7. Schematic Diagram

7-1 Overall Block Diagram

FRONT PART

A/D CONVERTER
WM8775

TUNER
AUX1
AUX2

DOUT

CE DI CL

MCLK LRCK BCLK

U-COM

KARAOKE PART(OP)

WIRELESS MIC Module

MIC

CE DI CL

MCLK LRCK BCLK

U-COM

COMPONENT OUT
COMPOSITE OUT

VIDEO FILTER
LA73054

YDAC VDAC
UDAC CDAC

DRAM

HDMI OUT

HDMI TRANSMITTER
SIL9030CTU80

HDMI DO
HDMI DI

1080P
24bit

UP-SCALE
(1080P)
ABT1010

OPTICAL IN1
OPTICAL IN2

74LCX157

SCORE BLOCK

MIC SIGNAL

SCORE IC

SCORE OUT

VFD

KEY IN
REMOCON

DISPLAY
DRIVER
S5G5128

BUZZER

USB

USB
CONTROLLER
UBI9022

CE
DI
CL

u-COM

LC875C00

P-RESET
P-TXD
P-RXD
P-STB
P-ACK

SUB_I2C

MIC(OP)

TSDO0
TSDO1
TSDO2

DAC
WM8746

MiX

MCLK
BCLK
LRCK

TSDO0
TSDO1
TSD2

P-RESET
P-TXD
P-RXD
P-STB
P-ACK

MPEG DECODER
(ES8381FCC UB)

BT656 480P

SCORE 1n

CCIR656

DRAM

ROM

SCSJ
DATA
SCLK

RF/CE/FE
TE/SBAD

TRACKING
SLED
FOCUS

A/B/C/D/E/F

MOTOR
DRIVER IC
BA5954FP

TRACKING
FOCUS
SLED+/-

DVD DECK

FAN8082

OPEN
CLOSE

MAIN PART

TAS5121 FL
TAS5121 FR
TAS5121 C
TAS5121*2 SW
TAS5121 SL
TAS5121 SR

PWM MODULATOR
PS9829B

EXT_MUTE
SO/SDA
SCK/SCL
S1/I2C-AD0
CS/I2C-AD2
RESET

TSDO0
TSDO1
TSDO2

RESET

CS
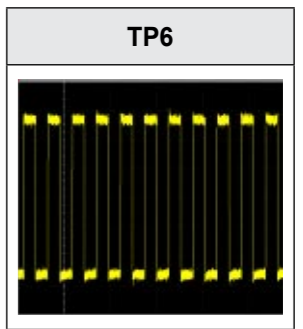
ADC
AK5384
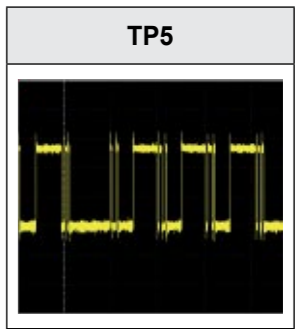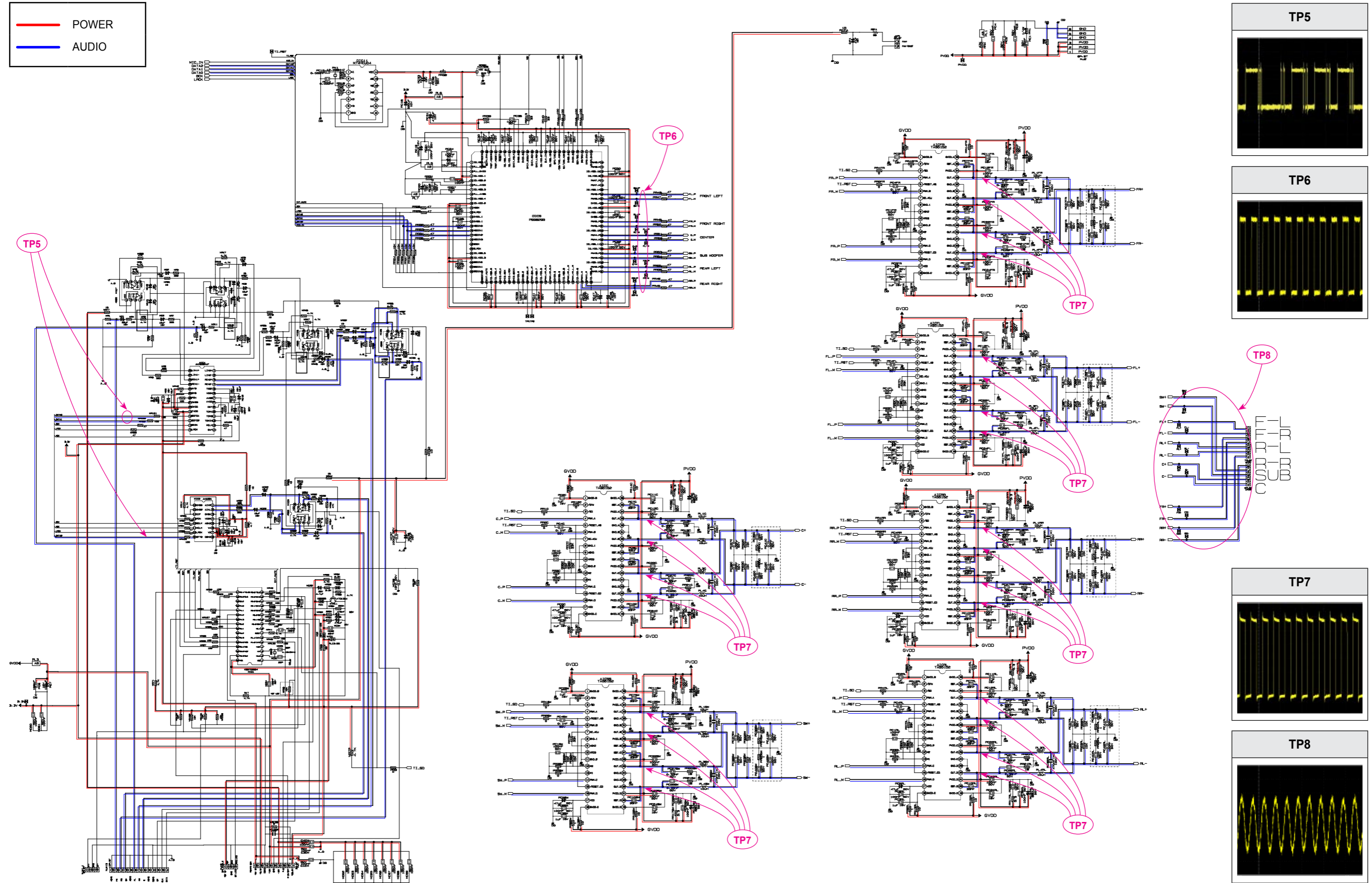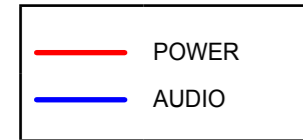
SUB-UCOM

I2C

SUB_I2C

AMP PART

AUDIO
VIDEO
CONTROL

■ The Main System uses the MPEG(ES 8381), the Up_scaler(FLI2301) and the Tx(SiI9030) of HDMI. The Main System consists of major circuit blocks such as HDMI, POWER, CEC, Front, Karaoke, etc. The Main System includes the functional blocks such as FM-Tuner, Input, ADC, Sub_Micom IC, etc.

■ Display is connected with VFD.

■ Audio signal is transmitted through Analog 2V between the main body and the sub woofer and is input to the AMP through ADC(AK5384).
First, MPEG(ES8381) receives RF signal from the PICK_UP and decodes video and audio signal.

■ HDMI IC is implemented by the I2C. The Micom and MPEG control each other through RXD and TXD communication.

■ The Power supplies voltages for each component using the SMPS. The Power can be switched turned on or off through the Micom port.
The functions can be controlled by the Touch Key and the DPL2 functions can be controlled with the remote control.
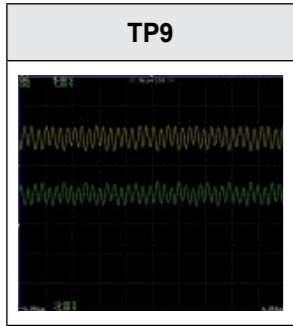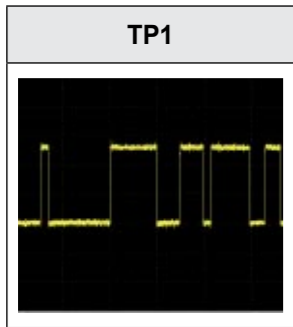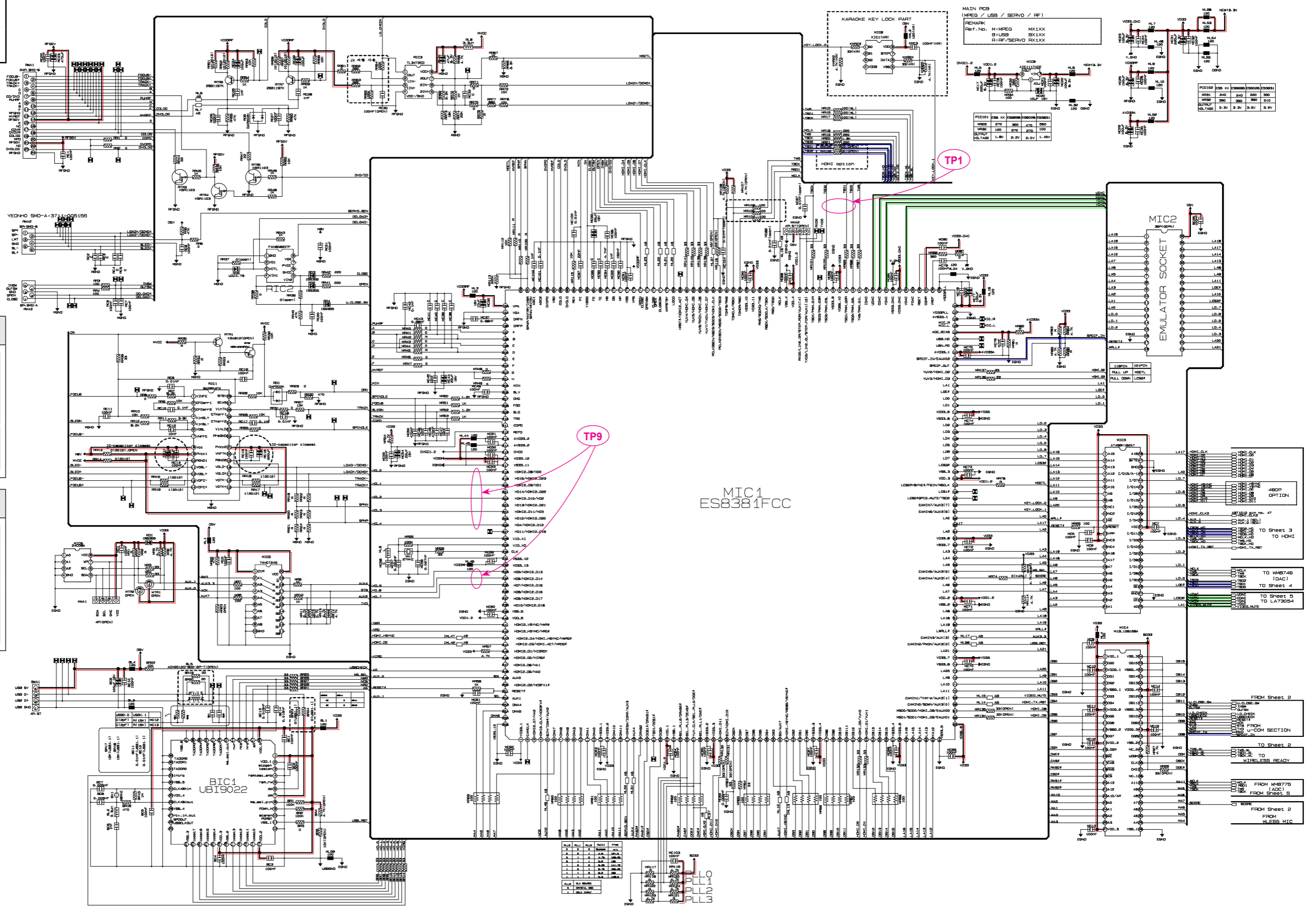
7-2 FRONT

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7-3 AMP

POWER
AUDIO

TP5

TP6

TP7

TP8

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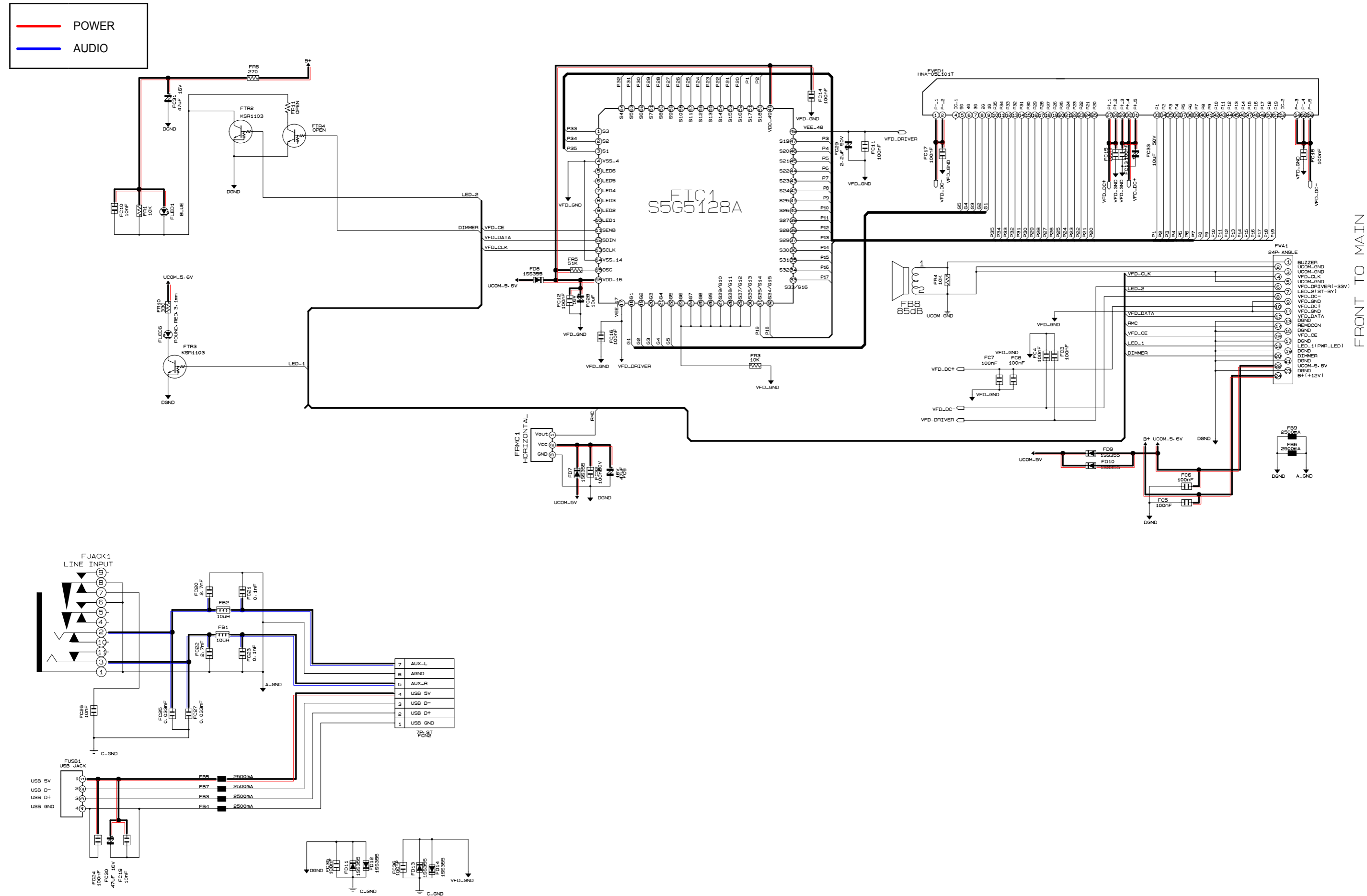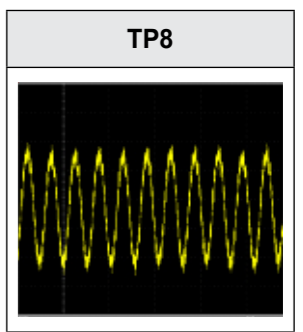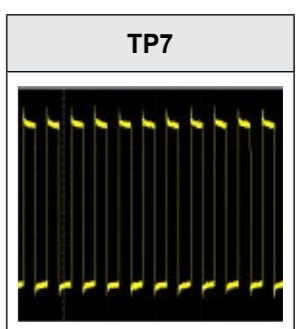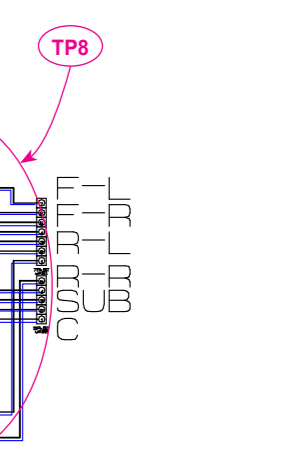
7-4 MPEG/MAIN

▬▬	POWER
▬▬	AUDIO
▬▬	VIDEO

MAIN PCB
(MPEG / USB / SERVO / RF)

KARAOKE KEY LOCK PART

REMARK
Ref.No. M:MPEG   MX1XX
        B:USB   BX1XX
        R:RF/SERVO RX1XX

TP1

TP9

MIC2

EMULATOR SOCKET

MIC1
ES8381FCC

480P
OPTION

TO Sheet 3
TO HDMI

TO WM8746
(DAC)
TO Sheet 4

TO Sheet 5
TO LA73054

FROM Sheet 2

FROM
U-COM SECTION

TO Sheet 2
TO
WIRELESS READY

BIC1
UBI9022

FROM WM8778
(ADC)
FROM Sheet 5

FROM Sheet 2
FROM
WLESS MIC

PLL0
PLL1
PLL2
PLL3

7-5 MICOM/MAIN

POWER

MAIN PCB
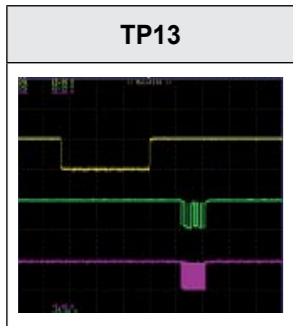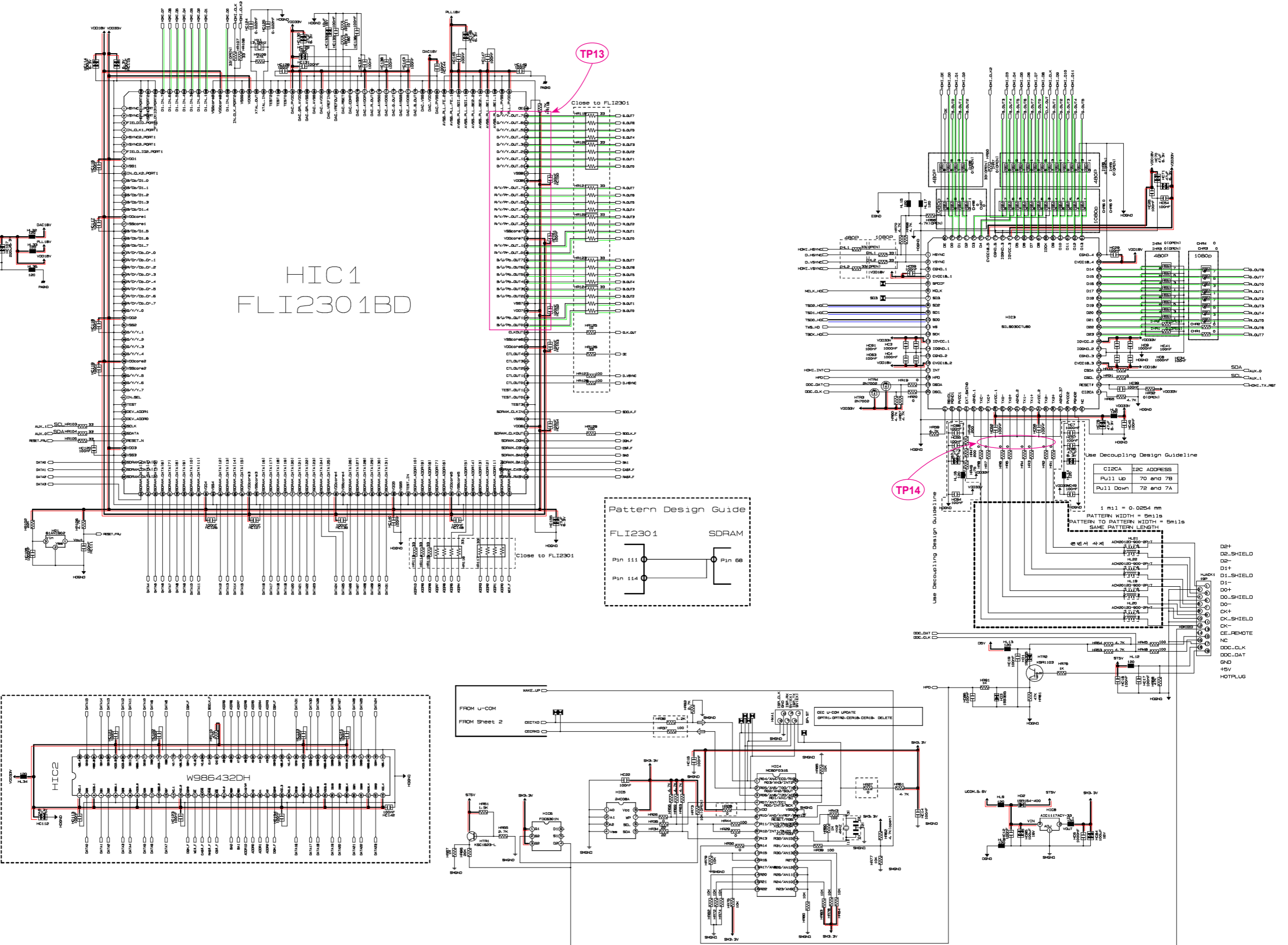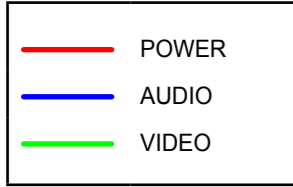(u-COM/TUNER/WIRELESS READY/FORNT CONNECTOR/JACK PCB WAFER/DOWN LOAD)

REMARK
Ref.No. U:u-COM   UX1X
        O:OPTICAL OX1X
        T:TUNER   TX1X
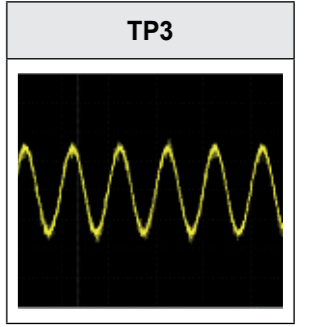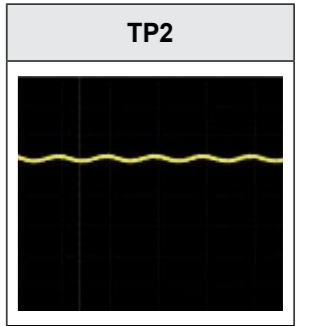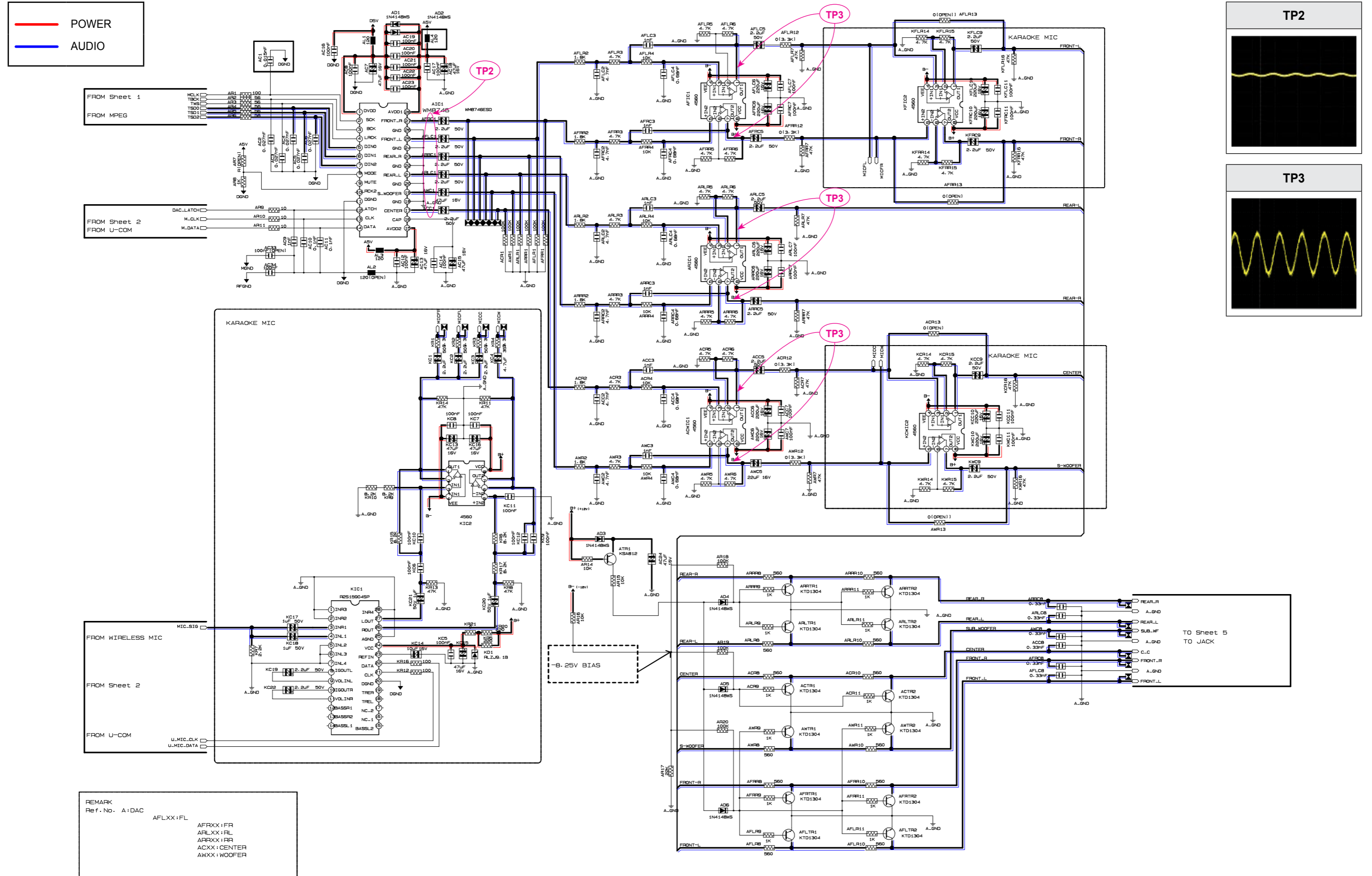
OPTION TABLE
TUNER	UD1, UD2, UD3, UD4(RDS ON)
REGION CODE	UD5(1)UD6(2)UD5 AND UD6(3)
	UD7(4=MAXICOLD) AND UD8(6)
	UD7 ABD UD5(5)
TV TYPE	UD8 AND UD9 = X X (NTSC)
	UD8 AND UD9 = O (PAL)
	UD8 AND UD9 = O O (PAL N. M)
DSP	UD10 (SDSM)
V-CD	UD11
WIDE TV	UD13(Y. PB. PR)UD16(WIDE TV)
HDMI	UD18
USB	UD19
DVDAUDIO	UD21

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Samsung Electronics
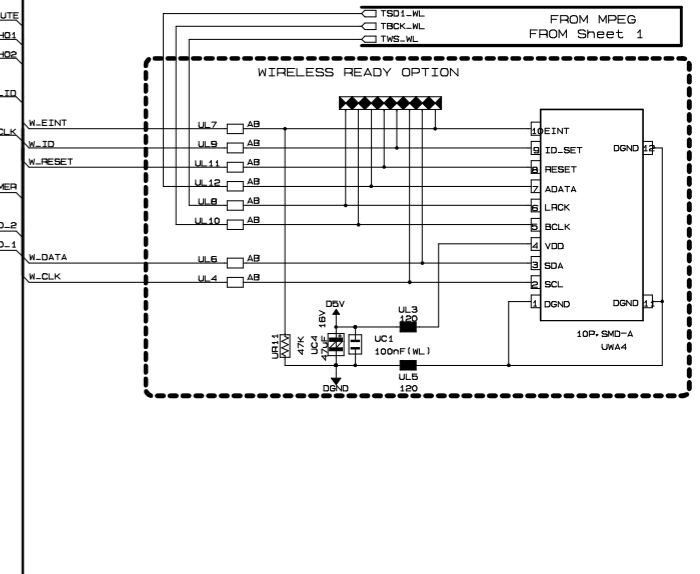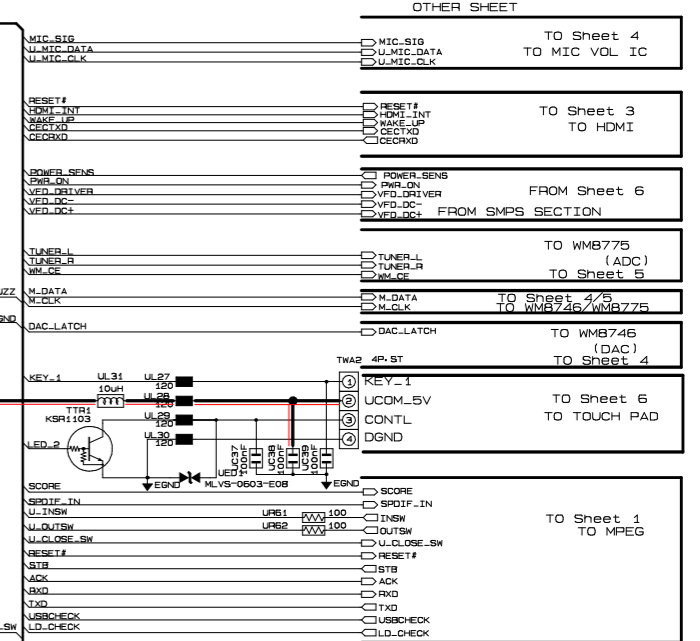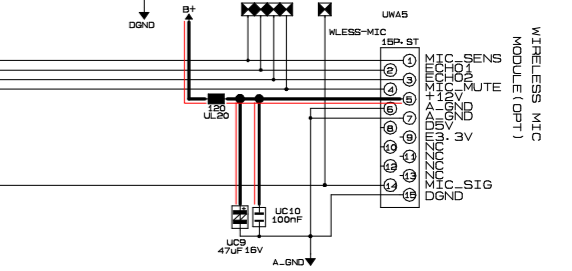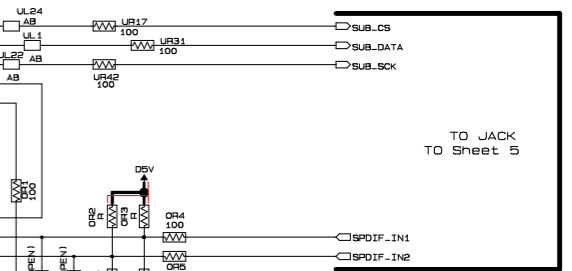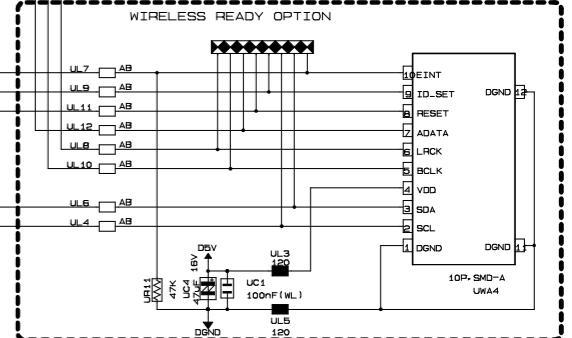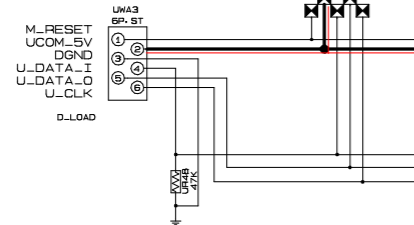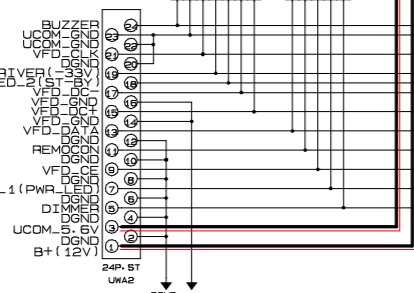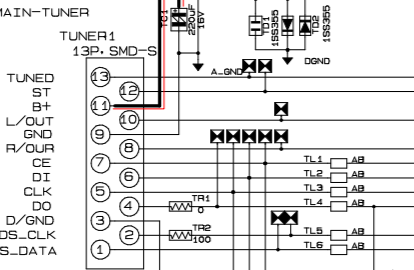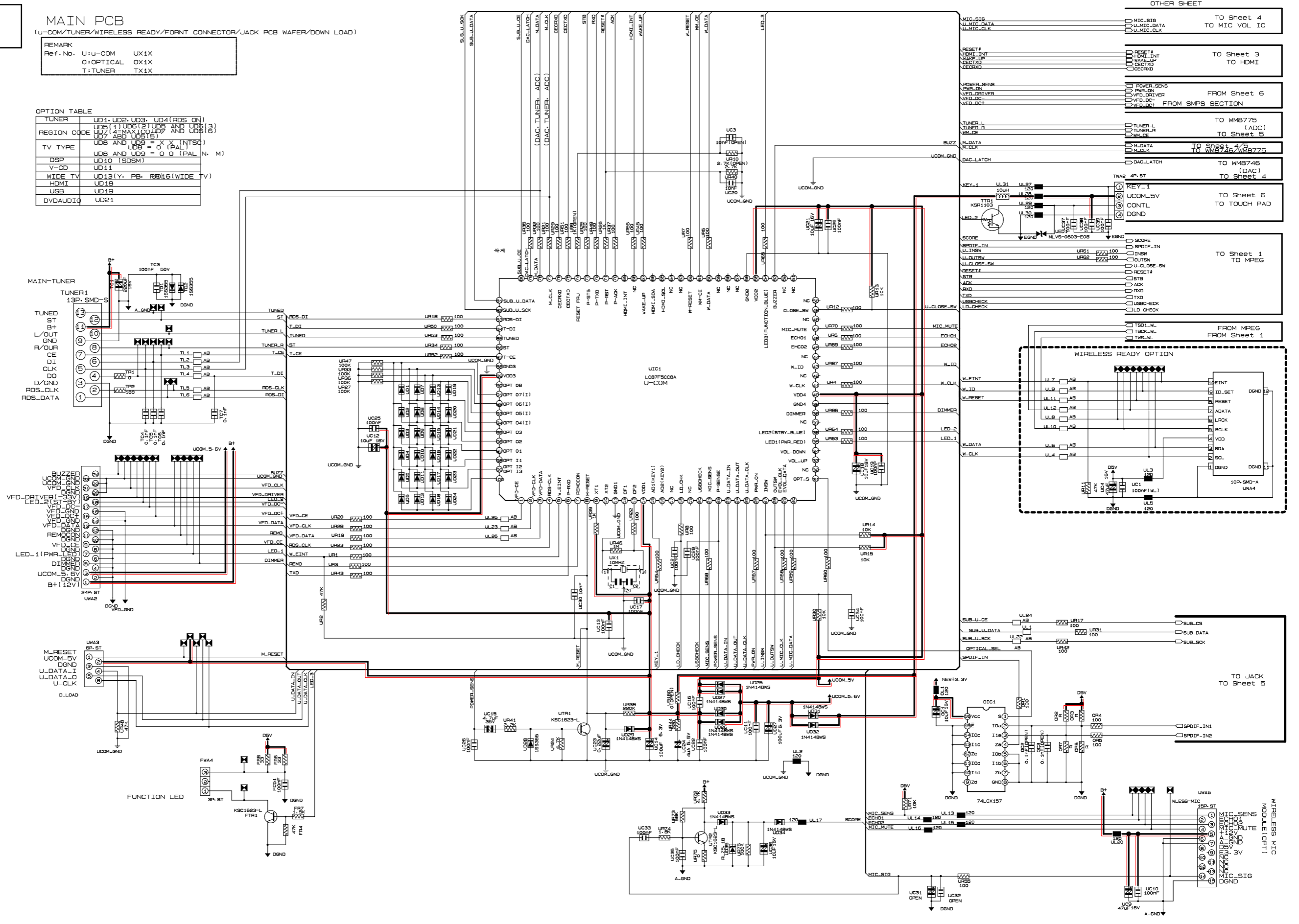
7-6 HDMI/MAIN

7-7 KARAOKE, DAC/MAIN

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7-8 SUBAMP

POWER
AUDIO

SPK JACK/ POWER PCB

TP4

STANDBY LED PCB

TP4
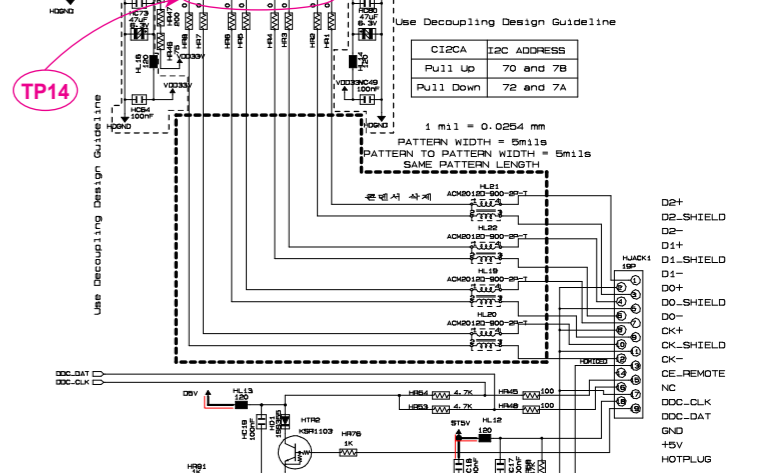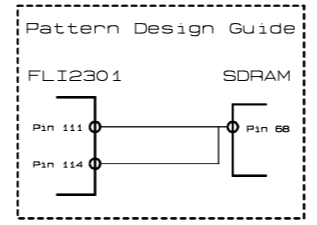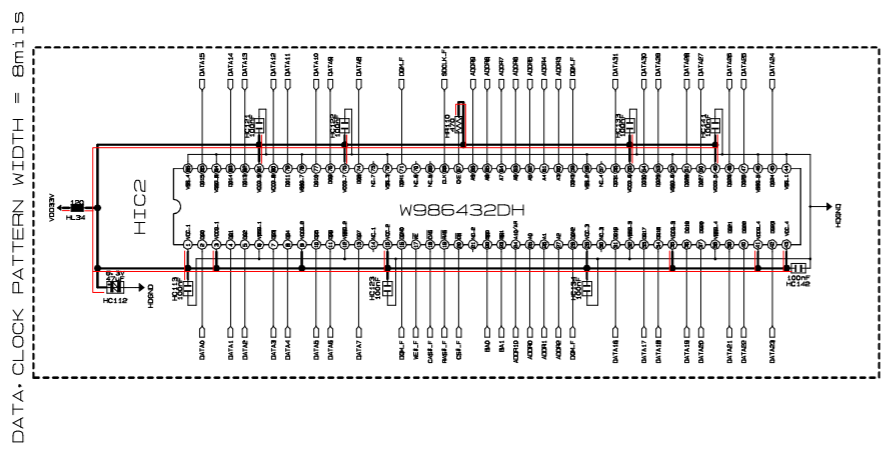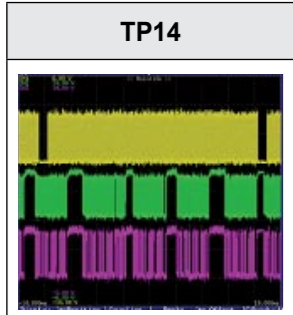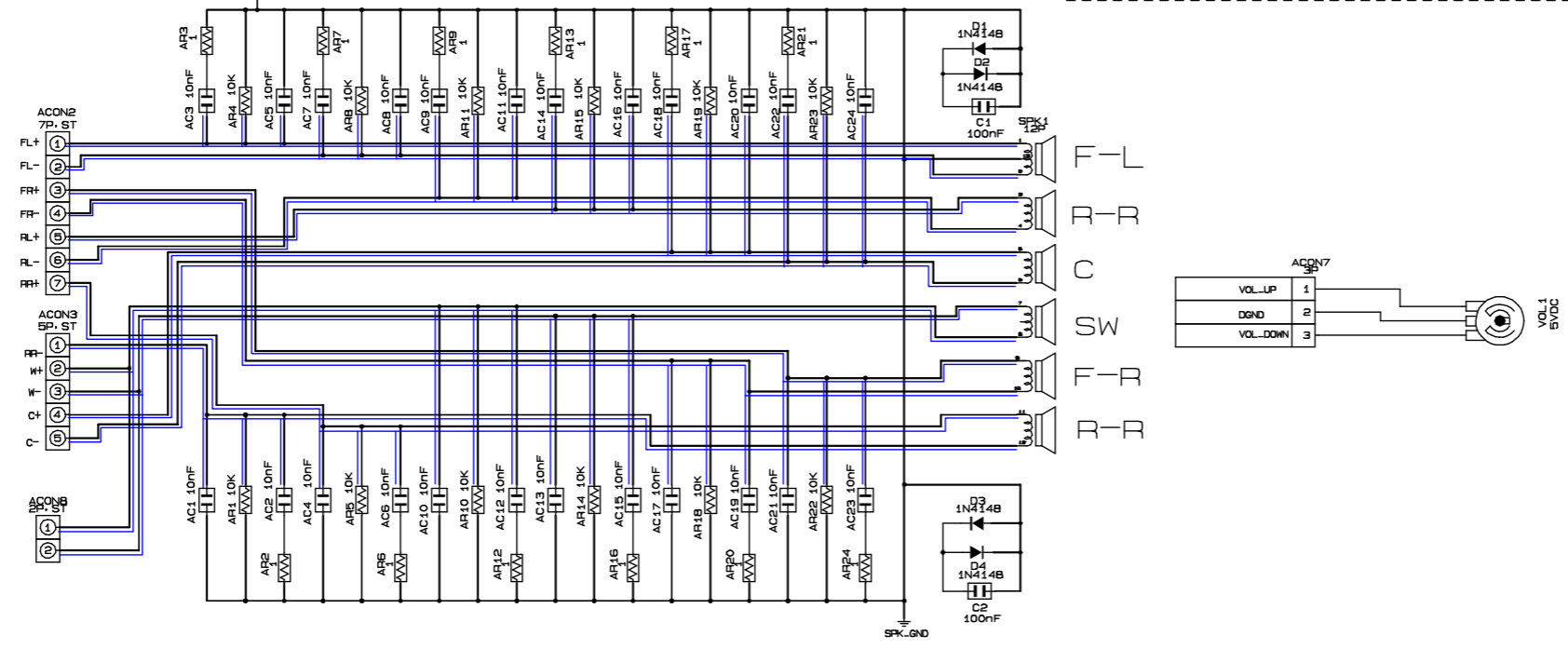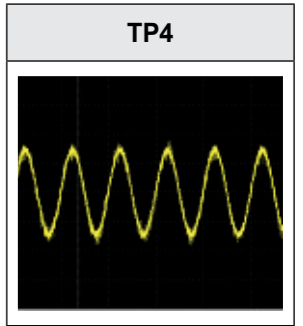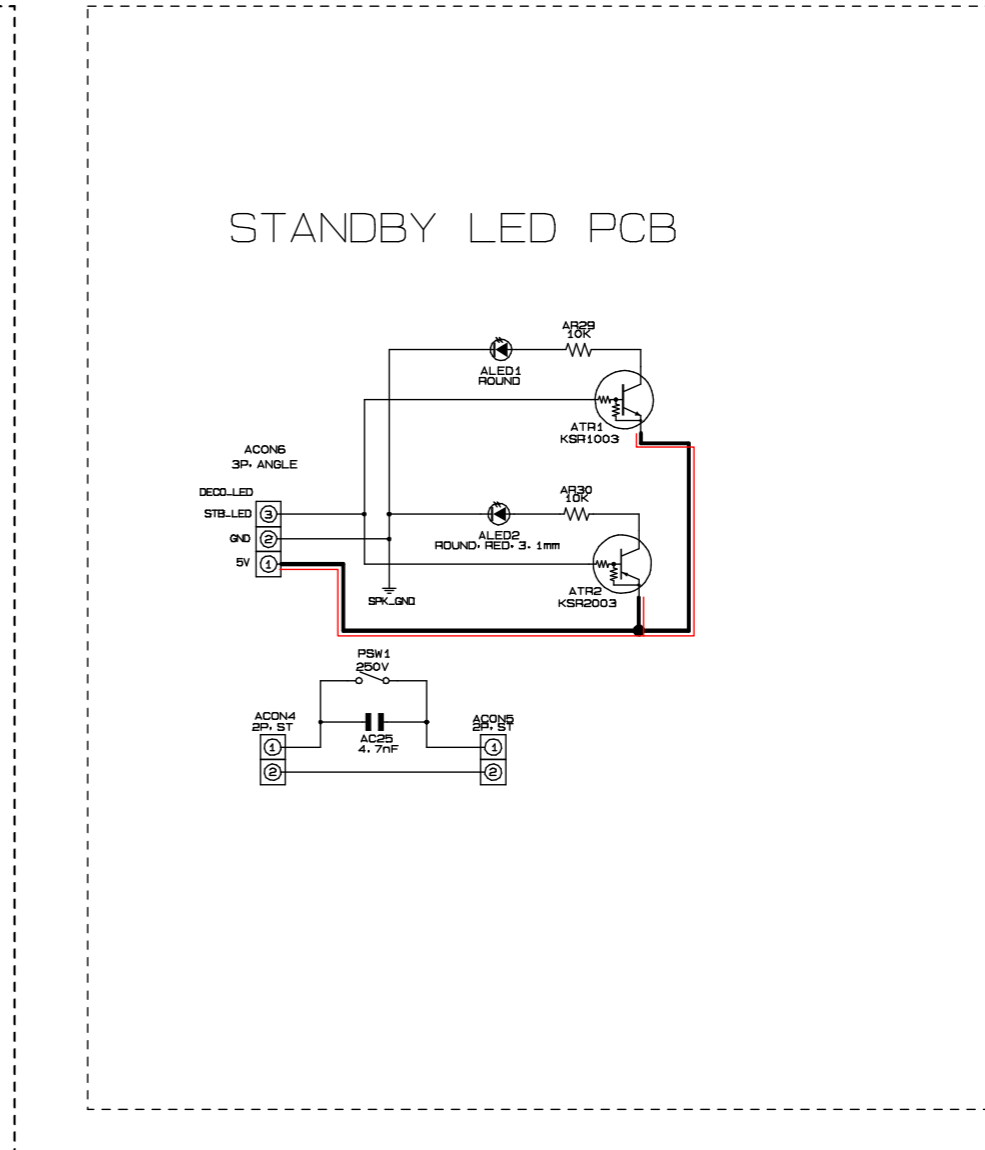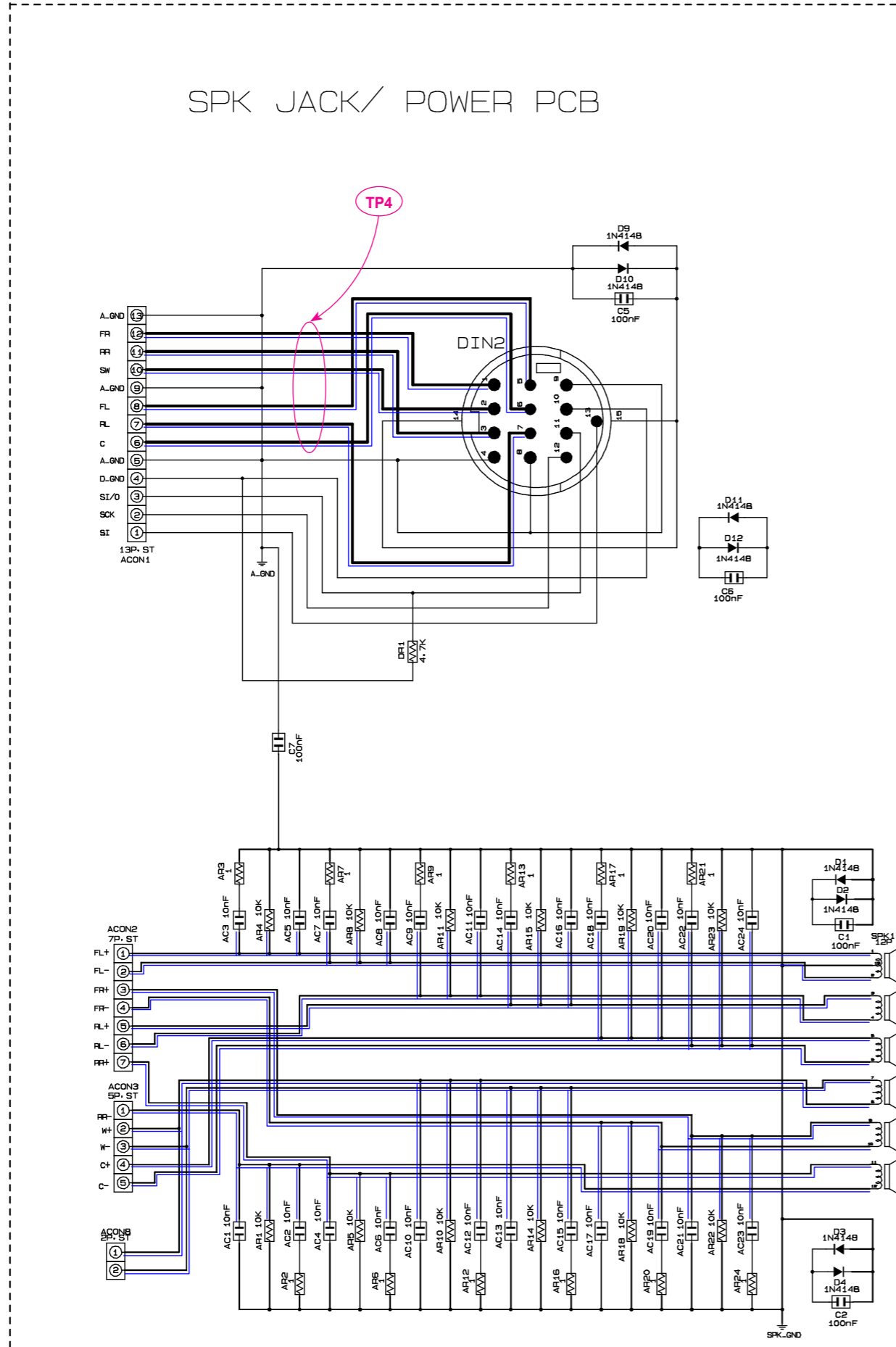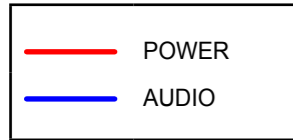
7-9 FUNCT, VIDEO, DIN/MAIN

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7-10 SMPS, TOUCH PAD/MAIN

7-11 MAIN SMPS ASSY

CAUTION
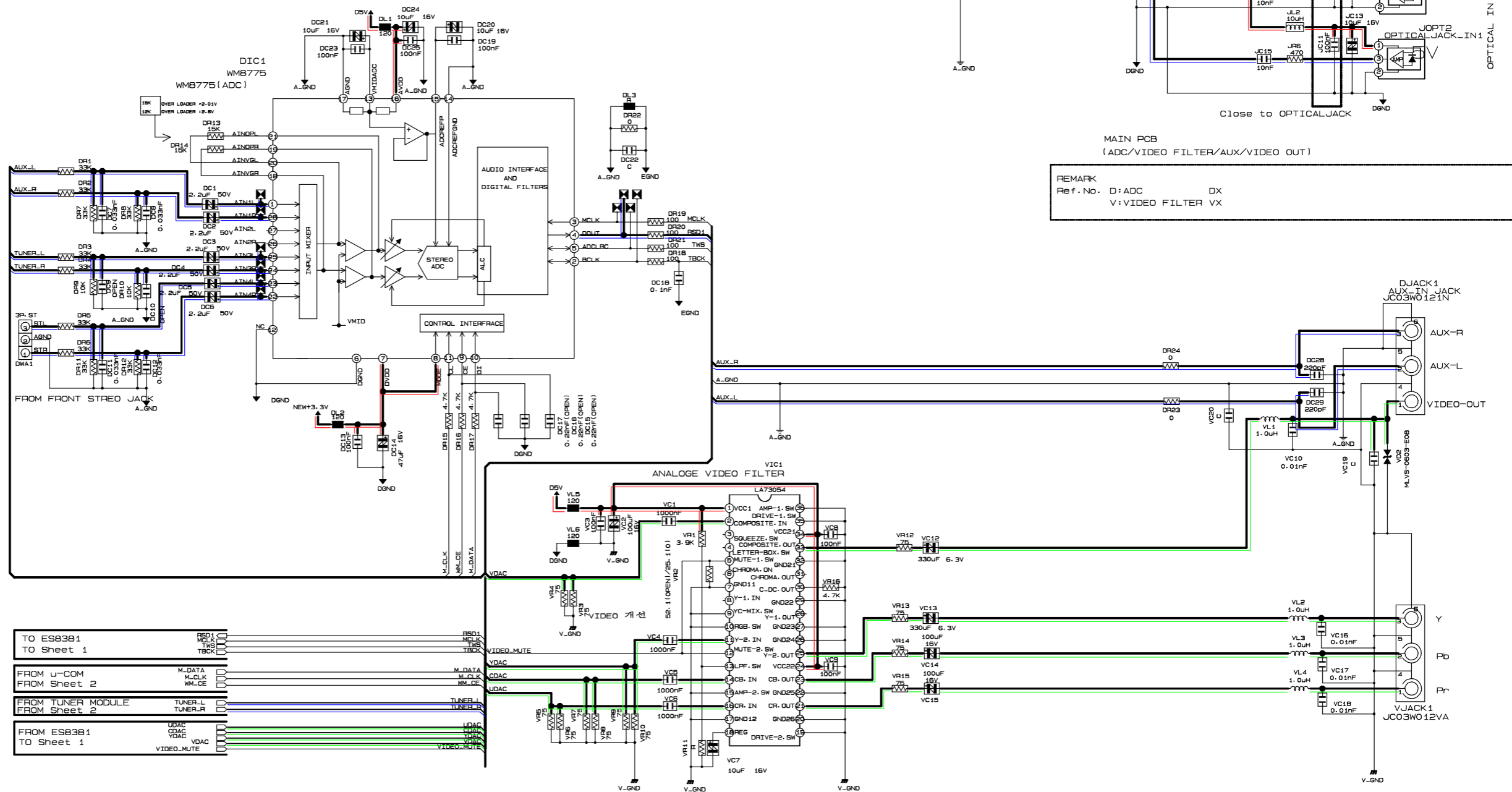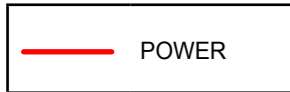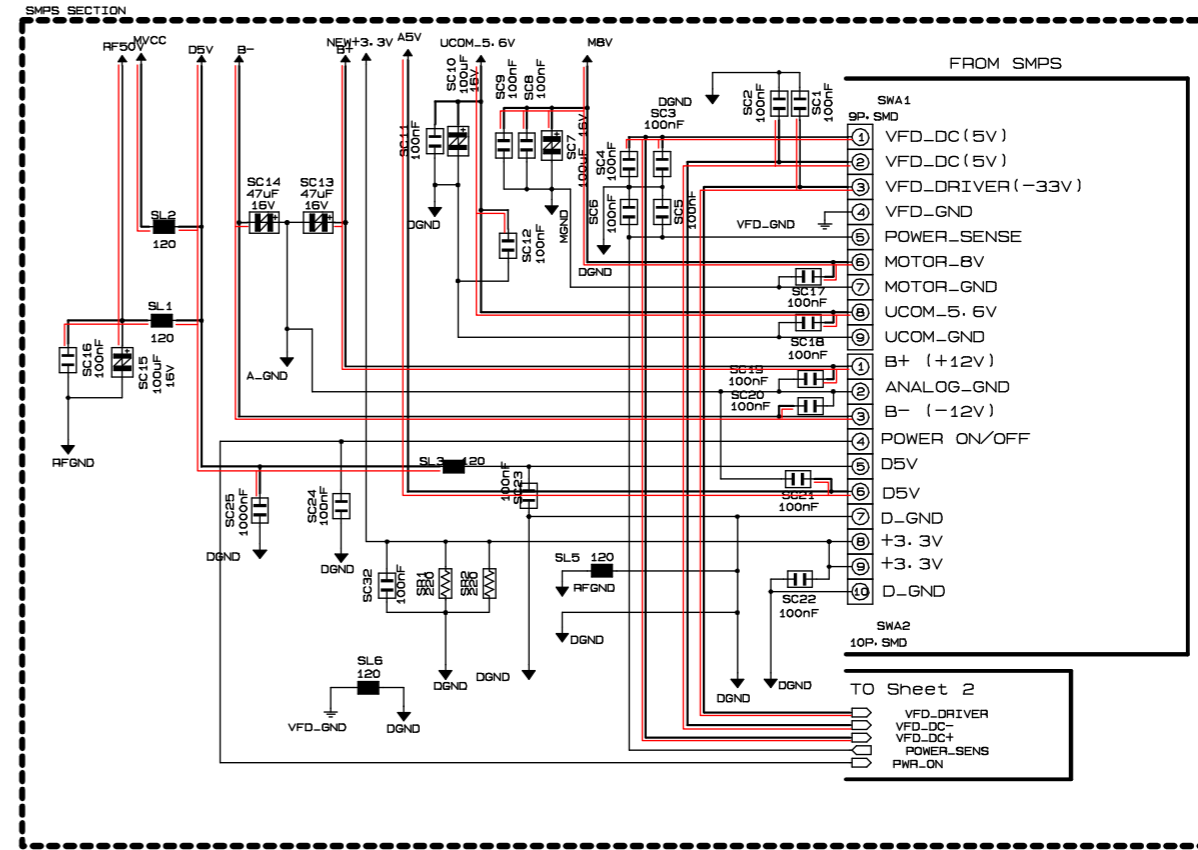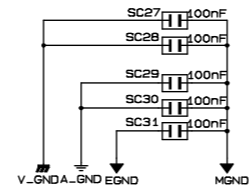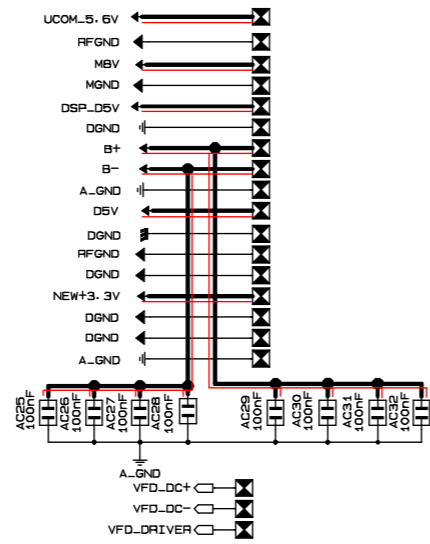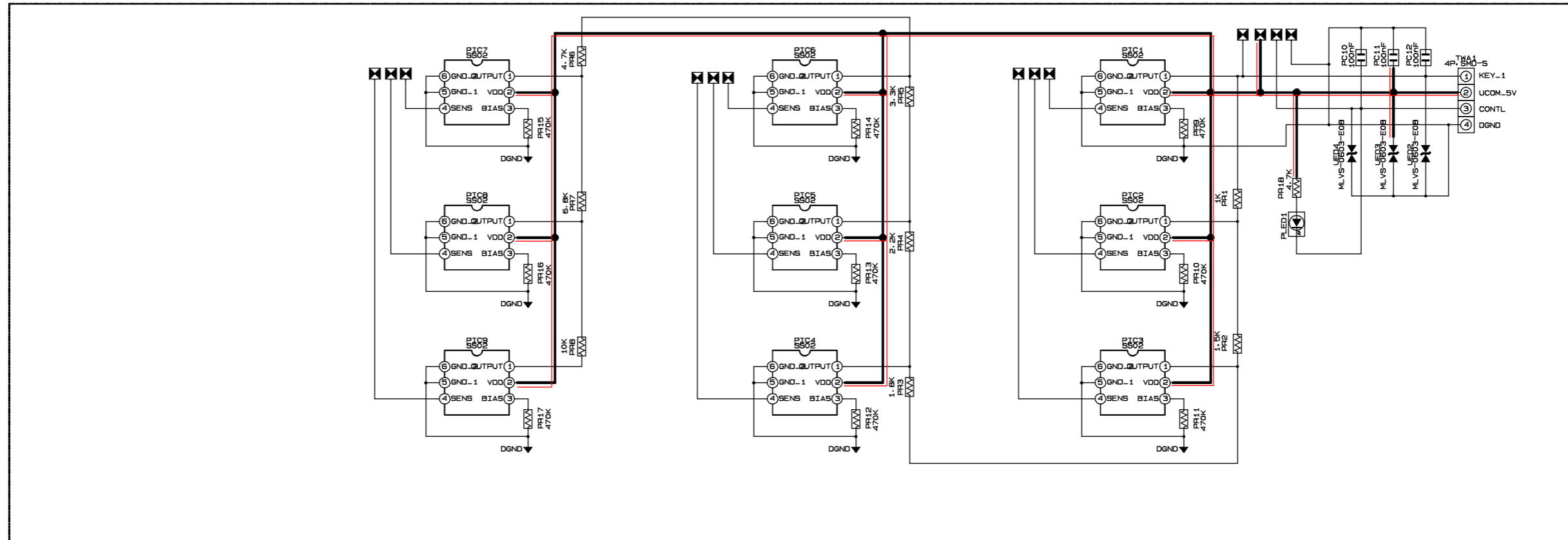
(The shapes shaded or marked with ⚠ designate components
which have special characterics important for safety.)
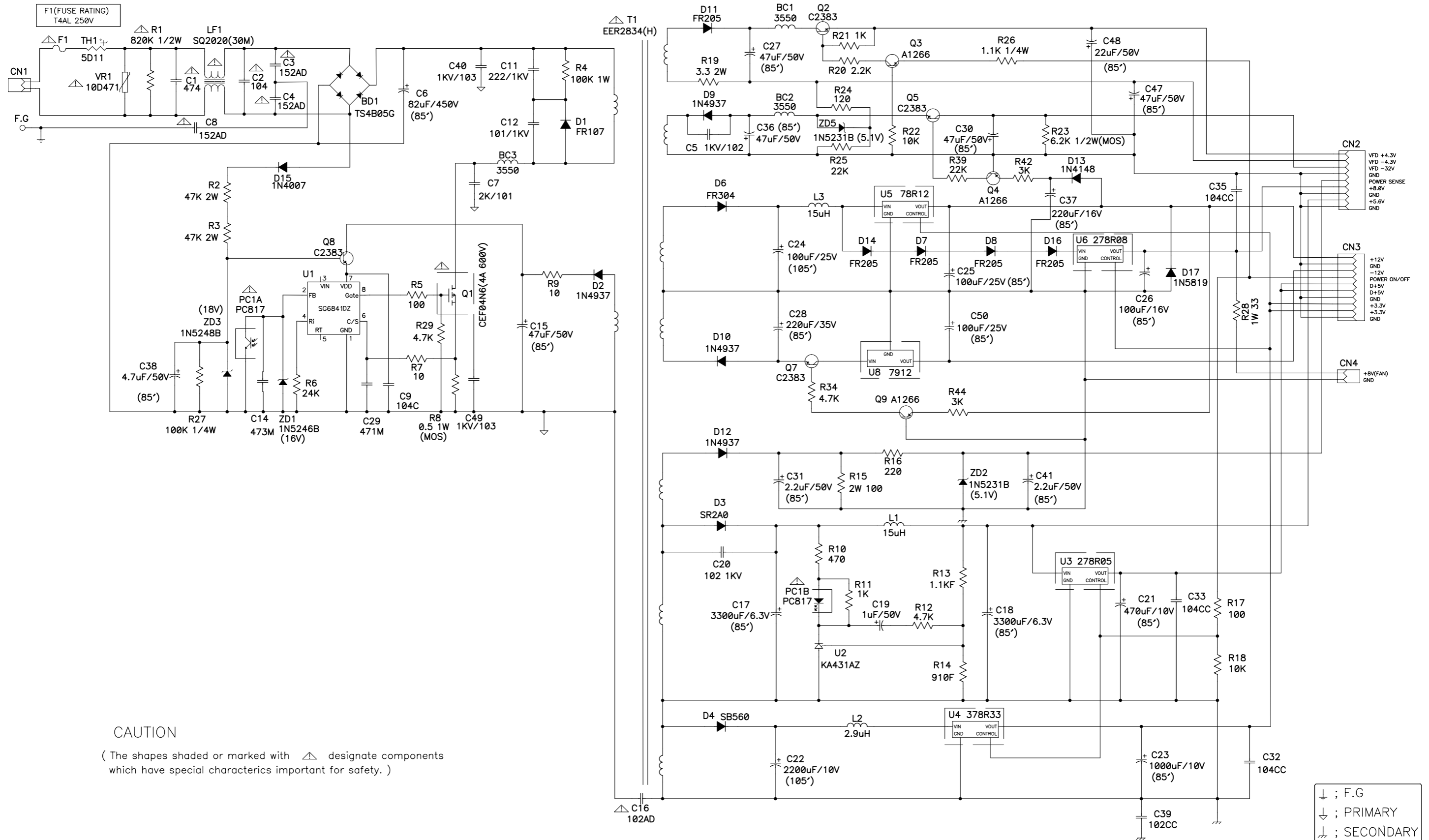
7-12 SUB WOOFER SMPS ASSY
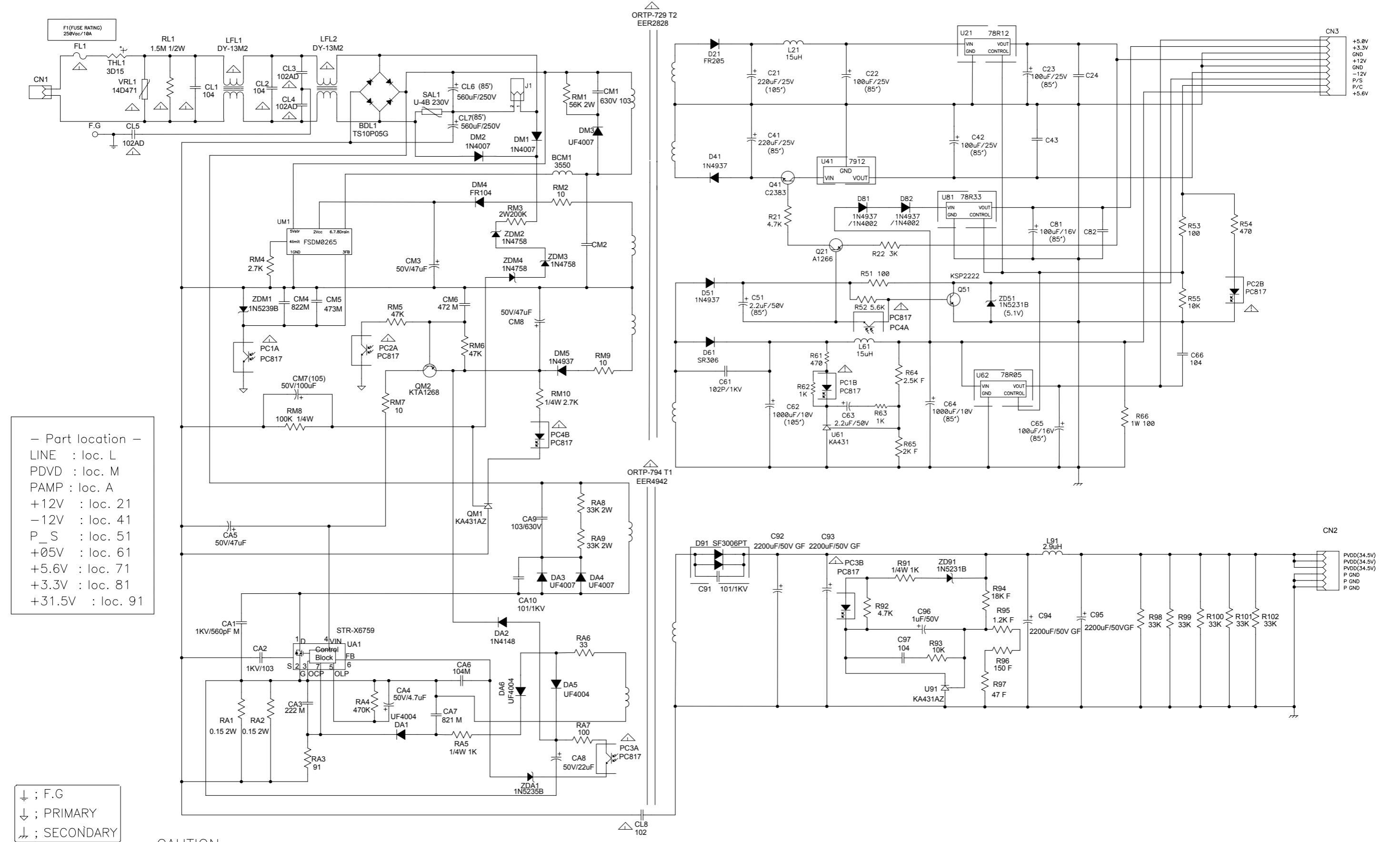
— Part location —
LINE   : loc. L
PDVD : loc. M
PAMP : loc. A
+12V   : loc. 21
−12V   : loc. 41
P_S   : loc. 51
+05V   : loc. 61
+5.6V : loc. 71
+3.3V : loc. 81
+31.5V : loc. 91

⏚ ; F.G
⏚ ; PRIMARY
⏚ ; SECONDARY

CAUTION

(The shapes shaded or marked with △ designate components
which have special characterics important for safety.)

MEMO