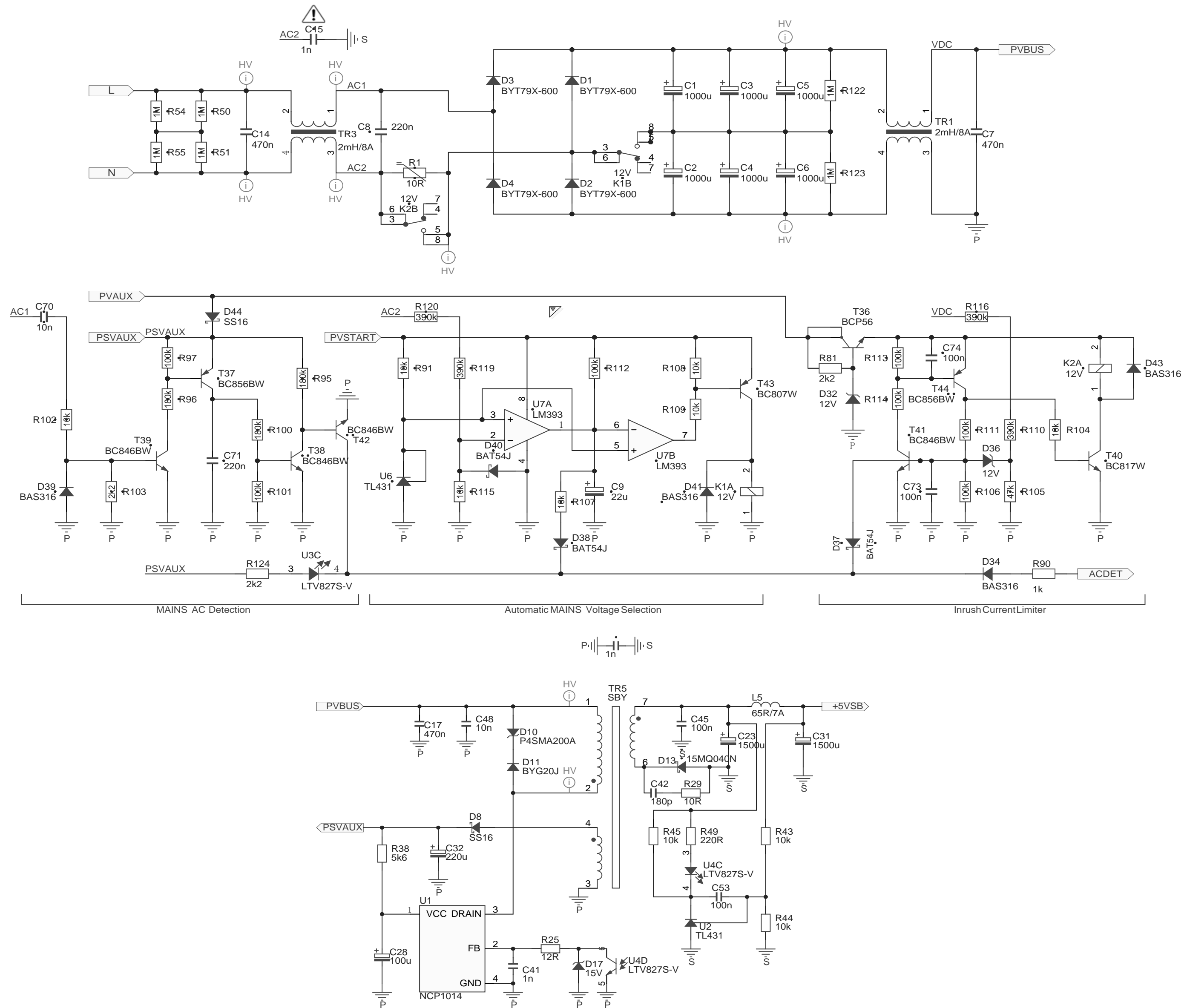


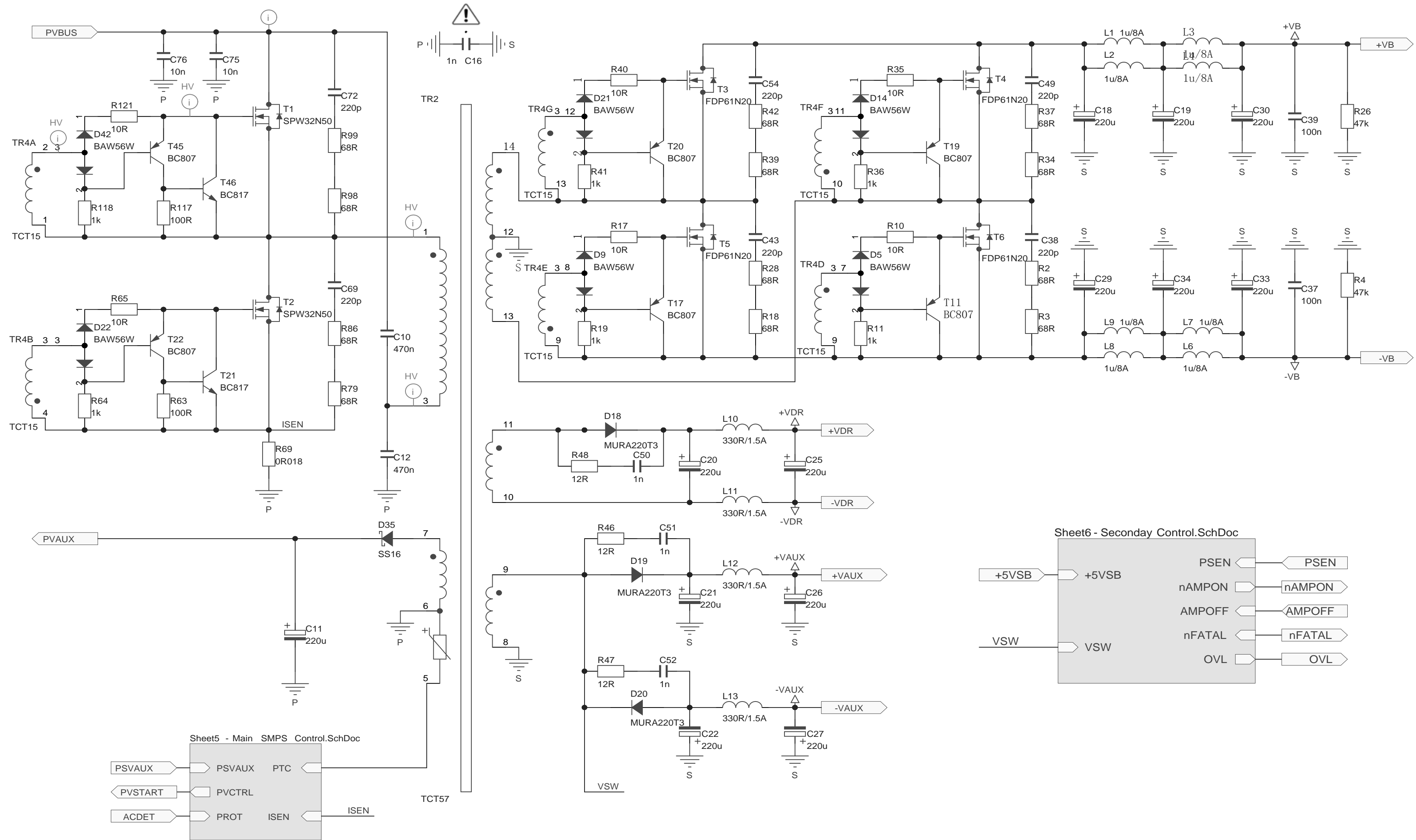
Trigger

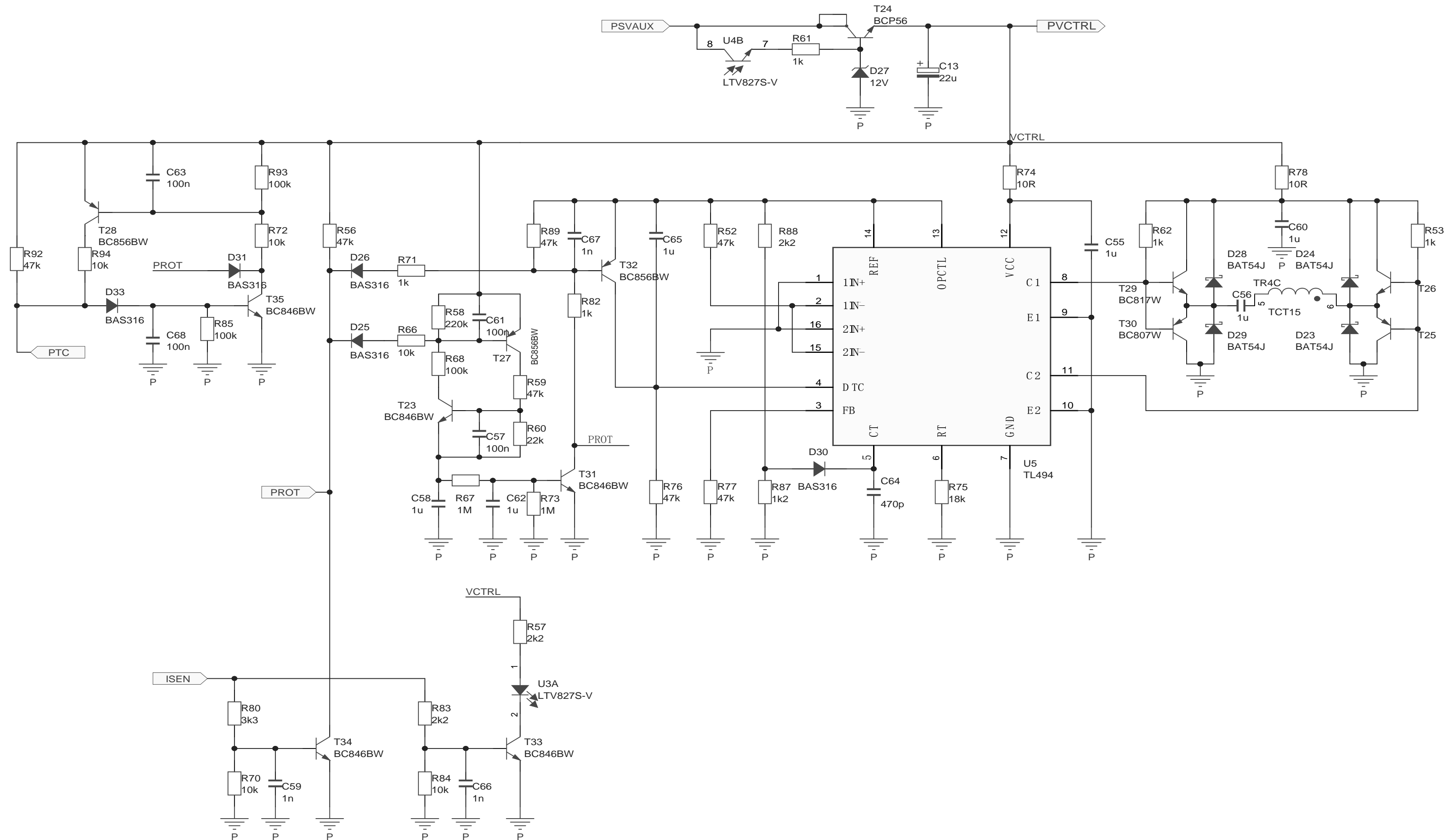


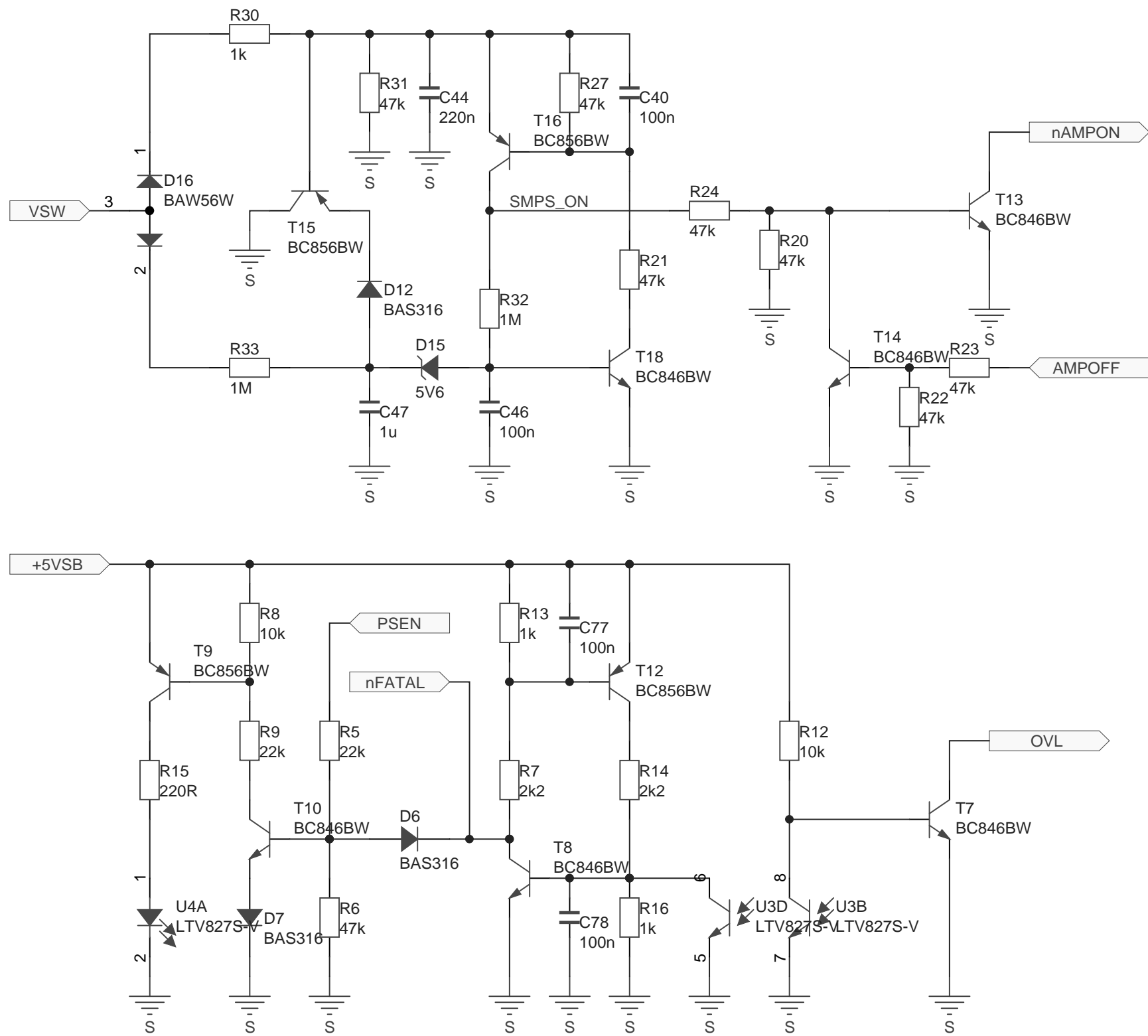
TOUCH(





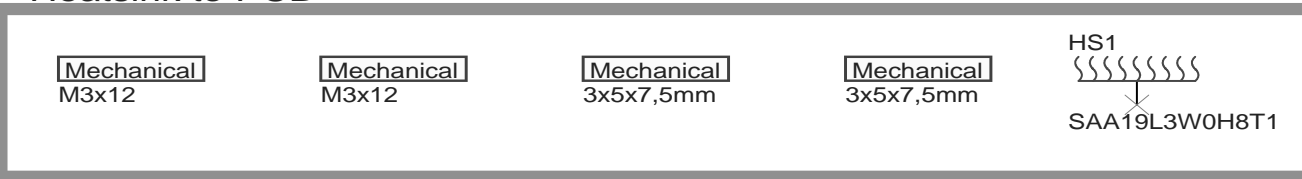




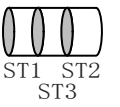
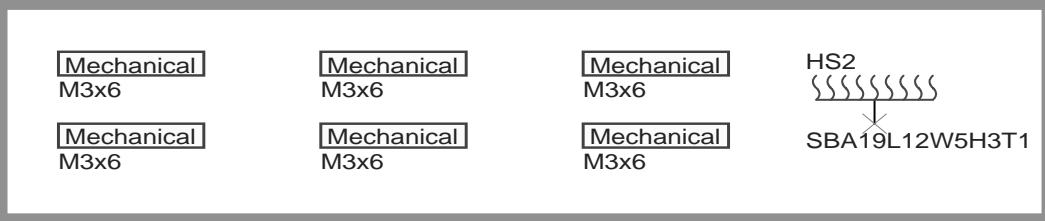


Assembly  
Ass1  
BarePCB  
PCB1

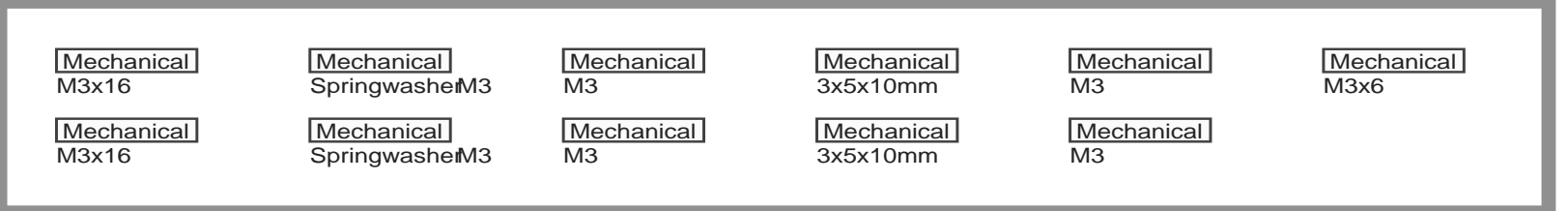
Heatsink to PCB



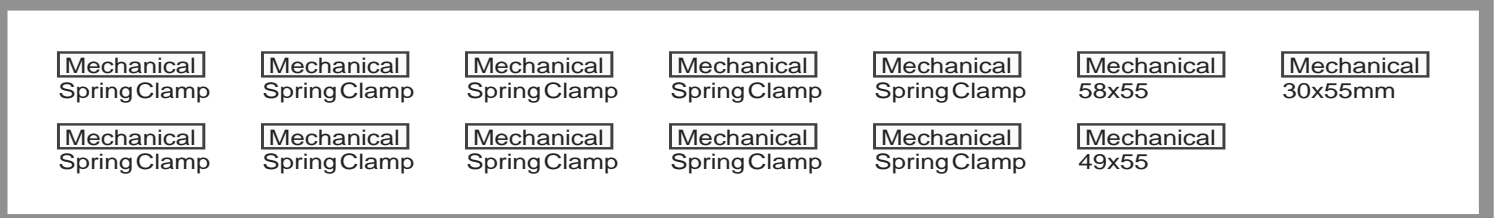
Heatsink to L-Profile



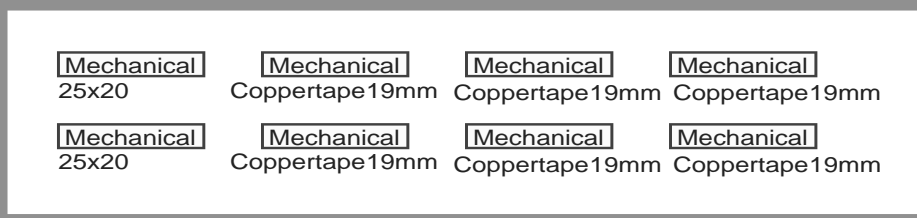
PCB to L-Profile

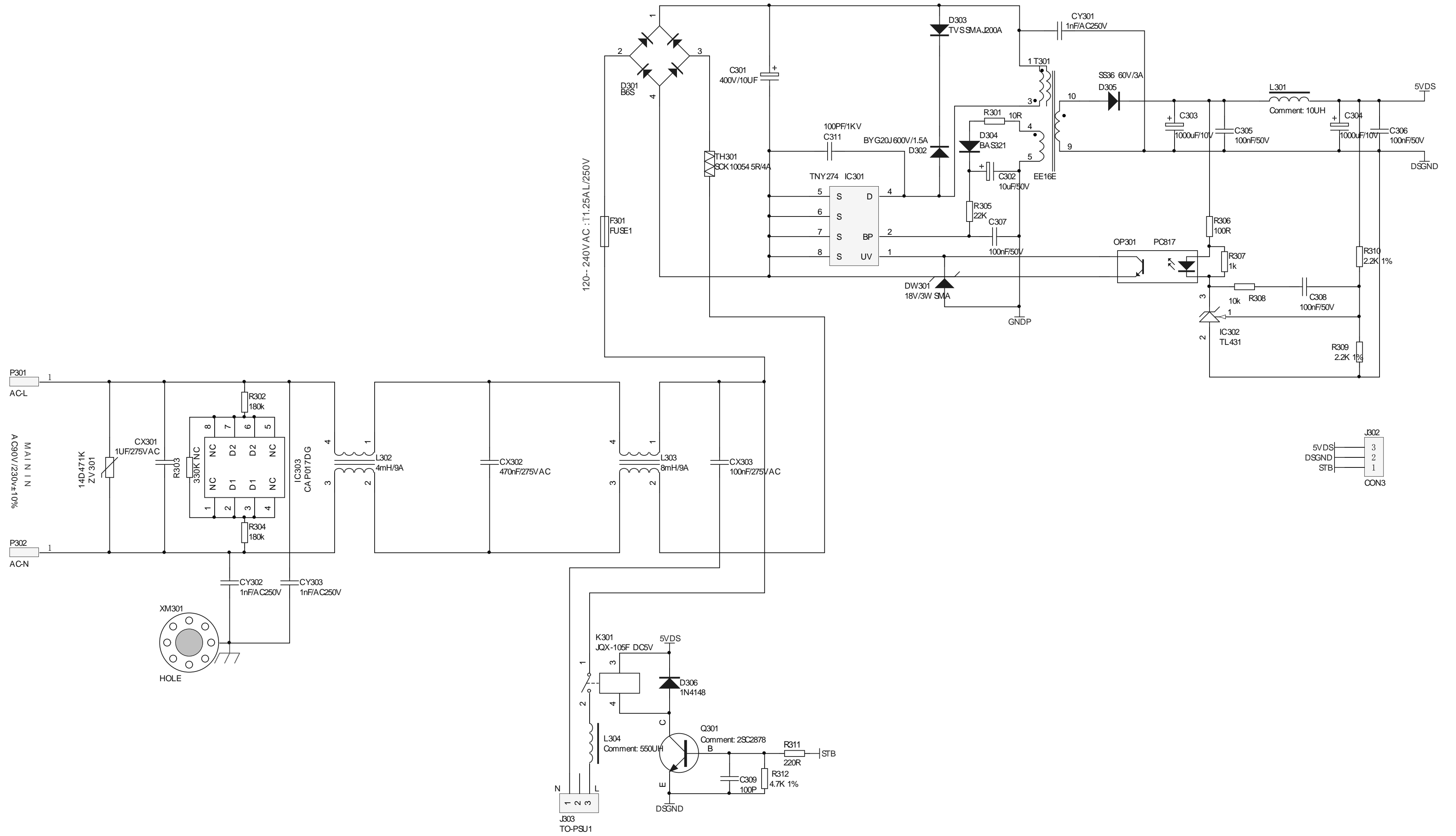


FETs/Diodes to Heatsink



FETs

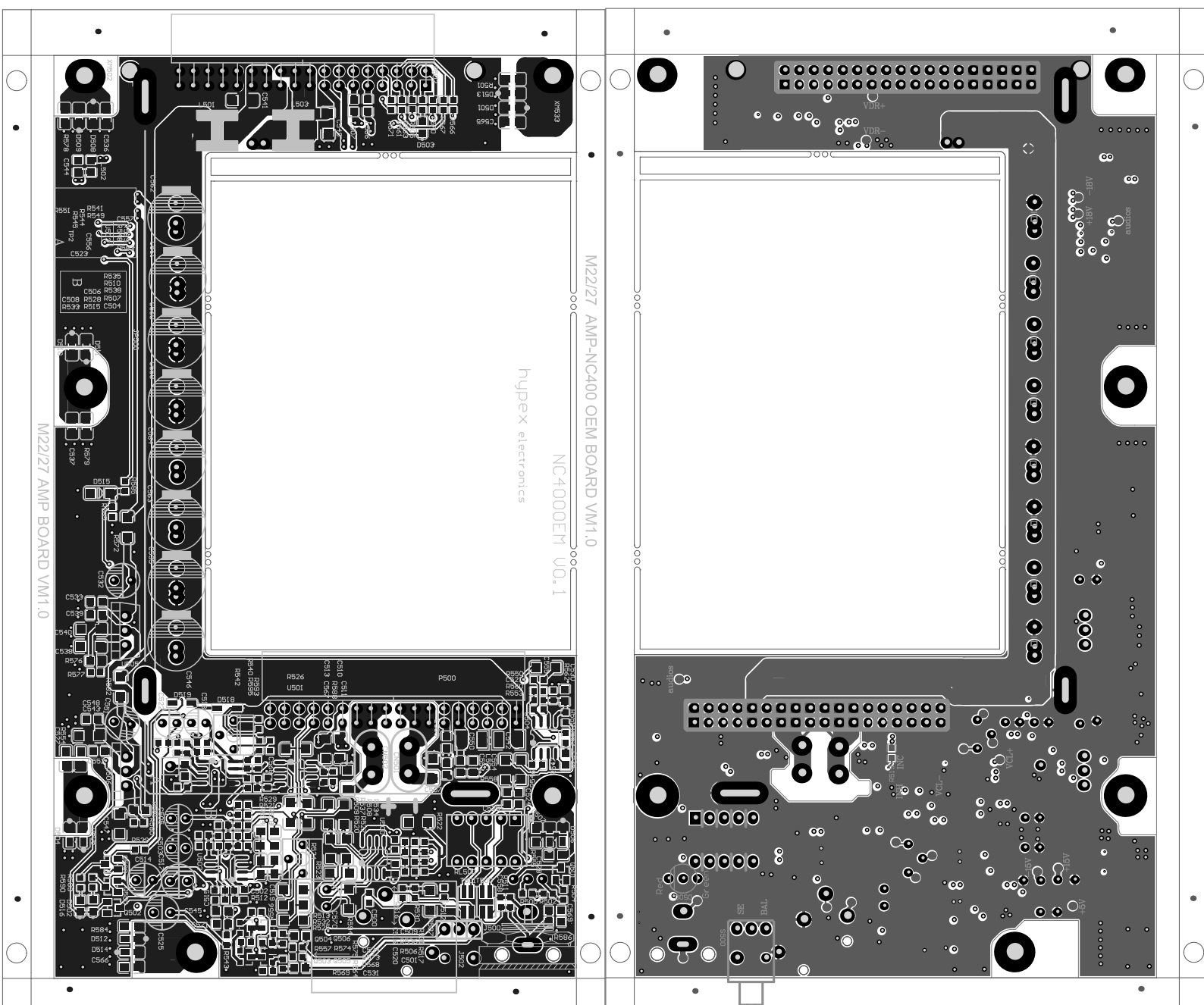








# 2.AMP VM1.0 BOARD

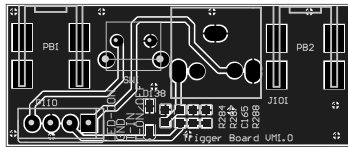


Top Layer

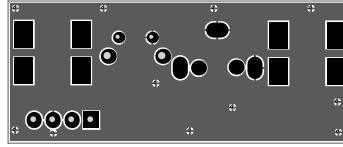
Bottom Layer



#### 4. TRIGGER VM1.1 BOARD

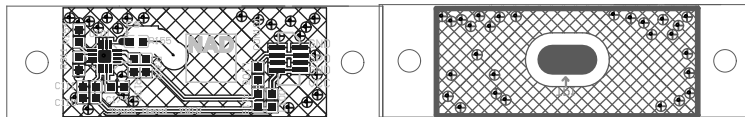


Top Layer



Bottom Layer

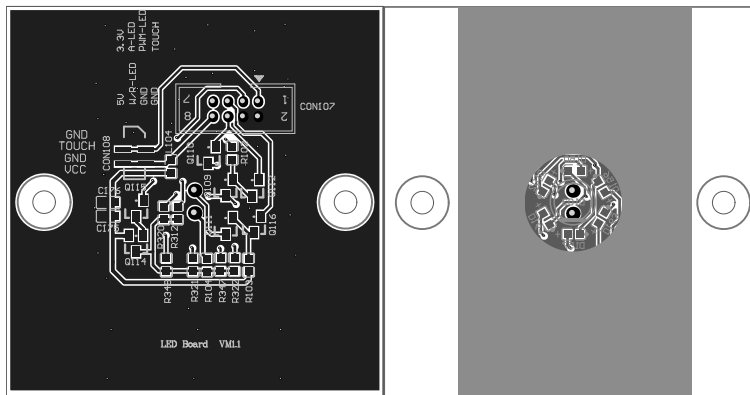
#### 5. TOUCH VM1.1 BOARD



Top Layer

Bottom Layer

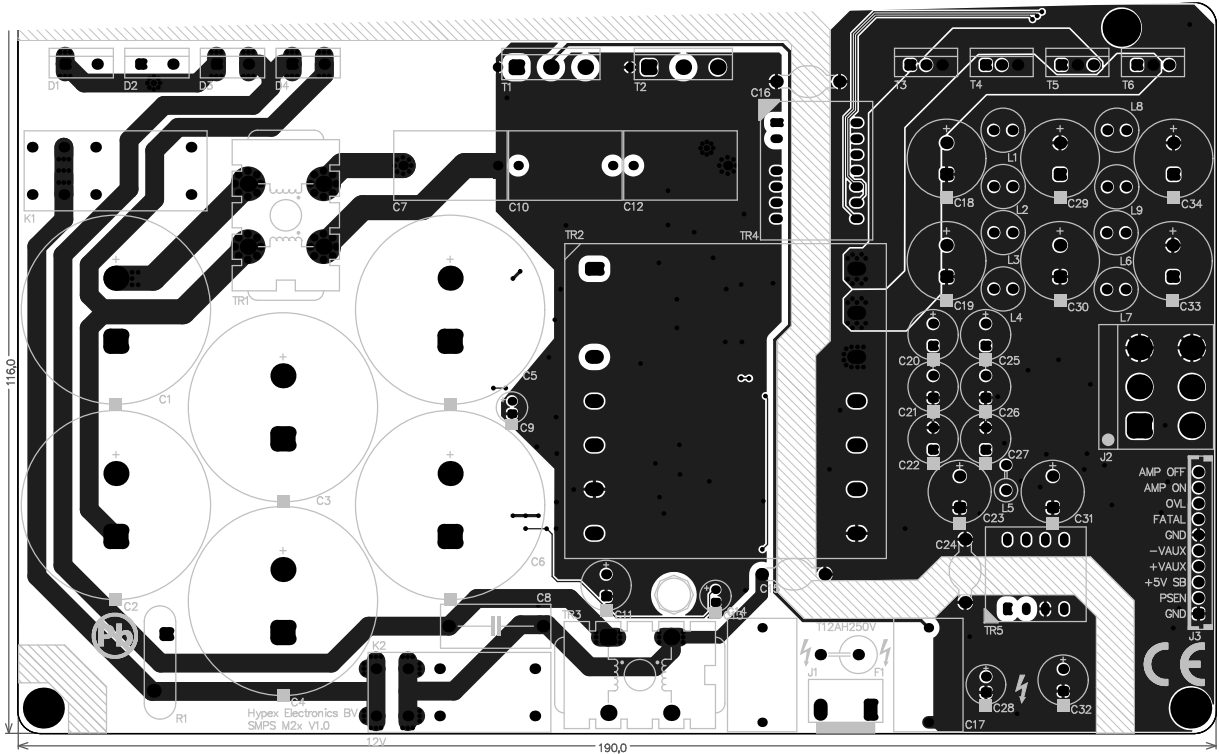
#### 6. LED VM1.1 BOARD



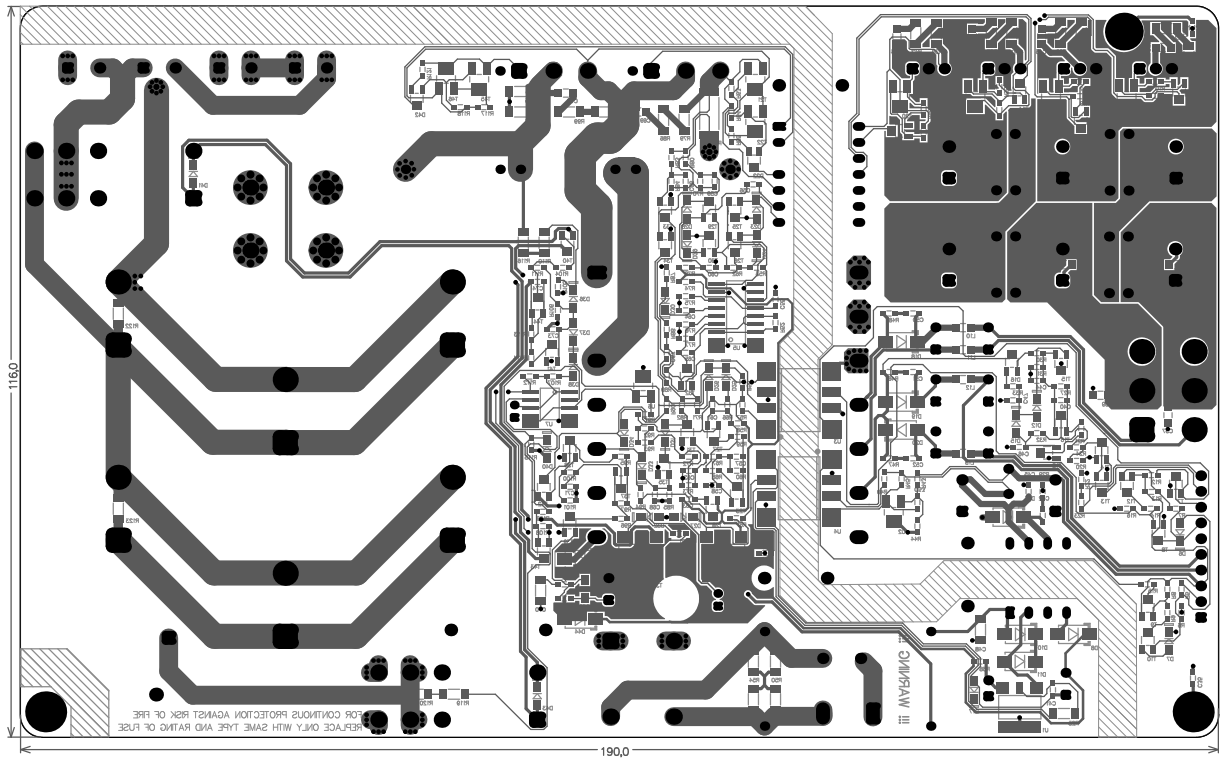
Top Layer

Bottom Layer

# 5.SMPS VM1.0 BOARD

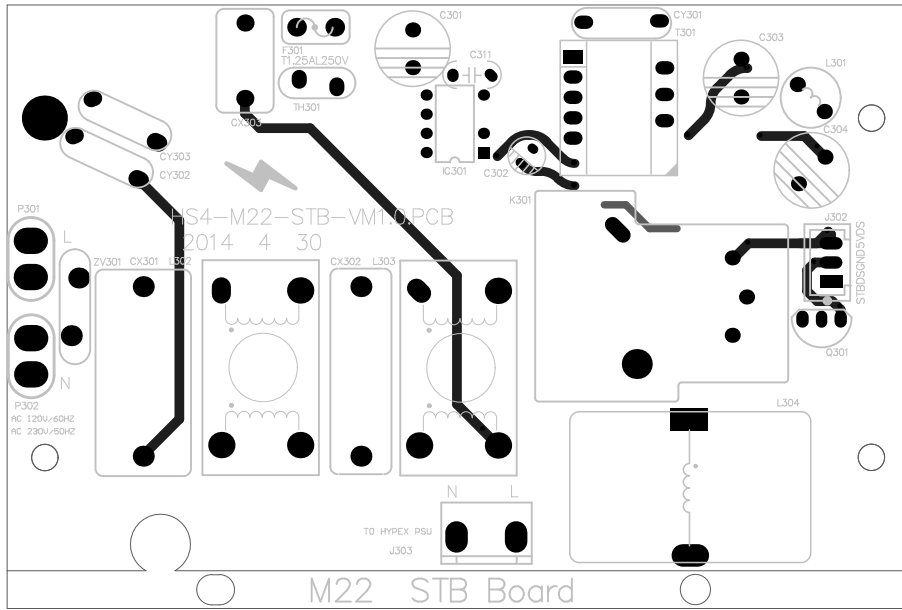


Top Layer

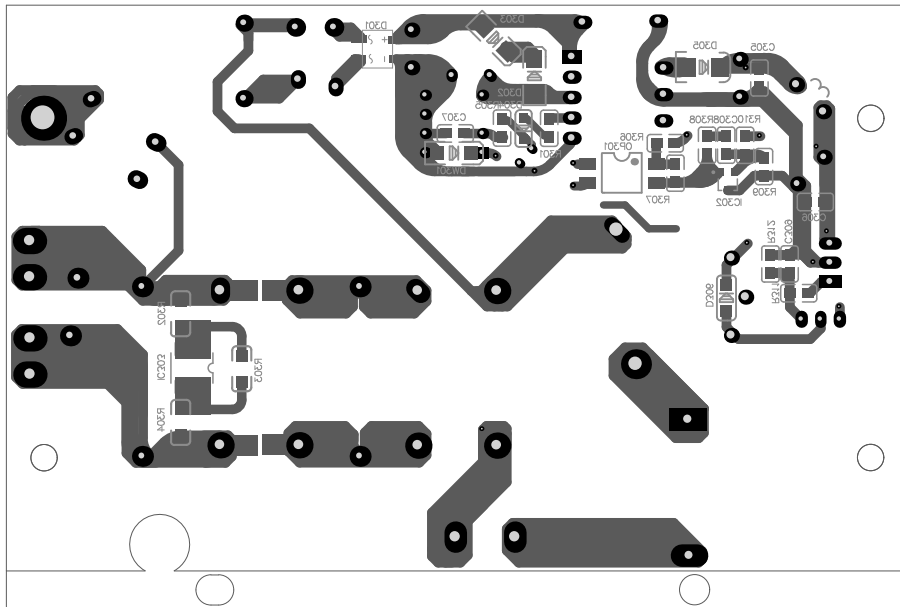


Bottom Layer

# 6.SMPS STB VM1.0 BOARD



Top Layer



Bottom Layer

## ELECTRICAL PARTS LIST

<b>PCB-1: MCU BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	A16-62201-21	MCU Board	VM1.0,FR-4,1.6mm,2Layers,2oz,TG130
	<b>DIODES</b>		
D166, D167	33-44148-16	Switch Diode SMD	CD4148WP
D101, D104, D109, D111, D134, D135, D136, D137, D139, D140, D141, D142, D146, D147	33-40352-01	Switch Diode	1SS352(TPH3,F),1SS355TE-17
D105, D106, D107, D112, D113, D114, D123, D158,D159,D160	33-14709-09	Zener Diode	BZT52C4V7,4.7V,350mW
D154,D162,D163	33-40099-02	Switch Diode	BAV99-7-F
D168,D169	33-11600-02	Zener Diode	BZT52C16-7-F,16V,500mW,6%
D118, D119, D155	33-13609-03	Zener Diode	BZT52C3V6,3.6V,350mW
D124	33-20012-01	Surface Mount Schottky Barrier Rectifier	SS12 SMA
D110, D170	33-11500-06	Zener Diode	BZT52C15,15V,350mW
	<b>TRANSISTORS</b>		
Q131	31-00114-01	Digital transistor	DTA114EKA
Q105, Q135	31-00114-05	Digital transistor	DTC114EKA
Q132	31-02301-01	P-CH MOSFET	APM2301CAC, SOT23, Tape
Q125,Q126	31-00856-01	Transistor	BC856B,SOT23
Q121,Q122	31-00846-01	Transistor	BC846B,SOT23
Q104, Q117	31-01312-00	Transistor	2SA1312GR(TE85L,F) TO-236MOD
Q113	31-00062-00	Transistor	BCV62B SOT143B
Q118	31-03324-00	Transistor	2SC3324-GR(TE85L,F) TO-236MOD
Q120	31-00593-00	Transistor	XSTR,FMMT593,PNP,100V
	<b>ICS</b>		
U100	03-00324-01	Low Power Quad OpAmp	LM324ADR
U102	03-00084-03	Quad OPAMP	TL084CD/TL084CDR
U105	03-01826-26B	MCU	PIC18F26K20-I/SS(M22 V2.1 program)
U105	03-01826-01	MCU	PIC18F26K20-I/SS
U108	03-01117-06	Regulator	AMS1117-3.3
U109	03-00717-01	Buffer	NC7WZ17P6X
U104	03-00595-01	Shift Register	74HC595D,118
	<b>RESISTOR</b>		
R119, R120, R121, R123, R126, R128, R130, R131, R133, R135, R158, R161, R168, R169, R170, R172, R174, R177, R178, R202, R240, R244	07-90000-00	Chip Resistor	0Ω, 0603, ±5%
R203,R210	07-91803-00	Chip resistor	180KΩ,0603,1/10W,±1%,RC0603FR-07180KL
R114, R290	07-91009-00	Chip resistor	10Ω,0603,1/10W,±1%,RC0603FR-0710RL
R124,R139, R141, R186, R219, R220, R222, R223, R225, R226, R228, R229, R231, R232, R233, R235, R245, R268, R269	07-91000-00	Chip Resistor	100Ω,0603,1/10W,±1%,RC0603FR-07100RL
R286, R289	07-91200-00	Chip Resistor	120Ω,0603,1/10W,±1%
R136, R137	07-92000-00	Chip Resistor	200Ω,0603,1/10W,±1%,RC0603FR-07200RL
R100, R176, R201	07-91001-00	Chip Resistor	1KΩ,0603,1/10W,±1%,RC0603FR-071KL

R180	07-97501-00	Chip Resistor	7.5K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-077K5L
R163	07-91202-00	Chip Resistor	12K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0712KL
R328	07-94301-00	Chip resistor	4.3K $\Omega$ ,0603,1/10W, $\pm$ 1%,
R323,R324	07-94707-03	Chip Resistor	0.47 $\Omega$ , 1210, $\pm$ 1% RL1210FR-070R47L
R165, R341,R342	07-93901-00	Chip resistor	3.9K $\Omega$ ,0603,1/10W, $\pm$ 1%,
R338,R339,R340,R346, R347, R348	07-96800-00	Chip Resistor	680 $\Omega$ ,0603,1/10W, $\pm$ 1%,
R107, R108, R151, ,R167, R185, R208, R214, R239, R241, R296, R297, R309, R329, R330, R331, R349	07-91002-00	Chip Resistor	10K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0710KL
R336,R337	07-94700-00	Chip Resistor	470 $\Omega$ ,0603,1/10W, $\pm$ 1%,
R319	07-91501-00	Chip resistor	1.5K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-071K5L
R122, R175	07-95101-00	Chip Resistor	5.1K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-075K1L
R112, R113	07-95601-00	Chip resistor	5.6K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-075K6L
R115, R125	07-91502-00	Chip Resistor	15K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0715KL
R173, R179, R216,R333,R335,R332,R334	07-92202-00	Chip resistor	22K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0722KL
R325	07-93302-00	Chip resistor	33K $\Omega$ ,0603,1/10W, $\pm$ 1%,
R101, R160,R164,R285	07-94702-00	Chip Resistor	47K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0747KL
R111, R116, R117, R127, R129	07-91003-00	Chip resistor	100K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07100KL
R326, R327	07-91203-00	Chip resistor	120K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07120KL
R152, R153	07-93303-00	Chip resistor	330K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07330KLT
R282, R283, R291, R292, R293	07-90101-01	Chip Resistor	100 $\Omega$ ,0805,1/8W, $\pm$ 5%,RC0805JR-07100RL
R144	07-92505-07	Chip Resistor	WSR32L500FEA,2.5m $\Omega$ , $\pm$ 1%,3W
R144	Or	Chip Resistor	LRS1050,2.5mR,3W, $\pm$ 1%
R209, R213	07-90101-10	Chip Resistor NET	100 $\Omega$ , $\pm$ 5% R0603X4
JP100, JP101, JP102	69-047001-0	Bus Bar	
R171	09-02103-05	Variable Resistor	10K $\Omega$ , $\pm$ 10%,3362P-1-103LF
INSTALL COPPER 210mm*3	85-000002-0	Moveable Bushing	KG-010N, 260mm
	<b>CAPACTIOR</b>		
C178, C179	26-47051-01	Ceramic Chip Capacitor	47PJ,50V,0805,NPO,C2012C0G1H470J T
C146	26-10251-00	Ceramic Chip Capacitor	1nK,50V,0603,X7R
C107, C116, C117	26-22251-00	Ceramic Chip Capacitor	2n2K,50V,0603,X7R
C101, C102, C108, C109, C115,C159	26-10351-00	Ceramic Capacitor SMD	10nK,50V,0603,X7R,C2012X7R1H103K T
C180,C183	26-10611-21	Ceramic Chip Capacitor	10uK,16V,0805,X5R
C181,C182	26-10521-01	Ceramic Chip Capacitor	1uK,25V,0805,X7R



C104, C122, C124, C125, C129, C132, C133, C136, C139, C140, C143, C147, C152, C155, C158, C164, C173	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
C112	26-47111-00	Ceramic Capacitor SMD	470nF,16V,0603,10%, X5R
C114	26-10511-20	Ceramic Capacitor SMD	1uK,16V,0603,X7R
C103, C105	26-10611-10	Ceramic Chip Capacitor	10uK,10V,0603,X7R ECJ1VB1C106J/ECJ1VB1H106J/ECJ1VB1E106J/C0603C106K8RAC/C0603C106K4RAC/C0603C106K3RAC/C0603C106K5RAC
C162, C163, C166, C167, C168	26-22351-01	Ceramic Chip Capacitor	22nK,50V,0805,X7R
C138, C151, C174	26-22660-11	Ceramic Chip Capacitor	22uF, 6.3V, X5R, 0805
C100	26-22411-10	Ceramic Chip Capacitor	220nF,16V, X7R, 0603
C177,C184	26-10621-12	Ceramic Chip Capacitor	10uF, 25V, X5R, 1206, C3216X5R1E106KT
C113	06-10031-01	Alu Electrolytic Capacitor	CD70H,10uF,35V,±20%,105°C,F2.5
C123, C126, C127, C128, C130, C131	06-22131-05	Alu Electrolytic Capacitor	CD289,220uF,35V,20%,D=8mm,Pitch=3.5mm
C156	06-47111-10	Alu Electrolytic Capacitor	CD287,470uF,10V,±20%,Pitch=3.5mm D=8mm
	<b>INDUCTOR</b>		
FB100	08-04601-10	Bead	CBA321609-4U-601
L101, L102, L103	08-04102-31	Chip Ferrite Bead	742792662, 1000ohm@100MHz,Imax=600mA
	<b>TRANSISTORS</b>		
Q124	31-01220-00	Power Transistor	KSA1220AYS,TO-126
Q123	31-02690-00	Transistor	KSC2690AYS TO-126
	<b>CONNECTORS</b>		
CON106	13-22008-05	IDC connector	2mmPitch,2*4Pin,CNT-B200-2*4-GS-2.8-N
TP1	13-10001-22	Test Pin	CNT-M254-1*1-GS-GS-6/3-N
P109	13-22504-20	Connector Socket	XHB2.5A-4A, Gold plated SIP4A
P112	13-22503-00	Connector Socket	XHB2.5A-3A
P111	13-22504-00	Connector Socket	XHB 2.5A-4A/TJC3-4A
CON103	13-12505-18	Connector	2.54Pitch,5Pin,CNT-M254-1*5-GS-6/2.5-N
	13-22536-04	2.54 Connector	2.54mmPitch,2*18Pin,gold-plating 5u",BHA2900P18CCA01
	or	2.54 Connector	2.54mmPitch,2*18Pin,gold-plating ,TSS-118-01-L-D,
P105	13-26206-00	Connector	2X3P MV 6.2mm PCB JST,JST VL-series
P103	13-22510-23	Connector	CNT-1132-10
INSTALLQ123, Q124	70-048004-0	Small Heatsink	6063 T5 TBD
INSTALLQ123, Q124	61-023206-0	Self Tapping Screw	BTB3x6,black zinc plated
INSTALLQ123, Q124	61-023208-0	Self Tapping Screw	BTB3x8,black zinc plated
<b>PCB-2: AMP BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	A16-62202-21	AMP PCB	VM1.0,FR-4,1.6mm,4Layers,Top,Bottom 2oz,Mid 1oz,TG130,161.5x95.5mm,
	A16-62220-21	AMP PCB ASSM	VM1.0,FR-4,1.6mm,4Layers,Top,Bottom 2oz,Mid 1oz,TG130,174.5x105.5mm

<b>DIODES</b>			
D518, D519	33-14709-09	Zener Diode	BZT52C4V7,4.7V,350mW
D501, D502, D503, D504, D505, D506, D507, D508, D509, D510, D511, D512, D513, D514, D516	33-40352-01	Switch Diode	1SS355TE-17
D500	33-50325-10	LED(Red/Green Dual Color)	Φ3mm Red&Green,AC,BL-BEG201Q-B
<b>TRANSISTORS</b>			
Q500, Q508	31-00114-01	Digital transistor	DTA114EKA
Q501, Q502	31-00114-05	Digital transistor	DTC114EKA
Q503, Q504	31-01015-03	Transistor	A1015, SOT23
Q505, Q506	31-01815-03	Transistor	C1815 SOT23
<b>ICS</b>			
U500, U501	03-49720-01	Dual OPAMP	LME49720MA/NOPB
U502	03-00072-01	Dual OPAMP	TL072CD/TL072CDR
U503	03-02134-00	Dual OPAMP	OPA2134UA/2K5E4 SO-8
U504	03-06002-01	Dual OPAMP	MCP6002T-E/SN
U505	03-00317-00	3-Terminal Adjustable Regulator	LM317T
U506	03-00337-00	3-Terminal Regulator	LM337T
<b>RESISTOR</b>			
R561, R563, R570, R571, R585	07-90000-00	Chip Resistor	0Ω, 0603, ±5%
R541, R543, R551, R588, R589	07-91009-00	Chip resistor	10Ω,0603,1/10W,±1%,RC0603FR-0710RL
R506, R536	07-91000-00	Chip Resistor	100Ω,0603,1/10W,±1%,RC0603FR-07100RL
R581	07-93160-01	Chip Resistor	316Ω,0805,1/8W,±1%,RC0805FR-07316RL
R576	07-93090-01	Chip Resistor	309Ω,0805,1/8W,±1%,RC0805FR-07309RL
R505, R595	07-91001-00	Chip Resistor	1KΩ,0603,1/10W,±1%,RC0603FR-071KL
R577, R580	07-93241-00	Chip Resistor	3.24KΩ,1/10W,±1%,0603,RC0603FR-073K24L
R594	07-91201-92	Chip resistor	MMF204FRE1K2R,1.2KΩ,±1%,
R550	07-95601-00	Chip resistor	5.6KΩ,0603,1/10W,±1%,RC0603FR-075K6L
R500, R564, R575	07-96801-00	Chip resistor	6.8KΩ,0603,1/10W,±1%,RC0603FR-076K8L
R503, R504, R515, R528, R539, R552, R556, R557, R590	07-91002-00	Chip Resistor	10KΩ,0603,1/10W,±1%,RC0603FR-0710KL
R545	07-94701-00	Chip Resistor	4.7KΩ,0603,1/10W,±1%
R544, R548, R549	07-91022-00	Chip Resistor	10.2KΩ,0603,1/10W,±1%,RC0603FR-0710K2L
R507, R538	07-91202-00	Chip Resistor	12KΩ,0603,1/10W,±1%,RC0603FR-0712KL
R593	07-91302-00	Chip Resistor	13KΩ,0603,1/10W,±1%
R568, R573	07-92202-00	Chip resistor	22KΩ,0603,1/10W,±1%,RC0603FR-0722KL
R502	07-93302-00	Chip resistor	33KΩ,0603,1/10W,±1%,

R540	07-94121-00	Chip resistor	4.12K $\Omega$ ,0603,1/10W, $\pm$ 1%
R510, R511, R517, R531, R535, R569, R574	07-94702-00	Chip Resistor	47K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-0747KL
R560, R562	07-91003-00	Chip resistor	100K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07100KL
R512, R533, R516, R530	07-92203-00	Chip resistor	220K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07220KL
R553	07-90334-00	Chip Resistor	330K $\Omega$ ,0603,1/10W, $\pm$ 5%,RC0603JR-07330KL
R586	07-91000-01	Chip resistor	100 $\Omega$ ,0805,1/8W, $\pm$ 1%,RC0805FR-07100RL
R501, R554, R555, R578, R579, R584	07-90101-01	Chip Resistor	100 $\Omega$ ,0805,1/8W, $\pm$ 5%,RC0805JR-07100RL
R514, R518, R521, R529	07-90103-01	Chip Resistor	10K $\Omega$ ,0805,1/8W, $\pm$ 5%,RC0805JR-0710KL
R508, R534, R509, R537	07-94751-92	MELF Resistors	MMF204FRE4K75,4.75K $\Omega$ ,1/4W, $\pm$ 1%
R572, R582	07-93308-92	MELF Resistors	MMF204FRE3.3R,3.3 $\Omega$ ,0.4W, $\pm$ 1%,3.45*1.35*0.6mm
R520, R527	07-92431-92	MELF Resistors	MMF204FRE2K43,2.43K $\Omega$ ,0.4W, $\pm$ 1%,3.45*1.35*0.6mm
R513, R532	07-94641-92	MELF Resistors	MMF204FRE4K64,4.64K $\Omega$ ,0.4W, $\pm$ 1%,3.45*1.35*0.6mm
R546, R558	07-90225-02	Chip Resistor	2.2M $\Omega$ , 1/4W, $\pm$ 1%
R522	07-91000-02	Chip Resistor	100 $\Omega$ ,1206,1/4W, $\pm$ 1%,RC1206FR-07100RL
R547, R559	07-96803-00	Chip Resistor	680K $\Omega$ ,0603,1/10W, $\pm$ 1%,RC0603FR-07680KL
C524, C529	26-10351-11	Ceramic Capacitor SMD	10nJ,50V,0805,NPO
C502, C508, C521	26-10511-20	Ceramic Capacitor SMD	1uK,16V,0603,X7R
R587	07-90475-02	Chip Resistor	4.7M $\Omega$ , 1/4W, $\pm$ 1%
R523	07-98450-92	Chip Resistor	MMF204FRE845R,845 $\Omega$ ,0.4W, $\pm$ 1%,3.45*1.35*0.6mm
R525	07-93920-92	MELF Resistors	MMF204FRE392R,392 $\Omega$ ,0.4W, $\pm$ 1%,3.45*1.35*0.6mm
R526	07-94703-92	Chip Resistor	MMF204FRE470K, 470K $\Omega$ , $\pm$ 1%
R524	09-02501-04	Variable Resistor	500 $\Omega$ , $\pm$ 10%3362P-1-501LF
R542	09-02502-04	Variable Resistor	5K $\Omega$ , $\pm$ 10%3362P-1-502LF
	21-06300-00	Link( $\phi$ 0.6)	L=3mm
	<b>CAPACTIOR</b>		
C558, C500, C512	26-10151-00	Ceramic Chip Capacitor	100pJ,50V,0603,NPO,C1608C0G1H101JT
C501, C509	26-22151-00	Ceramic Chip Capacitor	220PJ,50V,0603,NPO
C504, C506, C515, C516, C519, C520, C523, C557	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
C567, C568	26-10521-00	Ceramic Capacitor SMD	1uFZ,25V,0603,Y5V
C553, C554	26-10322-11	Ceramic Capacitor SMD	10nK,250V,0805,X7R CC0805KKX7RYBB103
C527, C528, C536, C537, C565, C566	26-22351-01	Ceramic Chip Capacitor	22nK,50V,0805,X7R
C533, C539, C548, C552, C569	26-10451-01	Ceramic Chip Capacitor	100nZ,50V,0805,Y5V
C526	26-10521-01	Ceramic Chip Capacitor	1uK,25V,0805,X7R
C530, C531, C534, C544, C545, C556, C571	26-10611-21	Ceramic Chip Capacitor	10uK,16V,0805,X5R,C2012X5R1C106KT / CC0805KKX5R7BB106

C541, C549, C507, C511	26-10352-02	Ceramic Chip Capacitor	1206, 10nF, 500V, X7R, ±10%
C538, C547, C510, C513, C540, C543, C555	26-10621-12	Ceramic Chip Capacitor	10uF, 25V, X5R, 1206, C3216X5R1E106KT
C542, C550	26-33422-03	Ceramic Capacitor SMD	330nK,250V,1210,X7T C3225X7T2E334KT000N
C535, C546, C559, C560, C561, C562, C563, C564	06-10112-07	Alu Electrolytic Capacitor	100uF,100V,10x20mm, ±20%,105 °C WL2A107M10020BB180
C525	06-22111-04	Alu Electrolytic Capacitor	CD263(X),220uF,10V,±20%,F2.5
C503, C505	06-10011-03	Alu Electrolytic Capacitor	CD263(X),10uF,16V,±20%,105°C,F2.5
C514, C517, C532, C551	06-10121-14	ALU Electrolytic Capacitor	EEUFC1E101SH,100uF,25V,±20%,105 °C
C518, C522	06-47021-15	ALU Electrolytic Capacitor	47uF,25V,±20%,105 °C,EEUFC1E470(H)
C570	25-18261-00	Metallized Polyester Film Capacitor	ASS21,1800pF, 63V, ±5%
	<b>INDUCTOR</b>		
L501, L503	08-04158-00	Inductor SMD	150nH 744302015
L502, L504, L505, L506, L507	08-04102-11	Chip Bead	74279205 1000ohm@100MHz
T500, T501	08-04161-00	Common-Mode Choke Coils	744232161, 160ohm@100MHz 340mA
	<b>CONNECTORS</b>		
TP2	13-10001-22	Test Pin	CNT-M254-1*1-GS-GS-6/3-N
J500	17-01001-12	RCA	WHITE
J502	J17-09003-28	Mic Connector	NC3FAAH2
P500	13-22536-05	2.54 Connector	2.54mmPitch,2*18Pin,Gold Plating 5u",FHB2850Y18SCA55
P500	or	2.54 Connector	2.54mmPitch,2*18Pin,ASP-174743-01
P502	13-22536-06	2.54 Connector	2.54mmPitch,2*18Pin, Gold Plating 5u",3F85R2118S5BYE2
P502	or	2.54 Connector	2.54mmPitch,2*18Pin,Gold Plating,SSW-118-02-L-D-RA-N,
RL500	12-02202-22	Relay	HFD31/5-L1
RL500	or	relay	769-TQ2-L-5V
S500	11-06102-05	Toggle Switches	2AS1T2A1M6RES
BINDING POST ---PCB	14-62202-11	Wire	UL3135#16AWG, L=130mm,105 °C
CN501 CN502	32-26308-06	Connector	KY250
	85-375004-0	LED Spacer	LED3*4
	76-000001-0	Teflon	18AWG-L
JP500	69-355001-0	Bus-Bar	T2Y2 T=1mm
<b>PCB-3: NC400 OEM BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	A16-62203-21	NC400 OEM PCB	VM1.0,FR-4,1.6mm,4Layers,Top,Bottom 2oz,Mid 1oz,TG130,82x63mm
	A16-62220-21	AMP PCB ASSM	VM1.0,FR-4,1.6mm,4Layers,Top,Bottom 2oz,Mid 1oz,TG130,174.5x105.5mm
	<b>DIODES</b>		
D28	33-11000-03	Zener Diode	10V 0.4W, PDZ10B
D21, D23	33-11200-05	Zener Diode	PDZ12B 12V 0.4W SOD323
D6	33-11500-05	Zener Diode	PDZ15B 15V 0.4W SOD323
D5, D13	33-12409-02	Zener Diode	2.4V,PDZ2.4B
D16, D18	33-13309-04	Zener Diode	PDZ3.3B
D20	33-13909-04	Zener Diode	PDZ3.9B 3.9V,0.4W,SOD323
D10, D14, D27	33-15609-06	Zener Diode	PDZ5.6B 5.6V,0.4W,SOD323
D9	33-40056-00	High speed Diode	BAW56W SOT323

D4, D12	33-40070-00	High speed Diode	BAV70W
D1, D2, D7, D8	33-40099-02	High speed Diode	BAV99W-7-F
D3, D11, D15, D19, D22, D24, D25, D26, D29	33-20316-01	High speed Diode	BAS316
	<b>TRANSISTORS</b>		
T4, T11	31-00718-01	Transistor	FMMT718
T1, T6	31-00618-01	Transistor	FMMT618
T10, T13, T21, T22, T26, T29, T31, T34, T36, T38, T41, T42	31-00846-02	Transistor	BC846BW SOT323
T18, T19	31-00846-05	Transistor	BC846AS-7,100mA 65V
T7, T25, T28	31-00856-03	Transistor	BC856BW SOT323
T23	31-05401-05	Transistor	MMST5401-7-F
T14, T16, T17	31-00856-05	Transistor	BC856AS-7,100mA 65V
T15, T20	31-00856-04	Transistor	BCM856S SOT363
T39	31-00056-01	Transistor	BCP56 SOT223
T30, T37	31-00061-00	Transistor	BCV61B SOT143B
T24, T32	31-00062-00	Transistor	BCV62B SOT143B
T5	31-00622-01	Transistor	BF622
T3, T9	31-03906-02	Transistor	MBT3906DW1T1G
T12, T33	31-05401-01	Transistor	MMBT5401LT1G, SOT-23
T35	31-05551-01	Transistor	MMBT5551LT1G, SOT-23
T40	31-00139-01	Transistor	BD139 SOT-32
T2, T8	31-05220-00	MOSFET	FDP52N20,TO220F
	<b>ICS</b>		
U1	03-05532-03	amp	NE5532DR SOIC8
U2	03-16690-12	MCU	PIC16F690-I/SO(NC400-PIC-V1.00Progarm )
U2	03-16690-01	MCU	PIC16F690-I/SO
	<b>RESISTORS</b>		
R49, R86	07-98200-91	Professional MELF Resistors	820Ω, ±1%, MMU01020C8200FB300
R57, R58, R74, R75	07-91201-91	Professional MELF Resistors	1.2KΩ, ±1%, MMU01020C1201FB300
R60, R63, R72, R77	07-91501-91	Professional MELF Resistors	1.5KΩ, ±1%, MMU01020C1501FB300
R56, R80	07-92701-91	Professional MELF Resistors	2.7KΩ,0102,±1%,MMU01020C2701FB300
R50, R85	07-93001-91	Professional MELF Resistors	3KΩ,0102,±1%,MMU01020C3001FB300
R52, R84	07-91002-91	Professional MELF Resistors	10KΩ, ±1%, MMU01020C1002FB300
R2, R3, R4, R5, R6, R7, R19, R20, R21, R26, R27, R28, R41, R43, R44, R45, R46, R47, R144	07-91008-00	Chip Resistor	1Ω,0603,1/10W,±1%,RC0603FR-071RL
R13, R24, R33	07-92208-00	Chip Resistor	2.2Ω,0603,1/10W,±1%,RC0603FR-072R2L
R1, R23	07-94708-00	Chip Resistor	4.7Ω,0603,1/10W,±1%,RC0603FR-074R7L
R93	07-94709-00	Chip Resistor	47Ω,0603,1/10W,±1%,RC0603FR-0747RLT
R94, R112, R135	07-98209-00	Chip Resistor	82Ω,0603,1/10W,±1%,RC0603FR-0782RL
R99	07-91000-00	Chip Resistor	100Ω,0603,1/10W,±1%,RC0603FR-07100RL
R90	07-91200-00	Chip Resistor	120Ω,0603,1/10W,±1%
R12, R32, R48	07-92200-00	Chip Resistor	220Ω,0603,1/10W,±1%,RC0603FR-07220RL

R81, R82	07-92700-00	Chip Resistor	270Ω,0603,1/10W,±1%,RC0603FR-07270RL
R106, R109	07-93300-00	Chip Resistor	330Ω,0603,1/10W,±1%,RC0603FR-07330RL
R11, R31	07-94700-00	Chip Resistor	470Ω,0603,1/10W,±1%,RC0603FR-07470RL
R69, R73, R83, R89	07-95600-00	Chip Resistor	560Ω,0603,1/10W,±1%,RC0603FR-07560RL
R34, R38, R39, R55, R87, R88, R103, R115, R121, R128	07-91001-00	Chip Resistor	1KΩ,0603,1/10W,±1%,RC0603FR-071K1L
R142	07-91201-00	Chip Resistor	1.2KΩ,0603,1/10W,±1%,RC0603FR-071K2L
R122, R143	07-91801-00	Chip Resistor	1.8KΩ,0603,1/10W,±1%,RC0603FR-071K8L
R40, R110, R120	07-92201-00	Chip Resistor	2.2KΩ,0603,1/10W,±1%,RC0603FR-072K2L
R67, R68	07-92701-00	Chip Resistor	2.7KΩ,0603,1/10W,±1%,RC0603FR-072K7L
R91, R95, R136	07-94701-00	Chip Resistor	4.7KΩ,0603,1/10W,±1%,RC0603FR-074K7L
R53, R54	07-96801-00	Chip Resistor	6.8KΩ,0603,1/10W,±1%,RC0603FR-076K8L
R119	07-98201-00	Chip Resistor	8.2KΩ,0603,1/10W,±1%,RC0603FR-078K2L
R10, R29, R30, R70, R96, R98, R101, R102, R117, R118, R127, R140, R141, R152, R153	07-91002-00	Chip Resistor	10KΩ,0603,1/10W,±1%,RC0603FR-0710K1L
R145, R151	07-91202-00	Chip Resistor	12KΩ,0603,1/10W,±1%,RC0603FR-0712K1L
R150	07-91302-00	Chip Resistor	13KΩ,0603,1/10W,±1%,RC0603FR-0713K1L
R97, R100	07-92202-00	Chip Resistor	22KΩ,0603,1/10W,±1%,RC0603FR-0722K1L
R116, R123, R124, R139	07-92702-00	Chip Resistor	27KΩ,0603,1/10W,±1%,
R149	07-91802-00	Chip Resistor	18KΩ,0603,1/10W,±1%,RC0603FR-0718K1L
R66, R71	07-94702-00	Chip Resistor	47KΩ,0603,1/10W,±1%,RC0603FR-0747K1L
R16, R36, R51, R138	07-91003-00	Chip Resistor	100KΩ,0603,1/10W,±1%,RC0603FR-07100K1L
R113, R131	07-91503-00	Chip Resistor	150KΩ,0603,1/10W,±1%,RC0603FR-07150K1L
R130, R133	07-93903-00	Chip Resistor	390KΩ,0603,1/10W,±1%,RC0603FR-07390K1L
R25, R134	07-91004-00	Chip resistor	1MΩ,0603,1/10W,±1%,RC0603FR-071M1L
R14	07-91009-01	chip Resistor	10Ω,0805,1/10W,±1%,RC0805FR-0710RL
R64	07-94709-01	Chip Resistor	47Ω,0805,1/8W,±1%,RC0805FR-0747RL
R148	07-96809-01	Chip Resistor	68Ω,0805,1/8W,±1%,RC0805FR-0768RL
R17, R37	07-91001-01	chip Resistor	1KΩ,0805,1/8W,±1%,RC0805FR-071K1L
R65	07-91801-01	Chip Resistor	1.8KΩ,0805,1/8W,±1%,RC0805FR-071K8L
R59, R76, R146, R147	07-94702-01	Chip Resistor	47KΩ,0805,1/8W,±1%,RC0805FR-0747K1L

R61, R62, R78, R79	07-93603-01	Chip Resistor	360K $\Omega$ ,0805,1/8W, $\pm$ 1% RC0805FR-07360KL
R22	07-96808-22	chip Resistor	6R8,1206, 0.5W, $\pm$ 1%,RC1206FR-7W6R8L
R114, R125, R126, R129	07-91002-02	Chip Resistor	10K $\Omega$ ,1206,1/4W, $\pm$ 1%,RC1206FR-0710KL
R8, R18	07-93302-02	Chip Resistor	33K $\Omega$ ,1206,1/4W, $\pm$ 1%,RC1206FR-0733KL
R9, R42	07-92505-06	chip Resistor	0.0025 $\Omega$ ,2512,1W, $\pm$ 1%,WSL25122L500FEA
R132	07-70103-06	NTC	NTC 10K,NTCLE100E3103JB0, $\pm$ 5%
	<b>CAPACITORS</b>		
C17	26-15051-00	Chip Capacitor	15pJ, NPO, 50V,0603
C28	26-18051-00	Chip Capacitor	18pJ,50V,0603,NPO
C20, C65, C70, C71	26-10151-00	Chip Capacitor	100pJ,50V,0603,NPO,C1608C0G1H101JT
C24	26-33112-00	Chip Capacitor	330pJ,100V,0603,NPO,C1608C0G2A331JT000N
C67, C75	26-10251-10	Chip Capacitor	1nJ,50V,0603,NPO,C1608C0G1H102JT
C59, C64, C66, C68	26-10351-00	Chip Capacitor	10nK,50V,0603,X7R,C2012X7R1H103KT
C3, C23	26-47251-00	Chip Capacitor	4n7K,50V,0603,X7R
C49, C51	26-10451-10	Chip Capacitor	100nZ, 50V,X7R, 0603
C19, C22, C30, C31, C32, C34, C74	26-47421-20	Chip Capacitor	470nK,25V,0603,X5R,C1608X5R1E474KT
C69	26-10511-20	Multilayer Ceramic CAP	1uK,16V,0603,X7R,C1608X7R1C105K
C46, C54	26-56112-01	chip capacitor	560pJ,100V,0805,NPO CC0805JRNPO0BN561
C47, C48, C52, C53	26-18251-11	Chip Capacitor	1.8nF, 5%, 50V, 0805, NPO
C50	26-22251-21	Chip Capacitor	2n2J,50V,0805,NPO,C2012C0G1H222JT
C60, C61, C62, C63	26-22511-01	Chip Capacitor	2u2F,16V 0805, X7R
C1, C2, C4, C5, C6, C7, C8, C9, C16, C33, C41, C42, C43, C44, C45, C76	26-10412-01	Chip Capacitor	100nK,100V,X7R,0805,C2012X7R2A104KT
C72, C73	06-22061-03	Alu Electrolytic Capacitor	RD-series, 22uF, 63V, $\pm$ 20%, 105 $^{\circ}$ C, F2.0
C15, C35	06-22012-04	Alu Electrolytic Capacitor	RD-series,22uF,100V, $\pm$ 20%, 105 $^{\circ}$ C, F2.5
C10, C11, C12, C13, C14, C36, C37, C38, C39, C40	06-10112-04	Alu Electrolytic Capacitor	RD-series, 100uF,100V, F5.0
C21	06-22111-26	Alu Electrolytic Capacitor	RD-series, 220uF,16V, $\pm$ 20%,F2.5
C25, C26, C27	25-68412-00		CL23B-100V-684J RA
	<b>INDUCTOR</b>		
L4	08-04601-11		600R/100MHz,0.2A,0805,CBG201209U601T
L1, L6	J22-08318-00	Coil M LCL1	SC8318-145A
L3	J22-08125-00	Coil M LCT5	SC8125-145A,RM10,10uH,28A
	<b>POT</b>		
R92	09-02201-03	POT	200R,3362P-1-201LF
	<b>CONNECTORS</b>		
J3	13-12536-04	CON 2X18P MH 2.5mm	2.54mmPitch,2*18pin ,5u",QHB2251P18CCB12
J11	13-12505-14	CON 5P MV 2.5mm	2.54mmPitch, 5Pin, CNT-M254-1*5-GS-5.9/3-N
	78-090004-0	Insulated Cushion	19x14mm*1.5mm

	63-020309-0	Washer Spring	GB/T 93 Φ3 blue zinc plated
	63-010305-2	Washer	GB/T848-2002, M3, black zinc plated, ID=3.2mm,OD=6mm
	78-238001-0	Insupad Silpad	Silica gel,11x10x0.2mm,TO126
	78-015002-0	Screw insulator M3	TW-5
<b>Misc and Mechanical parts</b>			
	17-03001-16	Binding Post	gold plating,TH>0.06u
	17-03001-17	Binding Post	gold plating,TH>0.06u
	70-375004-0	Main Heatsink	6363 T5
	70-375005-1	L Heatsink Right	6363 T5
	70-375006-1	L Heatsink Left	6363 T5
	67-375004-0	RCA Bracket	SECC N5 T=1.6mm,Painting Black
	65-375004-0	RCA Bracket	SECC N5 T=1.6mm
	70-355013-0	Spacer	AL1050, OD=6mm, ID=3.2mm, H=3.5mm
	70-137003-0	Spacer	OD=6.3, ID=3.5, H=7.3mm
	70-138003-0	AL Spacer	OD=6.3, ID=3.5, H=4.5mm
HEAK SINK(6x2)	61-063510-0	Machine Screw	MF3x10,black zinc plated
HypexAMP BOARD(4x2)	61-023215-0	self tapping screw	BTB3x15
HypexAMP BOARD(3x2)	61-023515-0	Machine Screw	MB3x15,black zinc plated
BOARD(5x2)	61-023212-0	self tapping screw	BTB3x12
RCA STAND(1x2)	61-023206-0	Self Tapping Screw	BTB3x6,Black zinc plated
	76-001002-1	LED Lens	3mm
Led Lens	86-046001-0	LED Lens Gum	3M Double Side Adhesive
<b>PCB-4:Trigger BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	01-62204-00	Trigger Board	
	02-32704-00	SMT	
	A16-32704-22	Trigger PCB	VM1.1,VM1.1,FR-4,1.6mm,2Layers,1oz,TG130,46x19mm
	A16-32740-22	Trigger/LED/Touch Board ASSM	VM1.1,FR-4,1.6mm,TG130,110x96mm
		<b>DIODES</b>	
D138	33-14709-09	Zener Diode	BZT52C4V7,4.7V,350mW
		<b>RESISTOR</b>	
R284	07-94700-00	Chip Resistor	470Ω,0603,1/10W,±1%,RC0603FR-07470RL
R288	07-96801-00	Chip resistor	6.8KΩ,0603,1/10W,±1%,RC0603FR-076K8L
R287	07-91002-00	Chip Resistor	10KΩ,0603,1/10W,±1%,RC0603FR-0710KL
		<b>CAPACTIOR</b>	
C165	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
		<b>CONNECTORS</b>	
J101	17-02001-55	Con 3.5mm 90°	CKX-3.5-36(5P),Black
PB1, PB2	67-114001-0	PCB Terminal	SECC-N5 T=1 Ti
SW1	11-04101-30	Tact Switch	IT-1102VLC-1160,H=8.35mm 160gf
	14-62204-00	Cabel	UL1007#26AWG,L=250mm
<b>PCB-5: Touch BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>



	A16-32705-22	Touch PCB	VM1.1,VM1.1,FR-4,1.6mm,2Layers,1oz,TG130,50x15mm
	A16-32740-22	Trigger/LED/Touch Board ASSM	VM1.1,FR-4,1.6mm,2Layers,1oz,TG130,110x96mm
	<b>IC</b>		
U101	03-02044-02	four button capsense controller	CY8CMBR2044-24LKXI
	<b>RESISTOR</b>		
R155	07-90561-00	Chip Resistor	560Ω,0603,1/10W,±5%,RC0603JR-07560RL
R118	07-91002-00	Chip Resistor	10KΩ,0603,1/10W,±1%,RC0603FR-0710KL
R132, R154, R311, R318	07-90000-00	Chip Resistor	0Ω, 0603, ±5%
	<b>CAPACITOR</b>		
C111	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
C110	26-10611-20	Ceramic Chip Capacitor	10uF,10V,0603,X5R,±20%
C174	26-22251-00	Ceramic Chip Capacitor	2n2K,50V,0603,X7R
	<b>INDUCTOR</b>		
L100, L105	08-04102-31	Chip Ferrite Bead	742792662, 1000ohm@100MHz,I <sub>max</sub> =600mA
	<b>CONNECTORS</b>		
CON101	13-21004-04	FPC Connector SMD	PH1.0 FPC 4P, JX1.0-B2-4PLT
Copper-Touch PCB	14-32701-00	FFC Cable	UL1007#24AWG, Red, L=40mm
<b>PCB-6: LED BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	<b>01-32706-00</b>	<b>LED Board</b>	
	<b>02-32706-00</b>	<b>SMT</b>	
	A16-32706-22	LED Board PCB	VM1.1,VM1.1,FR-4,1.6mm,2Layers,1oz,TG130,50x52mm
	A16-32740-22	Trigger/LED/Touch Board ASSM	VM1.1,FR-4,1.6mm,TG130,110x96mm
	<b>DIODES</b>		
D150, D163, D164	33-50603-06	SMD LED (RED)	SML-310VTT86,Red
D102,D156,D157	33-50603-90	SMD LED (WHITE)	WR-PB1608UW-G-M23,White
D103	33-50565-01	LED	φ5,Blue&Orange, BL-BB5JC274
	<b>TRANSISTORS</b>		
Q114	31-00114-01	Digital transistor	DTA114EKA
Q109, Q110, Q111, Q112, Q115, Q116	31-00114-05	Digital transistor	DTC114EKA
	<b>RESISTOR</b>		
R104, R312, R347, R348	07-92200-00	Chip resistor	220Ω,0603,1/10W,±1%,RC0603FR-07220RL
R320,R321,R322	07-97500-00	Chip Resistor	0603, 750Ω, ±1%
R102, R103	07-94701-00	Chip Resistor	4.7KΩ,0603,1/10W,±1%,RC0603FR-074K7L
	<b>CAPACITOR</b>		
C175	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
C176	26-22511-30	Ceramic Chip Capacitor	2.2uK,10V,0603,X5R,CL10A225KP8NN
	<b>INDUCTOR</b>		

L104	08-04102-31	Chip Ferrite Bead	742792662, 1000ohm@100MHz,I <sub>max</sub> =600mA
	<b>CONNECTORS</b>		
CON108	13-21004-04	FPC Connector SMD	PH1.0 FPC 4P,JX1.0-B2-4PLT
CON107	13-22008-05	IDC connector	2mmPitch,2*4Pin,CNT-B200-2*4-GS-2.8-N
MCU PCB-Touch PCB	14-32704-10	FPC Cable	4Pin,1.0mmPitch,L=160mm,coplanar
MCU PCB-Touch PCB	14-32708-20	Cable	CNT-C200-8-260 FC
<b>PCB-7: SMPS BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	A16-32707-21	Bare PCB SMPS	VM1.0,FR-4,1.6mm,2Layers,2oz,TG130,200x126mm
	<b>DIODE</b>		
D6, D7, D12, D25, D26, D30, D31, D33, D34, D39, D41, D43	33-20316-01	High speed Diode	BAS316
D23, D24, D28, D29, D37, D38, D40	33-40054-02	Schottky Rectifier Diode	BAT54J
D5, D9, D14, D16, D21, D22, D42	33-40056-01	High-speed double diode	BAW56W-7-F
D5, D9, D14, D16, D21, D22, D42	or33-40056-00	High speed Diode	BAW56W SOT323
D11	33-20020-00	Super Fast Rectifier Diode	BYG20J-E3/TR3
D8, D35, D44	33-20016-01	Surface Mount Schottky Barrier Rectifier	SS16 SMA
D18, D19, D20	33-20220-01	Ultrafast Power Rectifier	MURA220T3G
D10	33-00200-01	Transient Voltage Suppressor	P4SMA200A
D27, D32, D36	33-11200-05	Zener Diode	PDZ12B 12V 0.4W SOD323
D17	33-11500-05	Zener Diode	PDZ15B 15V 0.4W SOD323
D15	33-15609-06	Zener Diode	PDZ5.6B 5.6V,0.4W,SOD323
D13	33-21540-01	Schottky Rectifier Diode	15MQ040NTRPBF
D1, D2, D3, D4	33-20600-01	Ultrafast Rectifier Diode	BYT79X-600 TO-220F
	<b>TRANSISTORS</b>		
T11, T17, T19, T20, T22, T45	31-80716-00	Transistor	BC807-16 PNP
T25, T30, T43	31-00807-40	Transistor	BC807-40W PNP
T21, T46	31-00817-16	Transistor	BC817-16 NPN
T26, T29, T40	31-00817-01	NPN Transistor	BC817-40W, 45V 500mA
T7, T8, T10, T13, T14, T18, T23, T31, T33, T34, T35, T38, T39, T41, T42	31-00846-02	Transistor	BC846BW SOT323
T9, T12, T15, T16, T27, T28, T32, T37, T44	31-00856-03	Transistor	BC856BW SOT323
T24, T36	31-00056-01	Transistor	BCP56 SOT223
	<b>IC</b>		
U5	03-00494-02	Power controller IC	TL494CDRG4, SO16
U7	03-00393-03	Dual Differential Comparator	LM393DR
U3, U4	03-00827-03	Multi-Channel Full-Pitch Phototransistor Optocoupler	LTV827S
U2, U6	03-00431-05	Shunt Regulator	TL431CDBZR

U1	03-01014-01	Self-Supplied Monolithic Switcher	NCP1014ST65T3G
	<b>RESISTORS</b>		
R69	07-91806-26	Power Metal Strip Chip Resistor	0.018Ω,2512,2W,±1%,WSL2512R0180FEA18
R46, R47, R48	07-91209-00	Chip Resistor	12Ω,0603,1/10W,±1%,
R10, R17, R29, R35, R40, R65, R74, R78, R121	07-91009-00	Chip resistor	10Ω,0603,1/10W,±1%,RC0603FR-0710RL
R63, R117	07-91000-00	Chip Resistor	100Ω,0603,1/10W,±1%,RC0603FR-07100RL
R15, R49	07-92200-00	Chip resistor	220Ω,0603,1/10W,±1%,RC0603FR-07220RL
R95, R96, R100	07-91803-00	Chip resistor	180KΩ,0603,1/10W,±1%,RC0603FR-07180KL
R11, R13, R16, R19, R30, R36, R41, R53, R61, R62, R64, R71, R82, R90, R118	07-91001-00	Chip Resistor	1KΩ,0603,1/10W,±1%,RC0603FR-071KL
R87?	07-91201-00	Chip Resistor	1.2KΩ,0603,1/10W,±1%,RC0603FR-071K2L
R7, R14, R57, R81, R83, R88, R103, R124	07-92201-00	Chip Resistor	2.2KΩ,0603,1/10W,±1%,RC0603FR-072K2L
R80	07-93301-00	Chip Resistor	3.3KΩ,0603,1/10W,±1%,RC0603FR-073K3L
R8, R12, R43, R44, R45, R66, R70, R72, R84, R91, R94, R102, R104, R107, R108, R109, R115	07-91002-00	Chip Resistor	10KΩ,0603,1/10W,±1%,RC0603FR-0710KL
R75	07-91802-00	Chip Resistor	18KΩ,0603,1/10W,±1%,RC0603FR-0718KL
R5, R9, R60	07-92202-00	Chip resistor	22KΩ,0603,1/10W,±1%,RC0603FR-0722KL
R6, R20, R21, R22, R23, R24, R27, R31, R52, R56, R59, R76, R77, R89, R92, R105	07-94702-00	Chip Resistor	47KΩ,0603,1/10W,±1%,RC0603FR-0747KL
R4, R26	07-94702-01	Chip Resistor	47KΩ,0805,1/8W,±1%,RC0805FR-0747KL
R68, R85, R93, R97, R101, R106, R111, R112, R113, R114	07-91003-00	Chip resistor	100KΩ,0603,1/10W,±1%,RC0603FR-07100KL
R58	07-92203-00	Chip Resistor	220KΩ,0603,1/10W,±1%,RC0603FR-07220KL
R38	07-95601-00	Chip Resistor	5.6KΩ,0603,1/10W,±1%,RC0603FR-075K6L
R32, R33, R67, R73	07-91004-00	Chip Resistor	1MΩ,0603,1/10W,±1%,RC0603FR-071ML
R50, R51, R54, R55, R122, R123	07-91004-02	Chip Resistor	1MΩ,1206,1/4W,±1%,RC1206FR-071ML
R25	07-91209-02	Chip resistor	12Ω,1206,1/4W,±1%,RC1206FR-0712RL
R110, R116, R119, R120	07-93903-02	Chip resistor	390KΩ,1206,1/4W,±1%,RC1206FR-0712RL
R2, R3, R18, R28, R34, R37, R39, R42, R79, R86, R98, R99	07-96809-02	Chip Resistor	68Ω,1206,1/4W,±1%,RC1206FR-0768RL
R1	A07-70060-00	Thermistor	10Ω @25°C, ±25%, CL-60
	<b>CAPACITORS</b>		
C41, C50, C51, C52, C59, C66, C67	26-10251-00	Ceramic Chip Capacitor	1nK,50V,0603,X7R

C35, C36, C40, C45, C46, C53, C57, C61, C63, C68, C73, C74, C77, C78	26-10451-10	Ceramic Chip Capacitor	100nK,50V,0603,X7R
C47, C55, C56, C58, C60, C65	26-10511-20	Ceramic Chip Capacitor	1uK,16V,0603,X7R,C1608X7R1C105K
C44, C71	26-22421-00	Ceramic Chip Capacitor	220nK,25V,0603,X7R,C1608X7R1E224KT
C38, C43, C49, C54, C69, C72	26-22152-01	Ceramic Chip Capacitor	220pK,500V,0805,X7R,0805B221K501NT/HCM0805X7RR221K501PT
C64	26-47151-00	Ceramic Capacitor SMD	470pJ,50V,0603,NPO
C42	26-18112-00	Ceramic Chip Capacitor	180pJ,100V,NPO,0603,0603CG181J101NT
C48, C70, C75, C76	26-10362-12	High Voltage MLC Chip Capacitor	10nK,630V,X7R,1206,1206CC103KAZ1A
C37, C39	26-10412-01	Ceramic Chip Capacitor	100nK,100V,X7R,0805,C2012X7R2A104KT
C15, C16, C24	A05-10242-00	High Voltage Ceramic Capacitor	CT81-400VAC-08b-2E4-102M-YA
C8	A25-22422-09	Interference Suppression Capacitor	MPX,220nF,275VAC,±10%,X2,PX224K3ID39L27
C7, C10, C12, C14, C17	A25-47422-00	Interference Suppression Capacitor	MKP62/MPX,0.47uF, 275V, 10%,
C1, C2, C3, C4, C5, C6	06-10222-02	Alu Electrolytic Capacitor	HE-series,1000uF,200V,±20%,30*35mm,105 °C
C28	06-10131-07	Alu Electrolytic Capacitor	RD-series,100uF,35V,±20%,105 °C,F2.5
C23, C31	06-15211-02	Alu Electrolytic Capacitor	RD-series,1500uF,10V, ±20%,105 °C
C18, C19, C29, C30, C33, C34	06-22112-00	Alu Electrolytic Capacitor	RD,220uF,100V, ±20% 12.5X25MM
C11, C20, C21, C22, C25, C26, C27, C32	06-22131-10	Alu Electrolytic Capacitor	RD-Series 220uF,35V,±20%,F3.5
C9, C13	06-22061-03	Alu Electrolytic Capacitor	RD-series, 22uF, 63V, ±20%, 105 °C, F2.0
	<b>INDUCTOR</b>		
L10, L11, L12, L13	08-04331-01	Ferriet Bead	BLM21AG331SH1D, 330R/100MHz 1.5A,0805
L5	08-02065-00	Ferriet bead	65R/100MHZ 7A,BL01RN1A1F1J
L1, L2, L3, L4, L6, L7, L8, L9	J22-08318-00	Inductor	SC8318-145A,1uH/8A
	<b>MOSFET</b>		
T3, T4, T5, T6	31-06120-00	N-ch MOSFET	FDP61N20 TO220
T1, T2	31-32503-00	MOSFET	SPW32N50C3
	<b>TRANSFORMER</b>		
TR1, TR3	J08-02202-00	COMMON INDUCTOR	SC7619-145A,2mH,8A
TR4	J22-08191-00	Transformer	SC8191-145A
TR5	J22-07856-02	Transformer SBY	SC7856-145A REV.G
TR2	JA22-08887-01	Transformer	SC8887-145A
TR2	86-000202-0	3M Adhesive	#1350 or CT-280,W=34mm,BLK
TR2	86-000203-0	3M Adhesive	#1350 or CT-280,W=16mm,BLK
	<b>RELAY</b>		
K1	J13-15002-01	Connector	5mmPitch, 2Pin, PR01502VBVC(31027102)
K1	J13-25002-03	Connector	5mmPitch, 2Pin, RP02502HBWC(31107102)
K2	12-01102-04	RELAY	RT314012F,12V 1x16A
	<b>CONNECTOR</b>		
J3	13-22510-23	Connecter	CNT-1132-10
J1	13-23903-16	Connector	3.96mmPitch,3Pin,Pull the middle pin,VH-3A2

J1	or 13-23903-07	Connector	2P MV 8mm PCB JST
J2	13-26206-00	Connector	2X3P MV 6.2mm PCB JST,JST VL-series
	<b>FUSE</b>		
F1	A20-12123-01	FUSE	0215012.MXEP,T12AH/250V
F1	A78-000060-1	Heat Shrinking Tube	Φ6, CB-HFT
<b>MISC and Mechanical</b>			
<b>Mechanism parts</b>			
LEFT SPACER	85-320002-0	Nylon screw	M3-12N
RIGHT SPACER	61-023512-1	Machine Screw	MB3X12 ,Blue zinc plated
PRESPACER/2	61-063520-1	Machine Screw	MF3X20, Blue zinc plated
	61-063508-1	Machine Screw	MF3x8,Blue zinc plated
	61-063506-1	Machine Screw	MF3x6,Blue zinc plated
TNSTALL PCB	70-355002-0	Connection Heatsink	6063,black oxide
MECH19, MECH20, MECH21, MECH22, MECH23, MECH24, MECH25, MECH26, MECH27, MECH28	66-355001-0	Heatsink Spring Clip	Stainless steel
	70-355003-0	Plate Heatsink	AL1050A,T=3mm
	78-355003-0	Insupad	HF300P1.0, 55x30mm
	78-355001-0	Insupad	49X55X0.5mm, 5W/Mk
	78-355002-0	Insupad	58X55X0.5mm, 5W/Mk
	63-020309-0	Washer Spring	GB/T 93 Φ3 Blue zinc plated
	63-010308-1	Plain Washer	φ3,0.8mm
	62-010302-0	NUT M3 IIN934	M3
	78-251006-0	Insupad	Silicon(Grey),20X26mm
	86-251001-0	tape adhesive copper	W=19 mm(3M 1181 L=16.5m )
	21-06181-00	Link(φ0.6)	L=18mm
MECH14, MECH18	85-138102-0	Nylon Spacer	3-10mm Nylon
MECH3, MECH4	85-138103-0	Nylon Spacer	3-7.5
	85-355001-0	Threaded Spacer	TPS-10
	62-110302-0	Plastic NUT	Nylon66,M-3
	94-355008-0	PCB Voltage Label	39x13mm,White PET
<b>PCB-8: SMPS STB BOARD</b>			
<b>CIRCUIT NO.</b>	<b>PART NO.</b>		<b>DESCRIPTION</b>
	A16-62208-21	SMPS STB PCB	VM1.0,FR-4,1.6mm,2Layers,2oz, TG130
	<b>DIODES</b>		
D301	33-30062-00	BRIDGE RECTIFIER	B6S, 0.8A 600V
D306	33-44148-17	Switch Diode	1N4148W-NR
D304	33-40321-00	Switch Diode	BAS321
D305	33-20036-00	Schottky Rectifier Diode	SS36B
DW301	33-12000-03	Zener Diode SMD	20V, 3W, BZG03C20
D302	33-20020-00	Super Fast Rectifier Diode	BYG20J-E3/TR3
D303	33-00200-01	Transient Voltage Suppressor	P4SMA200A
	<b>ICS</b>		
IC302	03-00431-05	Regulator	TL431CDBZR
OP301	A03-00817-03	Photo Coupler	PC817B

IC303	03-00017-01	Automatic X Cap Discharge IC	CAP017DG-TL SO-8 CAP017DG-TL
IC301	03-00274-00	Power controller IC	TNY274PN
	<b>RESISTORS</b>		
R301	07-91009-01	Chip resistor	10Ω,0805,1/10W,±1%,RC0805FR-0710RL
R306	07-91000-01	Chip resistor	100Ω,0805,1/8W,±1%,RC0805FR-07100RL
R311	07-92200-01	Chip resistor	220Ω,0805,1/8W,±1%,RC0805FR-07220RL
R307	07-91001-01	Chip resistor	1KΩ,0805,1/8W,±1%,RC0805FR-071KL
R309, R310	07-92201-01	Chip resistor	2.2KΩ,0805,1/8W,±1%,RC0805FR-072K2L
R308	07-91002-01	Chip resistor	10KΩ,0805,1/8W,±1%,RC0805FR-0710KL
R305	07-92202-01	Chip resistor	22KΩ,0805,1/8W,±1%,RC0805FR-0722KL
R312	07-94701-01	Chip resistor	4.7KΩ,0805,1/8W,±1%,RC0805FR-074K7L
R302, R304	07-90184-02	Chip resistor	180KΩ,1206,1/4W,±5%,RC1206JR-07180KL
TH301	A07-70080-01	NTC	SCK08082MSY, 8Ω 2A
ZV301	A07-70471-00	TVS	471KD14
	<b>CAPACTIOR</b>		
C309	26-10151-01	Chip capacitor	100pJ,50V,0805,NPO,C2012C0G1H101JT
C305, C306, C307, C308	26-10451-01	Ceramic Chip Capacitor	100nZ,50V,0805,Y5V
	<b>TRANSISTORS</b>		
Q301	31-02878-00	transistor	2SC2878
	<b>CAPACTIOR</b>		
C301	06-10042-00	Alu Electrolytic Capacitor	CD11H,10uF,400V,±20%,105°C,F5.0
C302	06-10051-02	Alu Electrolytic Capacitor	CD263, 10uF, 50V, ±20%, Pitch=2.5mm
C304	06-10211-05	Alu Electrolytic Capacitor	CD263X,1000uF,10V,±20%,105°C,F5.0
C303	06-10211-08	Alu Electrolytic Capacitor	CD287,1000uF,16V,±20%,105°C,F5.0
CX303	A25-10422-07	Interfernece Suppression Cap	MPX,0.1uF/275V,13mm*6mm,10%,Pitc h=10mm
CX302	A25-47422-02	Interfernece Suppression Cap	MKP62, 470nF, 275VAC, X2, ±10%
CX301	A25-10522-02	Interfernece Suppression Cap	MKP62, 1UF, 275VAC, X2, ±20%
CY301, CY303, CY302	A05-10242-00	Hign Voltage Cermatic Capacitor	1nF, 400V(X1), 250V(Y1), ±20% CT81-400VAC-08b-2E4-102M-YA
	<b>INDUCTOR</b>		
L301	08-02339-00	Inductor	3.3uH
L304	08-05551-01	Inductor	HJ-M22-PFC-L
L302, L303	22-00025-09	common mode line chokes	LE-T25M, ≥8mH
	<b>RELAY</b>		
K301	A12-03101-02	POWER RELAY	832A-1A-C-BH DC5V
	<b>FUSE</b>		
F301	A20-12122-04	FUSE	5ET-013HA,T1.25A/250V
	<b>CONNECTORS</b>		
P301, P302	32-26308-06	Connector	KY250
J302	13-22503-00	Connector	XHB 2.5A-3A
J303	13-23903-01	Connector	LD7.92A-2A, (VH 3.96A-3A, Pull the middle pin)

	<b>TRANSFORMER</b>		
T301	A22-00016-38	Transformer	HJ-M22/M27-EE16,Black tape
	<b>CONNECTORS</b>		
	A11-01201-03	Rocker Switch	1552.3112
	A20-12103-00	Fuse	0618010.XP,T10AL/250V
	A17-07103-08	AC Inlet	
Chassis TO AC INLET	A14-26501-01	1PIN CBALE	UL1672#18AWG,L=100mm,Add the circular
	19-22008-00	Ferrite Ring	HJ-2208,T22x14x8 10K,Ferrite Ring
L/N - STANDBY PCB	A14-62202-00	WIRES	UL1672#16AWG, , L=400mm
FUSE SEAT-SWITCH	A14-33201-01	1PIN CBALE	L=70mm
POWER SOCKET -SWITCH	A14-32201-04	Wire	UL1672#16AWG, L=70mm
STANDBY PCB-SMPS	A14-32702-01	WIRES	UL1672#18AWG,L=250mm
STANDBY PCB-MCU PCB	14-62203-01	wire	UL1007#22AWG, L=300mm
SMPS-MCU PCB	14-32706-00	Wire	UL1015#16AWG/18AWG, L=130mm
SMPS-MCU PCB	14-62210-00	Wire	UL2468#24AWG,L=180mm
	<b>ACCESSORIES</b>		
	A20-12103-00	Fuse	0618010.XP,T10AL/250V
	JA15-16250-00	AC Cord	LP-34 & H05VV-F 3x1.00mm2 6' BLK & LS-60
	or A15-10230-20	AC Cord	T973-C
	JA15-16120-12	AC Cord	LP-31 & SJT 14/3C BLK L=1800 & LS-13
	or A15-16120-11	AC Cord	AP-003 & SJT 14/3C BLK L=2000 & AP-005
	or A15-16120-10	AC Cord	T973-AH
	<b>METAL PARTS</b>		
	70-375910-0	Fascia Assy	
	(70-375008-0A)	Center Front Fascia	AL 6063-T5
	(70-375007-0A)	Left Front Fascia	AL 6063-T5
	(70-375009-0A)	Right Front Fascia	AL 6063-T5
	(70-375010-0)	Back Fascia	AL 6063-T5,
Left Front Fascia (4) , Right Front Fascia (4)	61-224510-1	Hex Screws	GB/T70.1, HM4x10, nickel plating
Center Front Fascia (4)	61-063506-0	Machine Screw	MF3x6,Black zinc plated
Center Front Fascia (4)	61-024208-0	Self Tapping Screw	BTB4x8,Black zinc plated
	70-375002-0	Left Side Panel	AL 6063-T5
	70-375003-0	Right Side Panel	AL 6063-T5
	67-267005-0	Vent sheet	Stainless Steel, T=0.5mm,black Painting
	70-267007-1	Main Top Cover	6063 T5
	70-267008-0	Second Top Cover	Al1050 T=3.0mm
	67-267004-0	Perf Sheet	SPCC, T=0.5mm,Black Painting
	67-375005-0	Connector Bracket	SECC-N5 T=1.0mm
	65-375005-0	Connector Bracket	SECC-N5 T=1.0mm
	67-375003-0	Fascia Connect Sheet	SECC N5 T=1.2mm, Painting Black
	65-375003-0	Fascia Connect Sheet	SECC N5 T=1.2mm
	67-355011-0	Logo Clamp	SECC N5 T=1mm,Painting Black
	65-355011-0	Logo Clamp	SECC N5 T=1mm
	67-355012-0	Logo Clamp	SECC N5 T=1mm,Painting Black

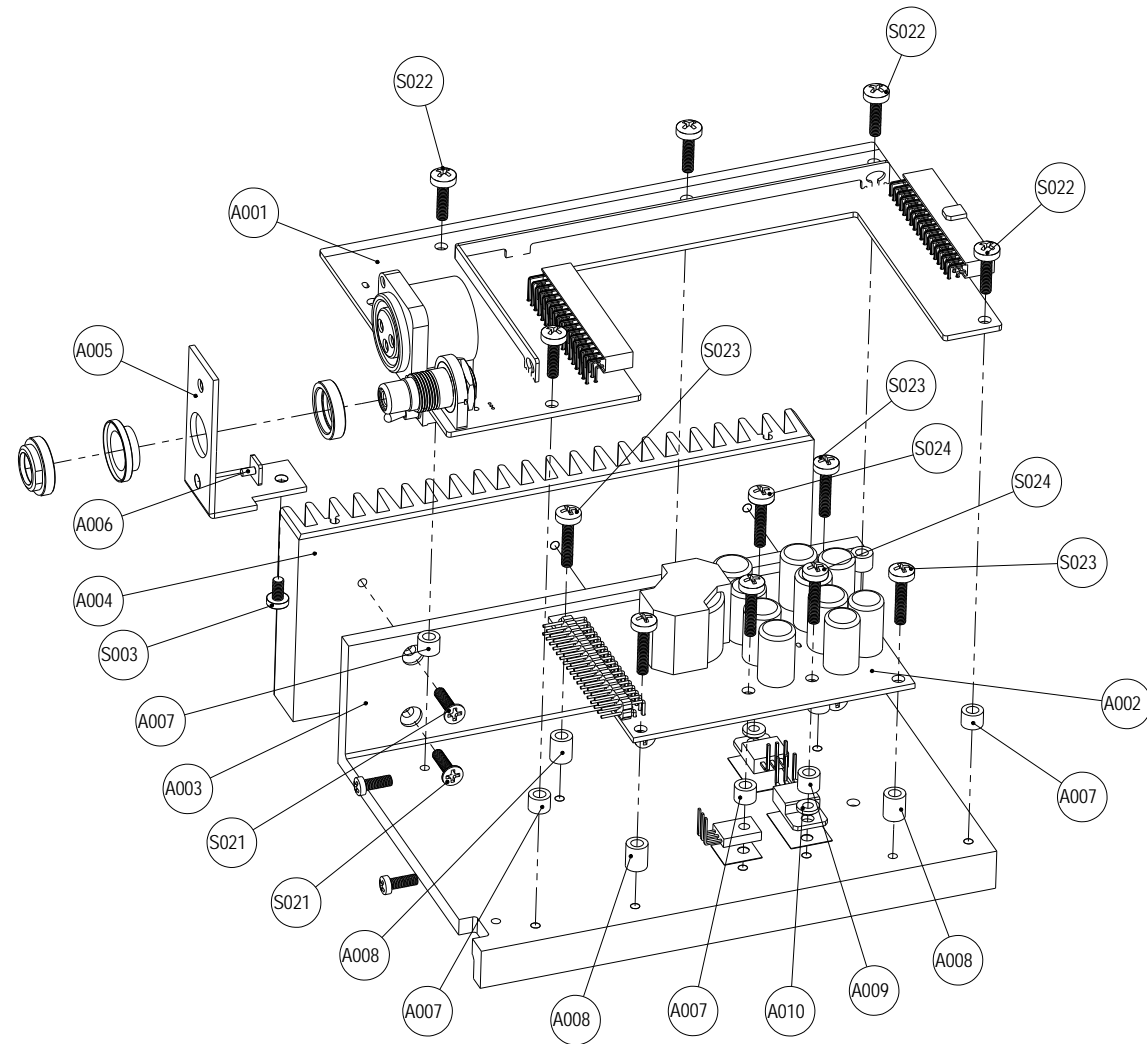
	65-355012-0	Logo Clamp	SECC N5 T=1mm
	67-375001-1	Chassis	SECC-N5 T=1.2mm
	65-375001-1	Chassis	SECC-N5 T=1.2mm
	67-375002-0B	Rear Panel	SECC-N5 T=1.0mm
	80-375002-0	Rear Panel	SECC-N5 T=1.0mm
	65-375002-0	Rear Panel	SECC-N5 T=1.0mm
	67-375012-0A	Rear Panel	SECC-N5 T=1.0mm
	80-375002-0	Rear Panel	SECC-N5 T=1.0mm
	65-375002-0	Rear Panel	SECC-N5 T=1.0mm
	J71-267002-0	Masters II Feet	
	71-267003-0	Feet Shoe Assy	
	J71-267903-0	Masters II Feet Shoe	
	78-267001-0	Feet PAD	Poron MX-48HF BLACK
	J71-355001-0A	NAD Logo	
	96-355001-0A	Touch Key Cap	18*6*2
	69-355002-0	Touch Key Copper plate	T2Y2 T=0.2mm
	86-355001-0	Adhesive tape	3M 9448,T=0.1mm
<b>FASTENERS</b>			
	61-273308-1	Self Tapping Screw	M2.9x18x8
AMP Heatsink (4x2)	61-023208-0	self tapping screw	BTB3x8
Hypex Power Module (6)	61-023508-0	Machine Screw	MB3x8
STB BOARD(4)	61-023506-1	Machine Screw	MB3x6
Touch Key Board (2) , Logo Clamp (4)	61-023206-0	Self Tapping Screw	BTB3x6
Fascia Connect Sheet (4) ,Rear Panel (4)	61-033208-0	Self Tapping Screw	BTP3x8
Vent sheet (12)	61-022205-6	Self Tapping Screw	BTB2.6x5
MCU Board (5) , Connector Bracket(4), RCA BRACKET (2) , Trigger Board(2),	61-023106-0	self tapping screw	STB3x6
Loam Cake(15), Logo PCB(2), Fascia Connect Sheet(4)	61-023506-0	Machine Screw	MB3x6
Loam Cake (15)	63-010309-5	Plain Washer	Φ3xΦ9.5mm, 8mm
Loam Cake(7)	J61-234510-1	Machine Screws	M4X10,
Chassis (14)	61-024506-0	Machine Screw	MB4x6
AC INLET(2)	61-073208-0	Self Taping Screws	BT03X8
Grounding (1)	62-010402-0	Nut	GB6170-86, M4
Grounding (1)	63-020411-0	Spring Washer	GB93-87 φ4
Grounding (1)	63-010408-0	Plain Washer	GB97.1-85 φ4
	62-010402-0	Nut	M4
	63-040408-0	Spring Washer	M4 GB862.2 4
	71-003002-0	Grd.Post Cap	
160 HPB59-1	71-003001-1	Grd.Post Bolt	
	63-010408-3	Plain Washer	GB/T97.1, 24, L3
<b>ACCESSORIES</b>			
	85-046001-0	Wire Saddle Side Entry	WCL-4
	84-001003-0	Cable Tie	YJ-100, Black
	79-355001-0	Shock Absorber Pad	IEPE Foam , Black, 318mmx12mmx0.5mm
	A78-000350-0	HEAT SHRINKING TUBE	Φ35, CB-HFT



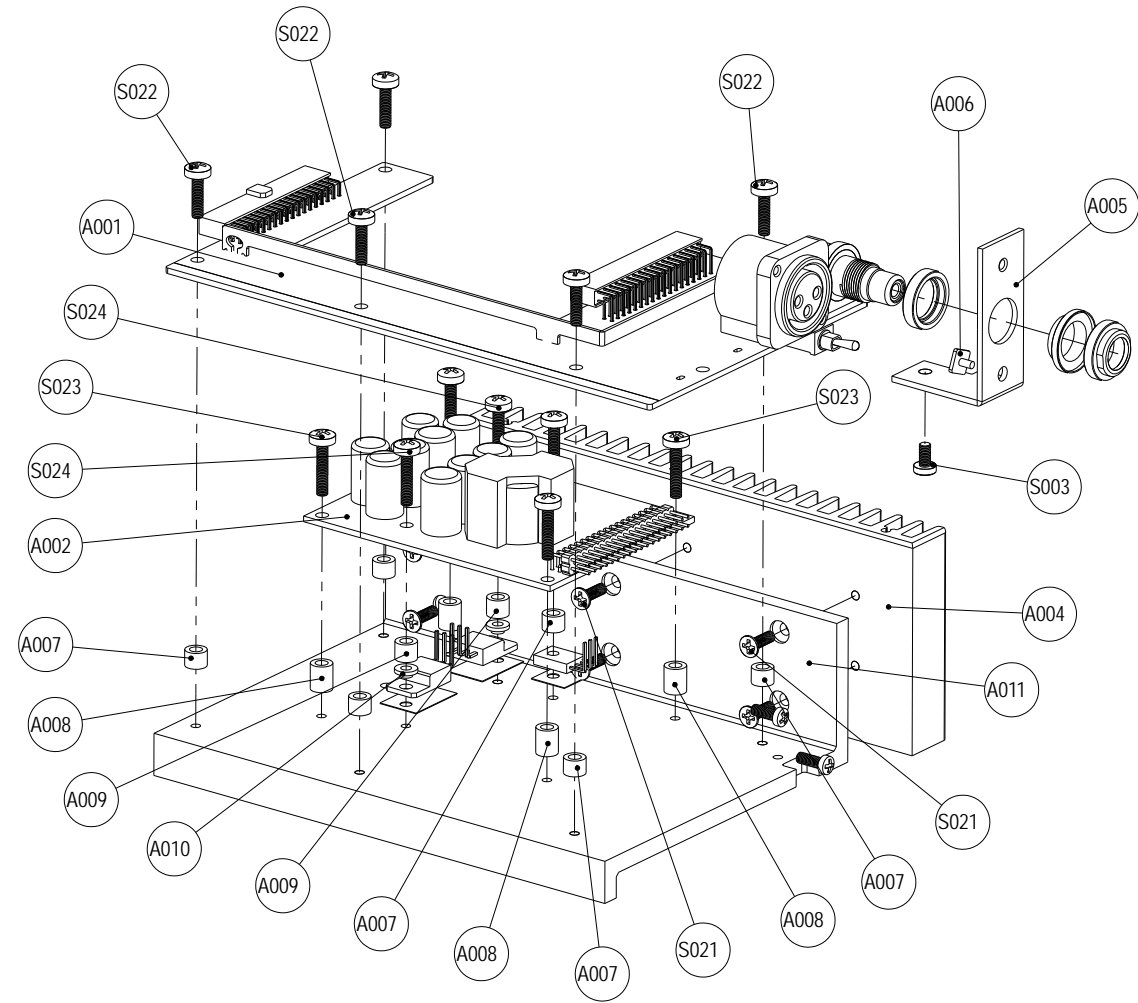
	79-158012-0	EVA Foam	EVA Foam 162X15mm , T=1mm
	79-375002-0	LED Board Foam	EVA,black,50x52mm,T=1mm
<b>PACKING</b>			
	88-375001-0A	Carton Box	547*495*219mm
	N88-375003-1	Paper Corner	50*50*5mm,L=197mm
	89-355901-0	Cushions Assy	
	88-355005-0A	Paper Formed Box	
	88-355006-0	Cushion First Layers	BC, 525*480*7mm
	88-355007-0	Cushion Second Layers	BC, 525*480*7mm
	88-355008-0	Cushion Third Layers	BC, 尺寸:525*480*7mm
	88-355009-0	Cushion Forth Layers	525*480*7mm
	88-355010-0	Cushion Last Layers	525*480*7mm
	89-355001-0	Main Pulp	523mmX478mmX92.5mm
	89-355003-0	Accessory Pulp	286mmX180mmX47mm
	89-355004-0	Shoe Cover Pulp	118mmX111mmX14mm
	88-355003-0A	Cables Box	306mmX187mmX52mm
NAD Logo	90-355002-0	woven bag	L620xW530,black
	88-351006-0A	accessory box	
	88-355004-0A	Cleaning Cloth bag	L160xW110
	90-355001-0	Cleaning Cloth	150mmx150mm
	30-49622-00	USB 说明书	2G
	37-00200-01	USB Disk	2G ,L-008
	30-49623-00	Quick Setup Guide	157g,370X287mm
	30-05000-00	Desiccant	50g 90x110,
	30-51500-01	Guarantee Card	210X148mm
Rear Panel(1), Carton Box(2),Traveler(1)	94-375003-0	Serial No. Label	53x10mm(selfcommand)
	86-005310-0	Copperplate Label	53x10mm,base color:Pantone cool gray 6C
Carton Box(2)	94-375006-0	Product Barcode Label	40x30mm(selfcommand)
	86-004030-0	Copperplate Label	40x30mm,base color:Pantone cool gray 6C
Carton Box(2)	94-375016-0	Product Barcode Label	40x30mm(selfcommand)

	86-004030-0	Copperplate Label	40x30mm,base color:Pantone cool gray 6C
	94-054002-0	Grouding Label	φ10

## M22 Amp Module L



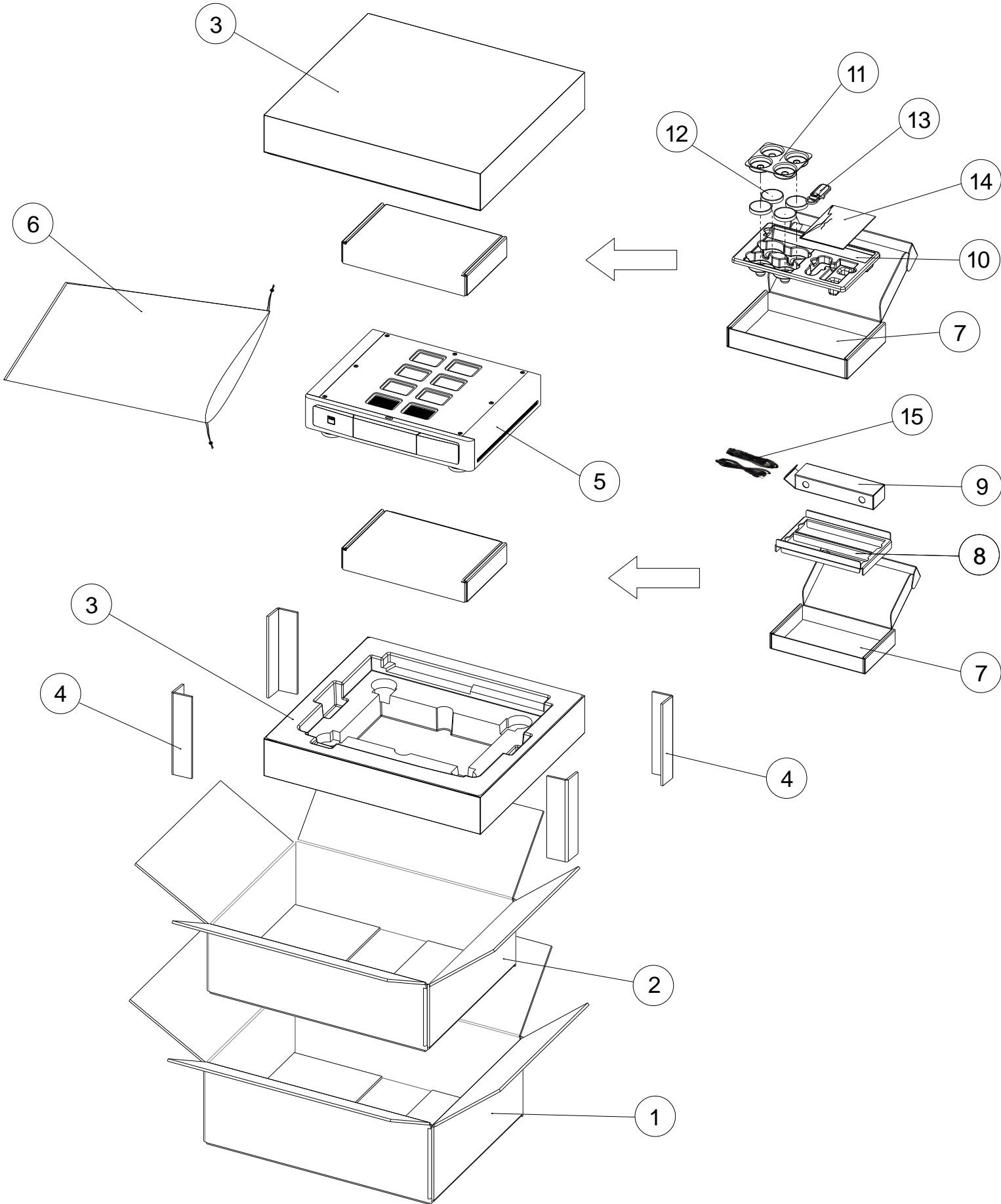
## M22 Amp Module R



REF.NO	Part No.	Description	Qty.
A001	01-62202-00	AMP Board	2
A002	01-62203-00	NC400 OEM Board	2
A003	70-375006-1	L Heatsink Left	1
A004	70-375004-0	Main Heatsink	2
A005	67-375004-0	RCA Bracket	2
A006	76-001002-1	LED Lens	2
A007	70-138003-0	AL Spacer	12
A008	70-137003-0	AL Spacer	8
A009	70-355013-0	AL Spacer	4

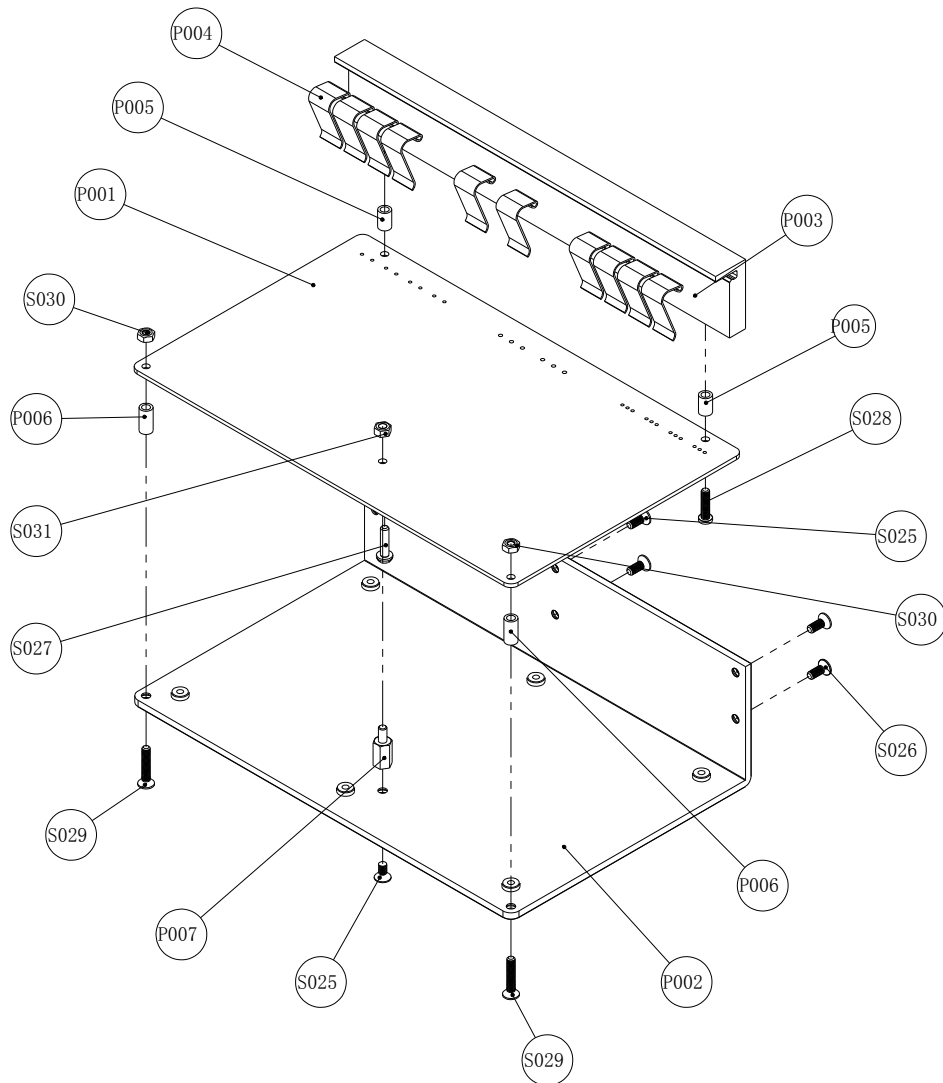
REF.NO	Part No.	Description	Qty.
A010	78-015002-0	Screw insulator M3	4
A011	70-375005-1	L Heatsink Right	1
S003	61-023206-0	Self Tapping Screw BTB3X6	2
S021	61-063510-0	Machine Screw MF3X10	12
S022	61-023212-0	Self Tapping Screw BTB3X12	10
S023	61-063520-1	Self Tapping Screw BTB3X15	8
S024	61-023515-0	Machine Screw MB3X15	6

# M22 Packing Exploded View



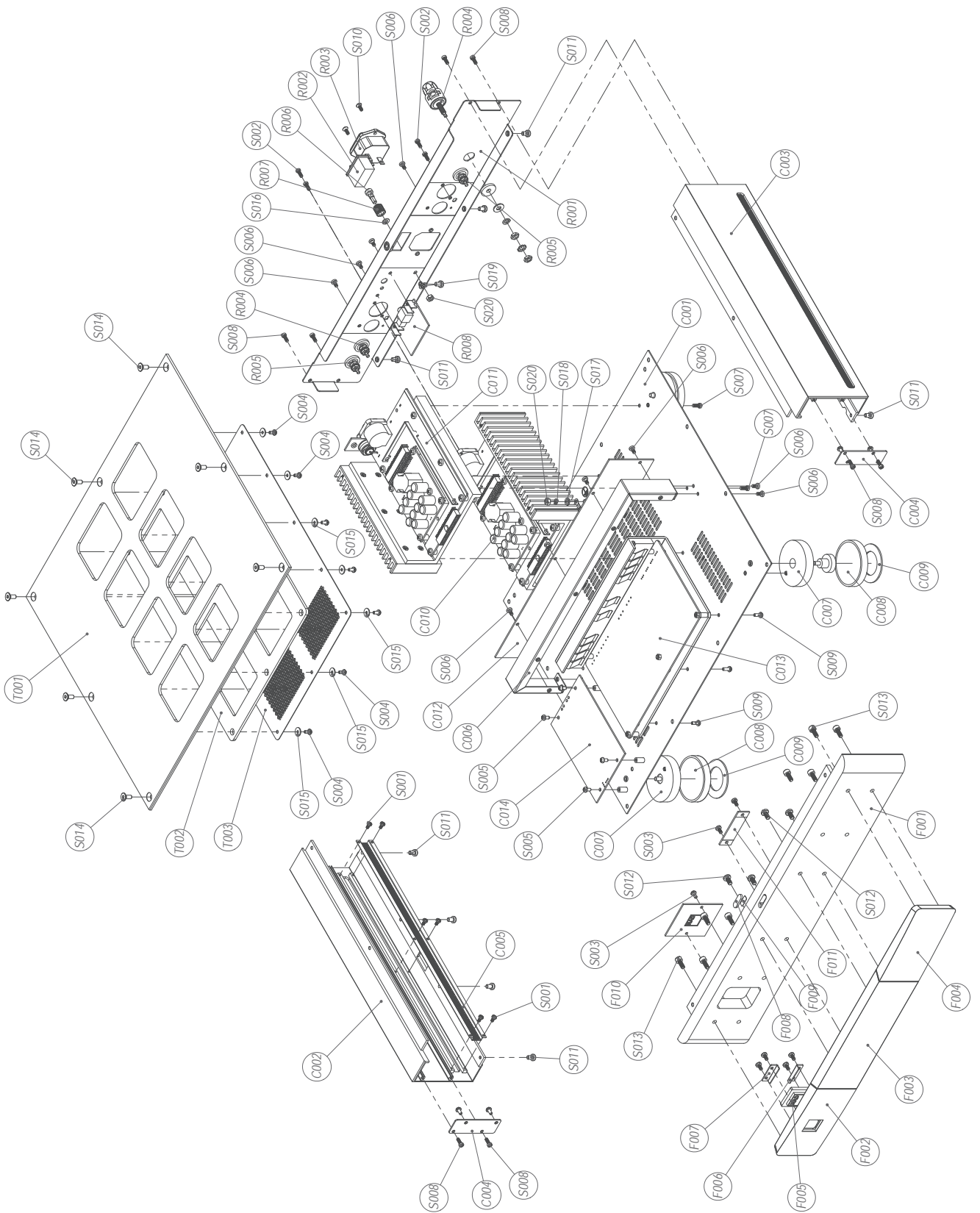
REF.NO	Part No.	Description	Qty.
1	88-375004-0A	Shipping Box	1
2	88-375001-0A	Carton Box	1
3	89-355901-0	Cushions Assy	2
4	88-375003-1	Paper Corner	4
5	00-62200-10	M22 Unit (AH Version)	1
	00-62200-20	M22 Unit (C Version)	1
6	90-355002-1	Woven Bag	1
7	88-355003-0A	Accessory Box	2
8	88-267002-0	Accessory Box Sheet	1
9	88-351006-0A	Cable Box	1
10	89-355003-0	Accessory Pulp	1
11	89-355004-0	Shoe Cover Pulp	1
12	J71-267903-0	Masters II Feet Shoe	4
	78-267001-0	Feet PAD	4
13	30-49622-01	Instruction Manual	1
14	88-355004-0A	Cleaning Cloth bag	1
	90-355001-0	Cleaning Cloth	1
15	JA15-16250-00	AC Cord	C:1
	or A15-10230-20	AC Cord	C:1
	JA15-16120-12	AC Cord	AH:1
	or A15-16120-11	AC Cord	AH:1
	or A15-16120-10	AC Cord	AH:1

# M22 SMPS Exploded View



REF.N0	Part No.	Description	Qty.
P001	01-62207-10	SMPS BOARD (AH)	AH:1
	01-62207-20	SMPS BOARD ( C)	C:1
P002	70-355003-0	Plate Heatsink	1
P003	70-355002-0	Connection Heatsink	1
P004	66-355001-0	Heatsink Spring Clip	10
P005	85-138103-0	Nylon Spacer	2
P006	85-138102-0	Nylon Spacer	2
P007	85-355001-0	Threaded Spacer	1
S025	61-063506-1	Machine Screw MF3X6	4
S026	61-063508-1	Machine Screw MF3X8	4
S027	85-320002-0	Nylon screw M3-12N	1
S028	61-023512-1	Machine Screw MB3X12	1
S029	61-063520-1	Machine Screw MF3X20	2
S030	62-110302-0	Plastic NUT,Nylon66,M-3	1
S031	62-010302-0	NUT M3	2

# M22 ASSY EXPLODE VIEW



## M22 EXPLODED VIEW PARTS LIST

REF.NO	PART NO.	DESCRIPTION	Qty.	REF.NO	PART NO.	DESCRIPTION	Qty.
C001	67-375001-1	Chassis	1	R002 	A11-01201-03	Rocker Switch	1
C002	70-375002-0	Left Side Panel	1	R003 	A17-07103-08	AC Inlet	1
C003	70-375003-0	Right Side Panel	1	R004	17-03001-16	Binding Post	2
C004	67-375003-0	Fascia Connect Sheet	2	R005	17-03001-17	Binding Post	2
C005	67-267005-0	Vent sheet	2	R006	71-003002-0	Grd.Post Bolt	1
C006	67-375005-0	Connector Bracket	2	R007	71-003001-1	Grd.Post Cap	1
C007	J71-267002-0	Masters II Feet	4	R008	01-62204-00	Trigger Board	1
C008	J71-267903-0	Masters II Feet Shoe	4				
C009	78-267001-0	Feet PAD	4	T001	70-267007-1	Main Top Cover	1
C010	01-62290-00	AMP Board Module (Left)	1	T002	70-267008-0	Second Top Cover	1
C010	01-62280-00	AMP Board Module (Right)	1	T003	67-267004-0	Perf Sheet	1
C012	01-62201-00	MCU Board	1				
C013	01-62207-10	SMPS Board(AH)	1	S001	61-022205-6	Self Tapping Screw BTB2.6x5	12
	01-62207-20	SMPS Board(C)	1	S002	61-273308-1	Self Taping Screws M2.9x18x8	4
C014	01-62208-00	SMPS STB BOARD	1	S003	61-023206-0	Self Taping Screws BTB3x6	6
				S004	61-373506-0	Machine Screw M3x6	21
				S005	61-023506-1	Machine Screw M3x6,Ni	4
F001	70-375010-0	Back Fascia	1	S006	61-023106-0	Self Taping Screws STB3x6	13
F002	70-375007-0A	Left Front Fascia	1	S007	61-023208-0	Self Taping Screws BTB3x8	8
F003	70-375008-0A	Center Front Fascia	1	S008	61-033208-0	Self Taping Screws BTP3x8	8
F004	70-375009-0A	Right Front Fascia	1	S009	61-023508-0	Machine Screw M3x8	6
F005	J71-355001-0A	NAD Logo	1	S010	61-073208-0	Self Taping Screws BTO3x8	2
F006	67-355011-0	Logo Clamp	1	S011	61-024506-0	Machine Screw M4x6	14
F007	67-355012-0	Logo Clamp	1	S012	61-024208-0	Self Taping Screws BTB4x8	4
F008	96-355001-0A	Touch Key Cap	1	S013	61-224510-1	Hex Screws HM4x10,Ni	8
F009	69-355002-0	Touch Key Copper plate	1	S014	J61-234510-1	Machine Screw M4x10	7
F010	01-32706-00	LED Board	1	S015	63-010309-5	Plain Washer Φ3xΦ9.5mm	15
F011	01-32705-00	Touch Board	1	S016	63-010408-3	Plain Washer GB/T97.1, Φ4,Ni	1
				S017	63-010408-0	Plain Washer GB/T97.1, Φ4	1
				S018	63-020411-0	Spring Washer GB93-87, Φ4	1
R001	67-375002-0B	Rear Panel(AH)	1	S019	63-040408-0	Tooth Washer GB862.2 4, Φ4	1
	67-375012-0A	Rear Panel(C)	1	S020	62-010402-0	Nut	2