JVC

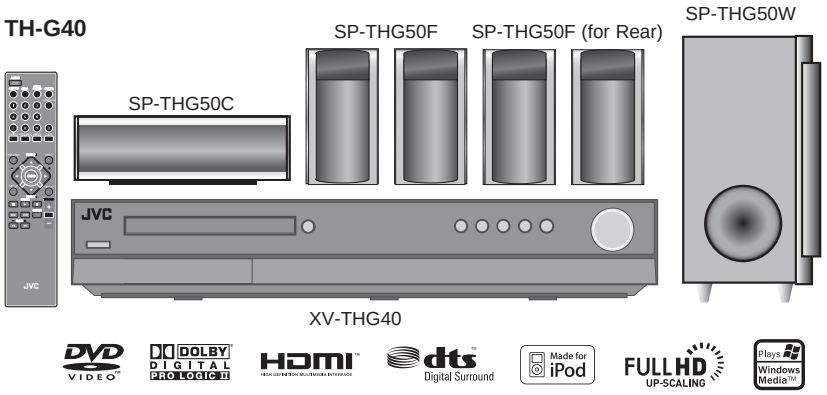
SCHEMATIC DIAGRAMS

DVD DIGITAL THEATER SYSTEM

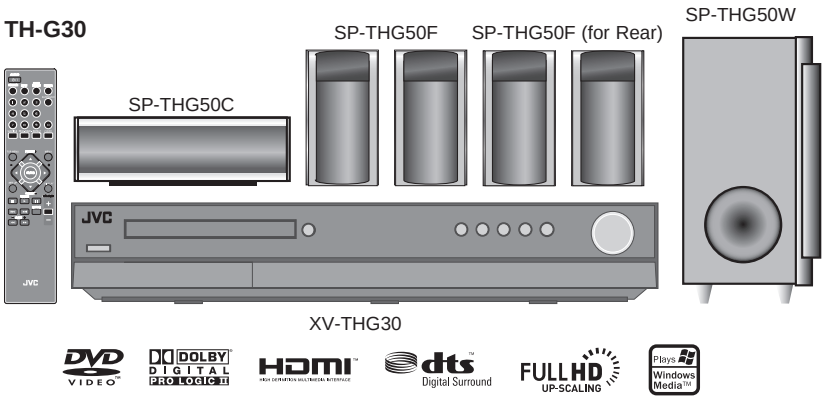
TH-G40J,TH-G40C,TH-G40UJ
TH-G30J,TH-G30C

DVD-ROM No.SML2008Q2

TH-G40



TH-G30



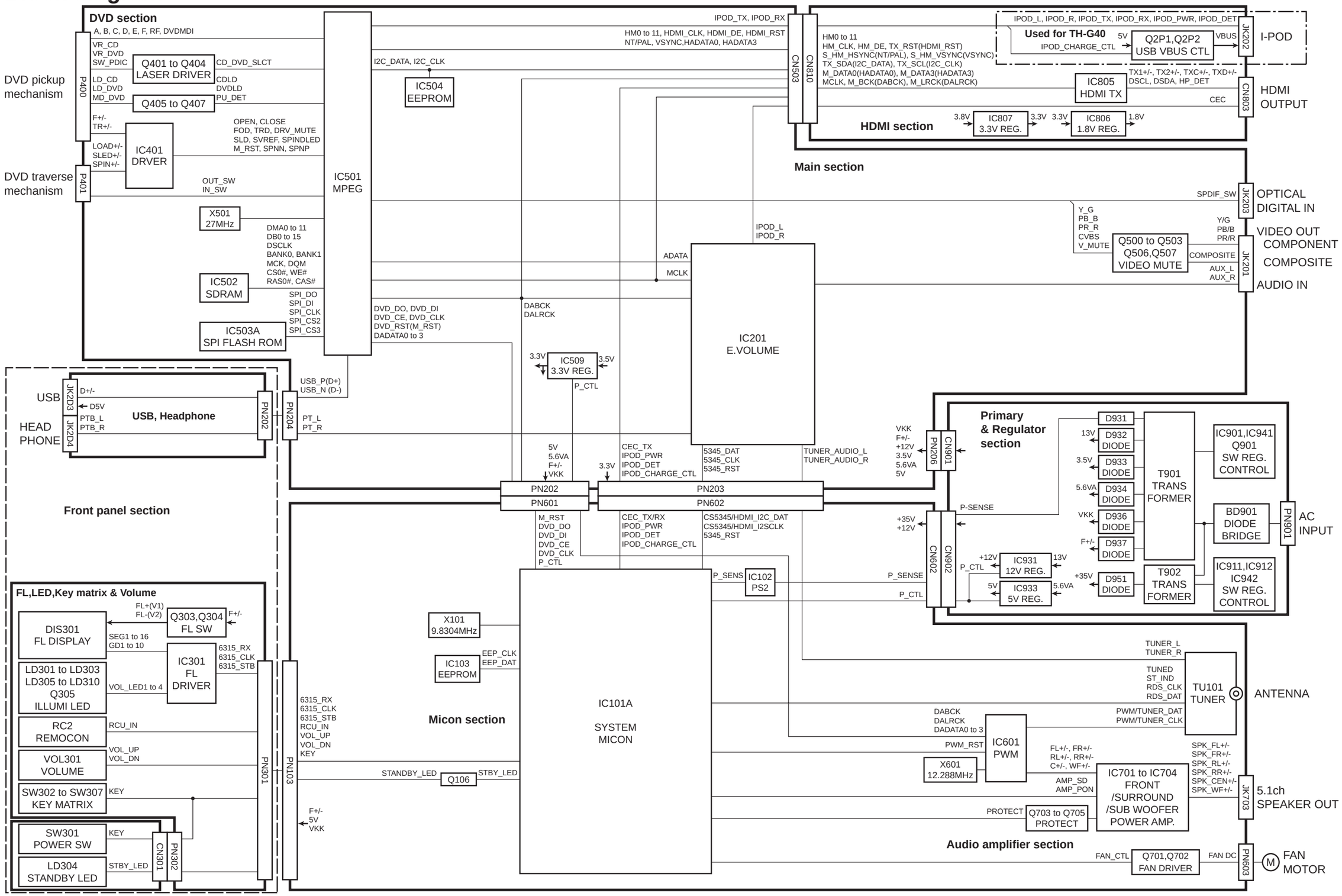
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

Contents

No.MB672SCH<Rev.002>
2008/9

In regard with component parts appearing on the silk-screen printed side (parts side) of the PWB diagrams, the parts that are printed over with black such as the resistor (▬), diode (▬) and ICP (⬤) or identified by the "⚠" mark nearby are critical for safety.

Block diagram



Standard schematic diagrams

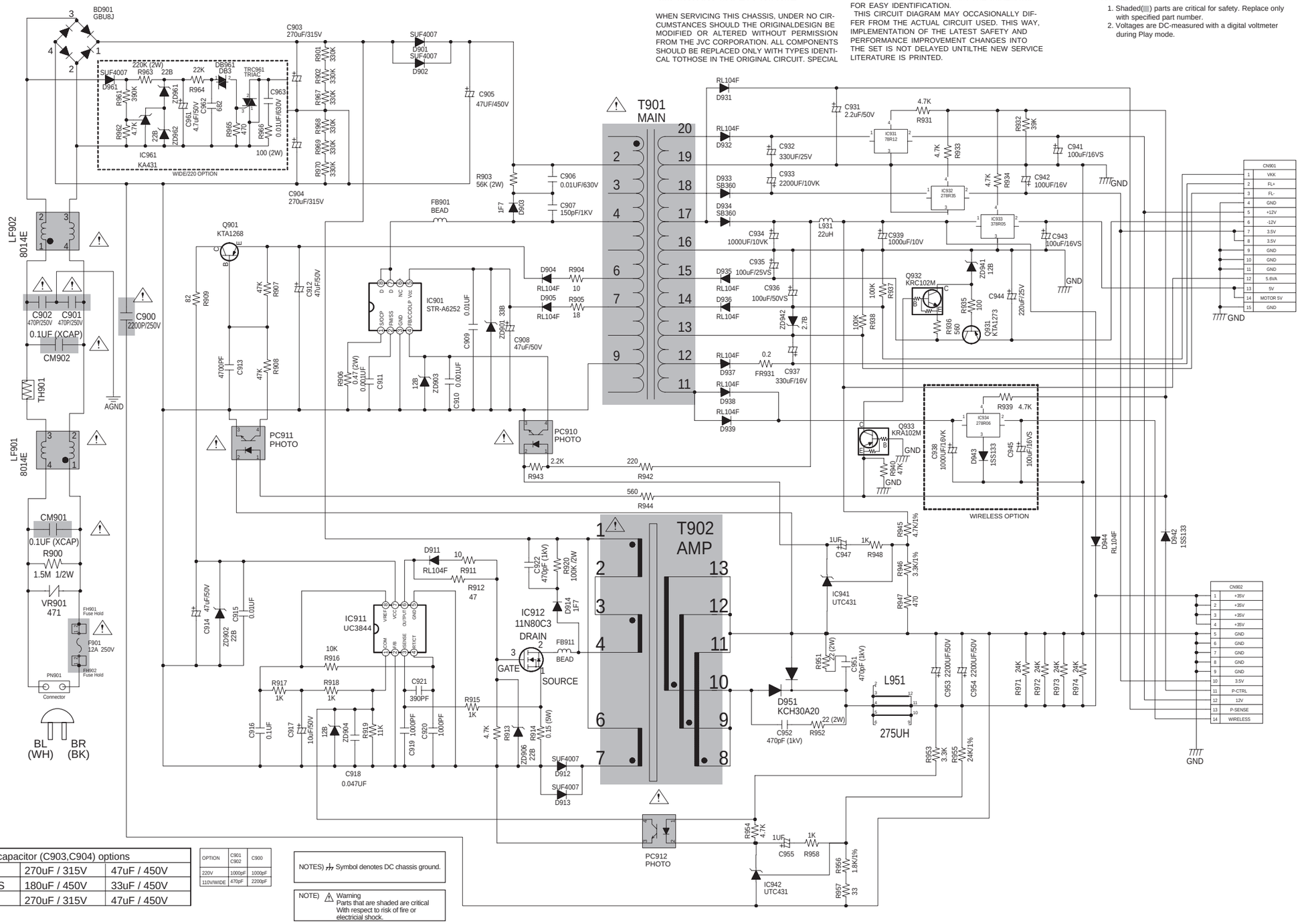
■ SMPS section

IMPORTANT SAFETY NOTICE

WHEN SERVICING THIS CHASSIS, UNDER NO CIR-CUMSTANCES SHOULD THE ORIGINALDESIGN BE MODIFIED OR ALTERED WITHOUT PERMISSION FROM THE JVC CORPORATION. ALL COMPONENTS SHOULD BE REPLACED ONLY WITH TYPES IDENTI-CAL TOTHOSE IN THE ORIGINAL CIRCUIT. SPECIAL COMPONENTS ARE SHADED ON THE SCHEMATIC FOR EASY IDENTIFICATION.
THIS CIRCUIT DIAGRAM MAY OCCASIONALLY DIF-FER FROM THE ACTUAL CIRCUIT USED. THIS WAY, IMPLEMENTATION OF THE LATEST SAFETY AND PERFORMANCE IMPROVEMENT CHANGES INTO THE SET IS NOT DELAYED UNTILTHE NEW SERVICE LITERATURE IS PRINTED.

NOTE :

1. Shaded(▨) parts are critical for safety. Replace only with specified part number.
2. Voltages are DC-measured with a digital voltmeter during Play mode.



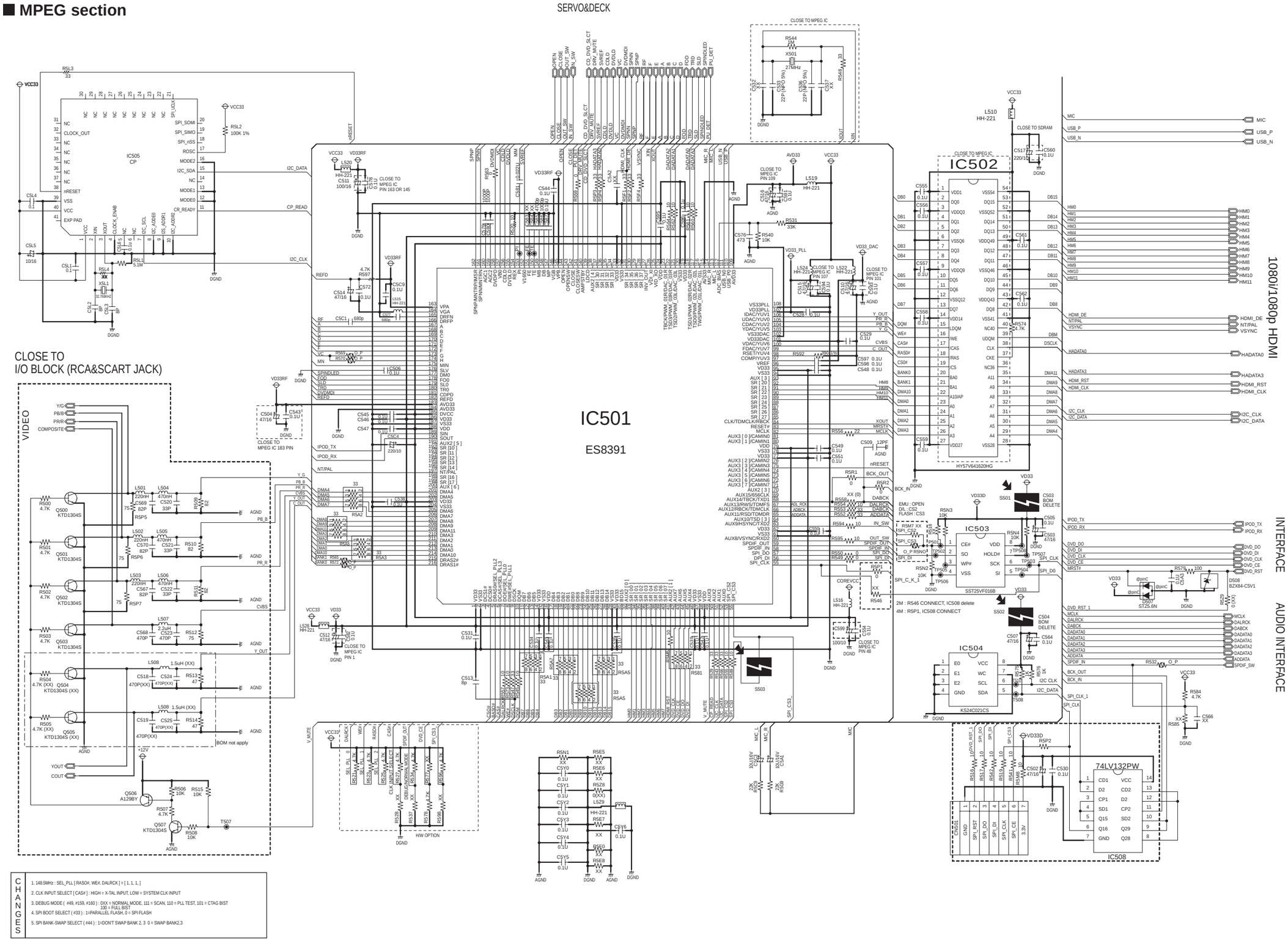
CHANGES	*Primary capacitor (C903,C904) options		
	110V	270uF / 315V	47uF / 450V
	220V/CIS	180uF / 450V	33uF / 450V
	WIDE	270uF / 315V	47uF / 450V

OPTION	C901 C902	C900
220V	1000pF	1000pF
110V/WIDE	470pF	2200pF

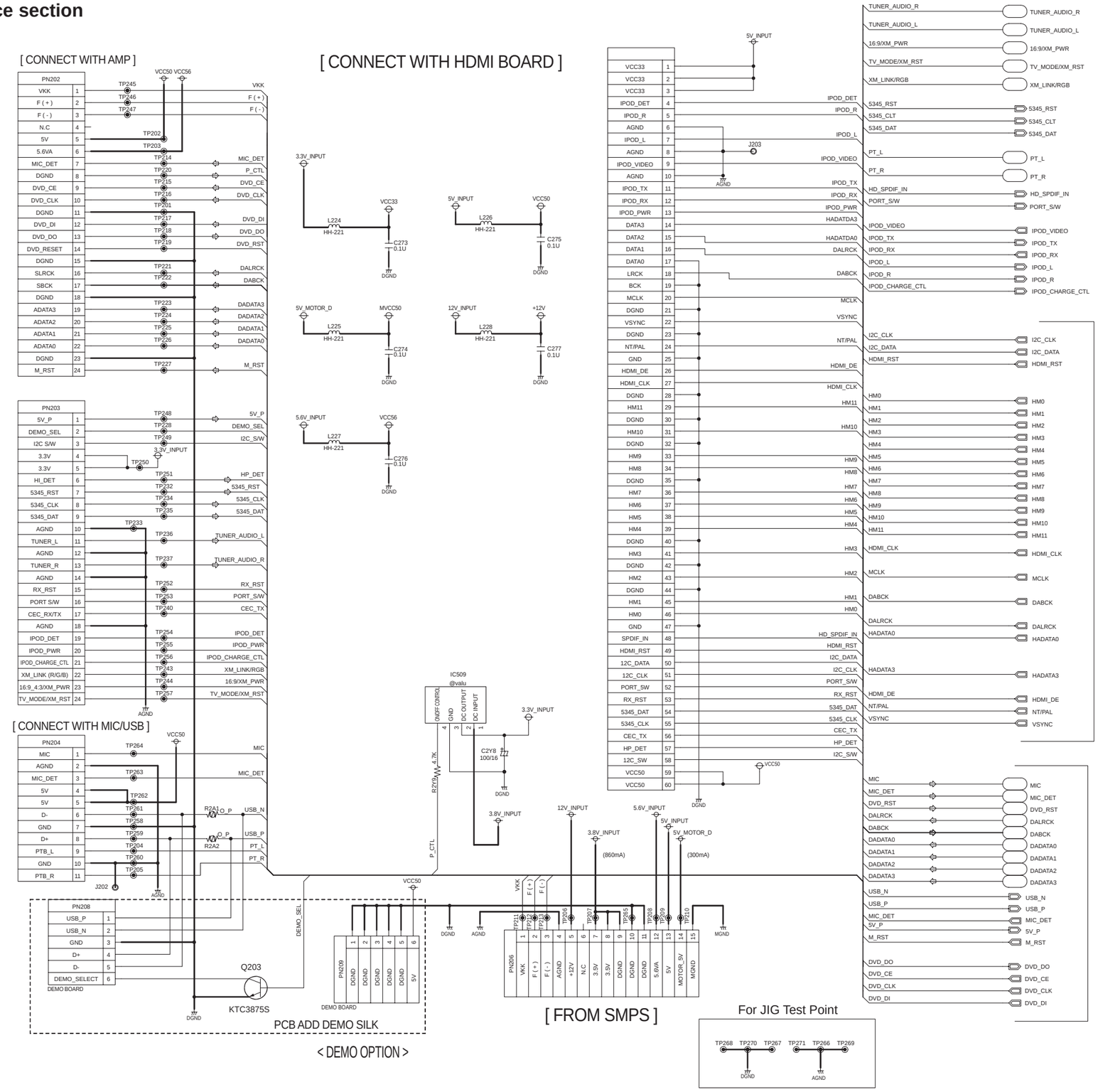
NOTES) ⏚ Symbol denotes DC chassis ground.

NOTE) ⚠ Warning
Parts that are shaded are critical With respect to risk of fire or electricial shock.

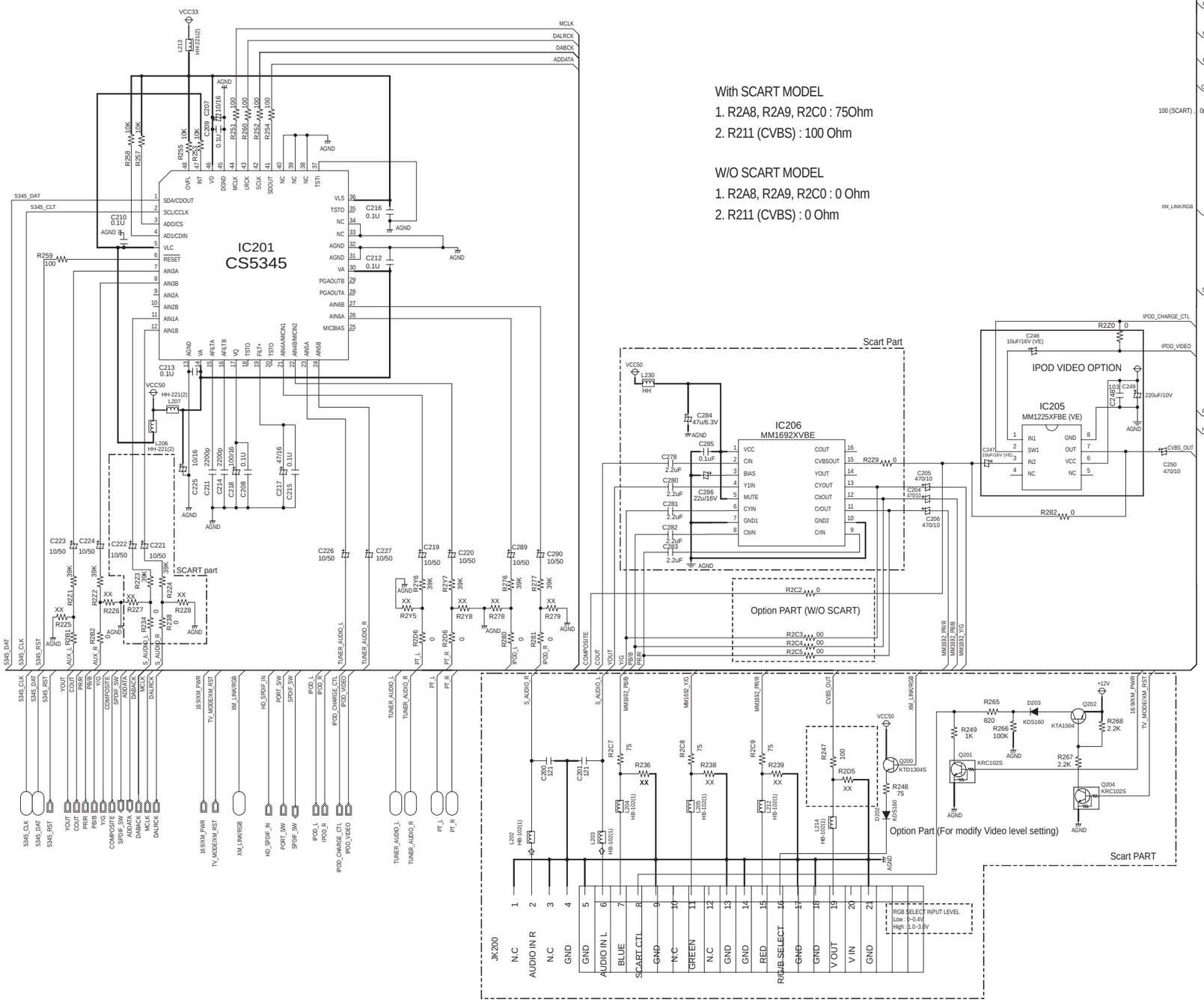
■ MPEG section



■ Power interface section



■ I/O section

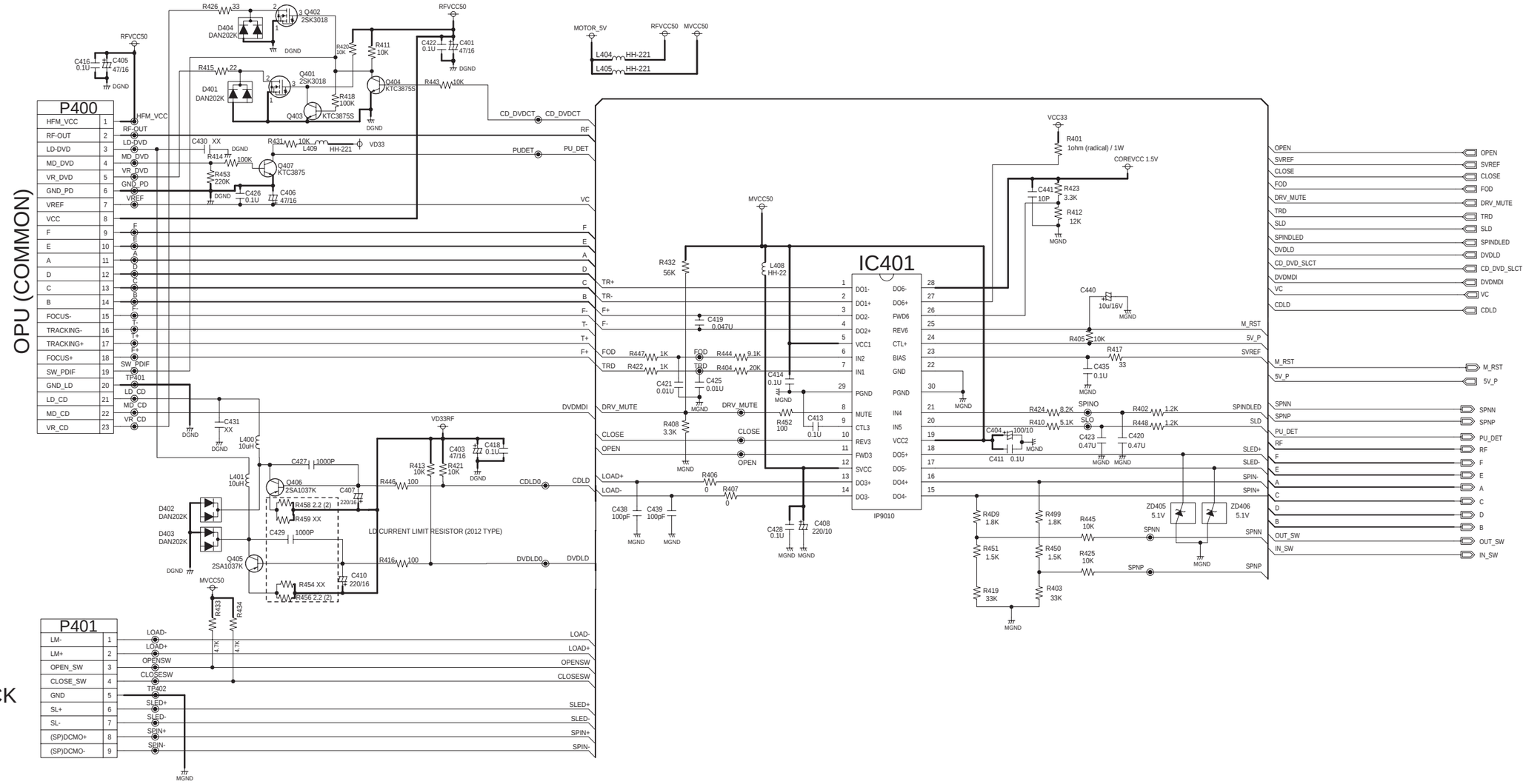


With SCART MODEL
1. R2A8, R2A9, R2C0 : 75Ohm
2. R211 (CVBS) : 100 Ohm

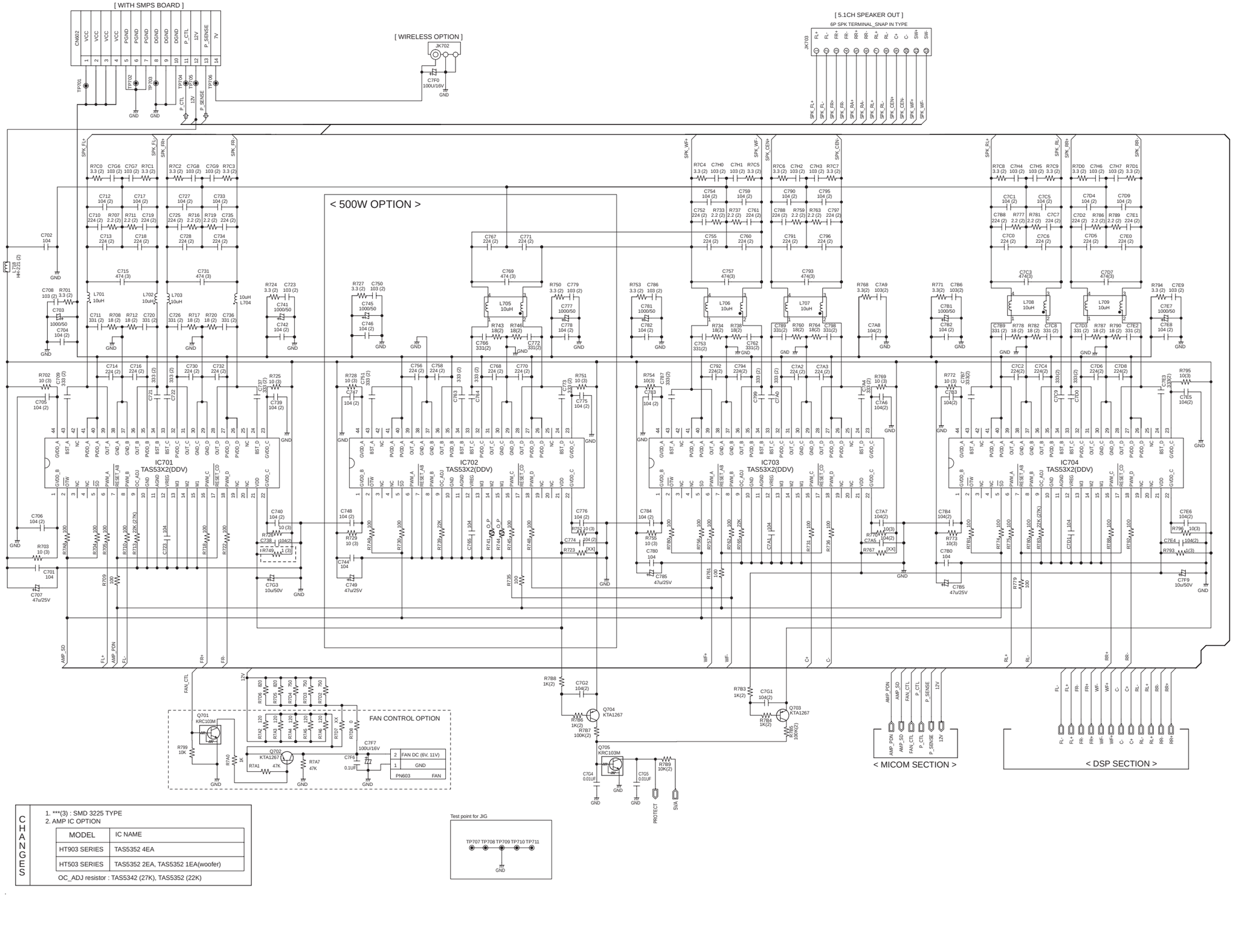
W/O SCART MODEL
1. R2A8, R2A9, R2C0 : 0 Ohm
2. R211 (CVBS) : 0 Ohm

I/O Part BOM is compose to 3 part.
1. RCA PART
2. SCART PART
3. OPTION Part (SCART, RCA, HDMI in/out, IPOD optional item)
   option part bom will be modificated.

■ Servo section

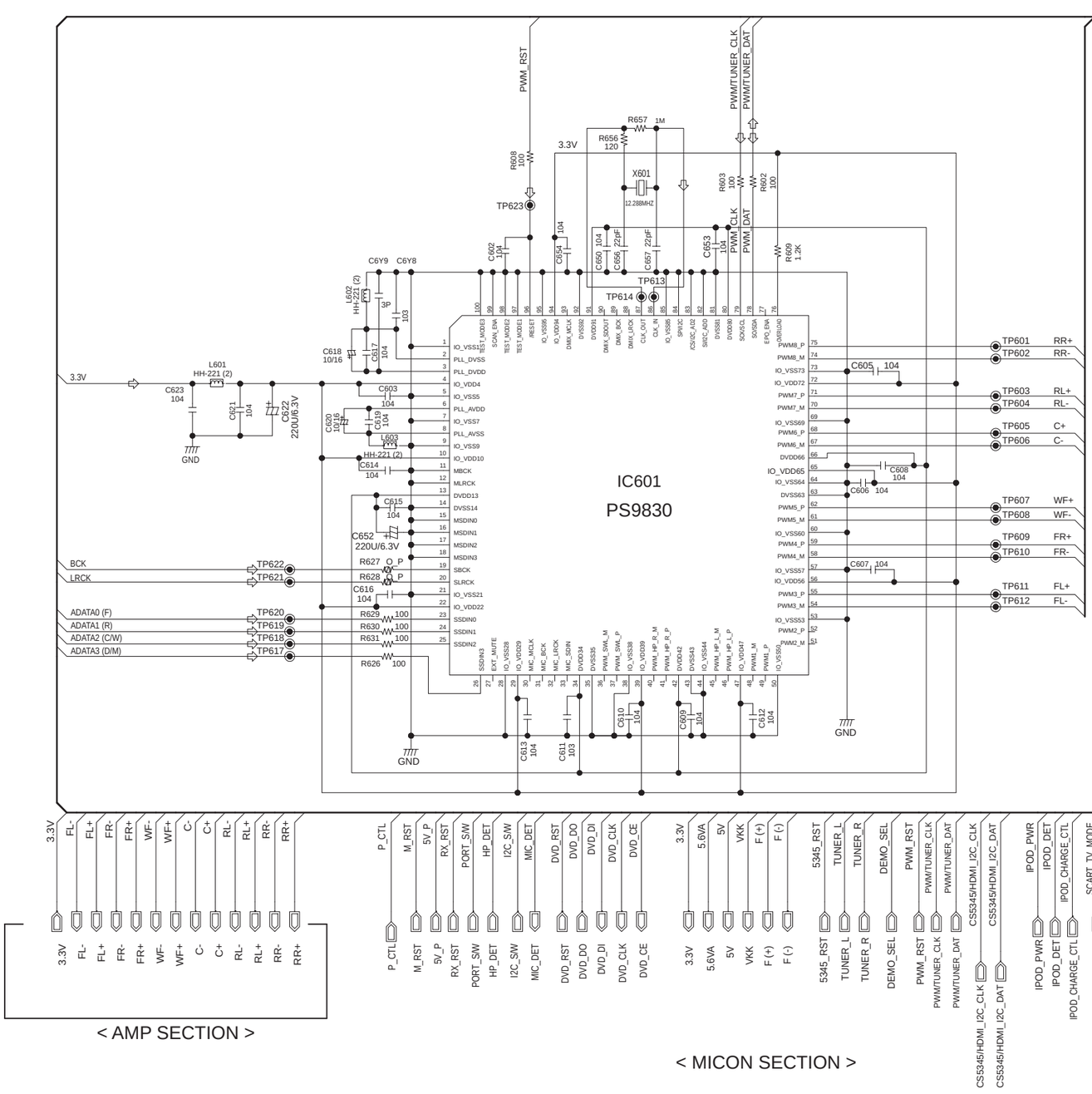


■ Amp section

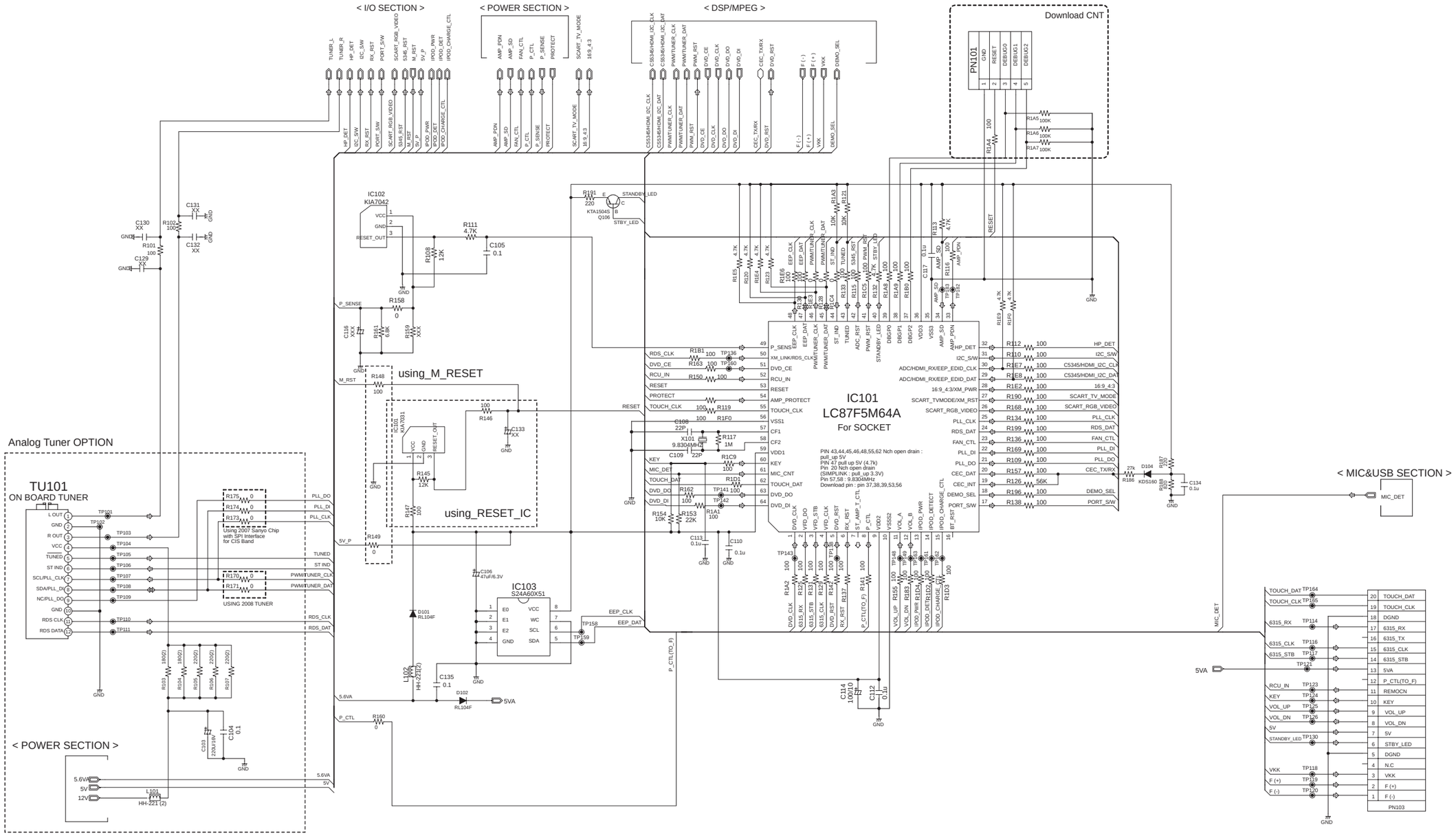


CHANGES	
1. ***(3) : SMD 3225 TYPE 2. AMP IC OPTION	
MODEL	IC NAME
HT903 SERIES	TAS5352 4EA
HT503 SERIES	TAS5352 2EA, TAS5352 1EA(woofer)
OC_ADJ resistor : TAS5342 (27K), TAS5352 (22K)	

■ DSP section

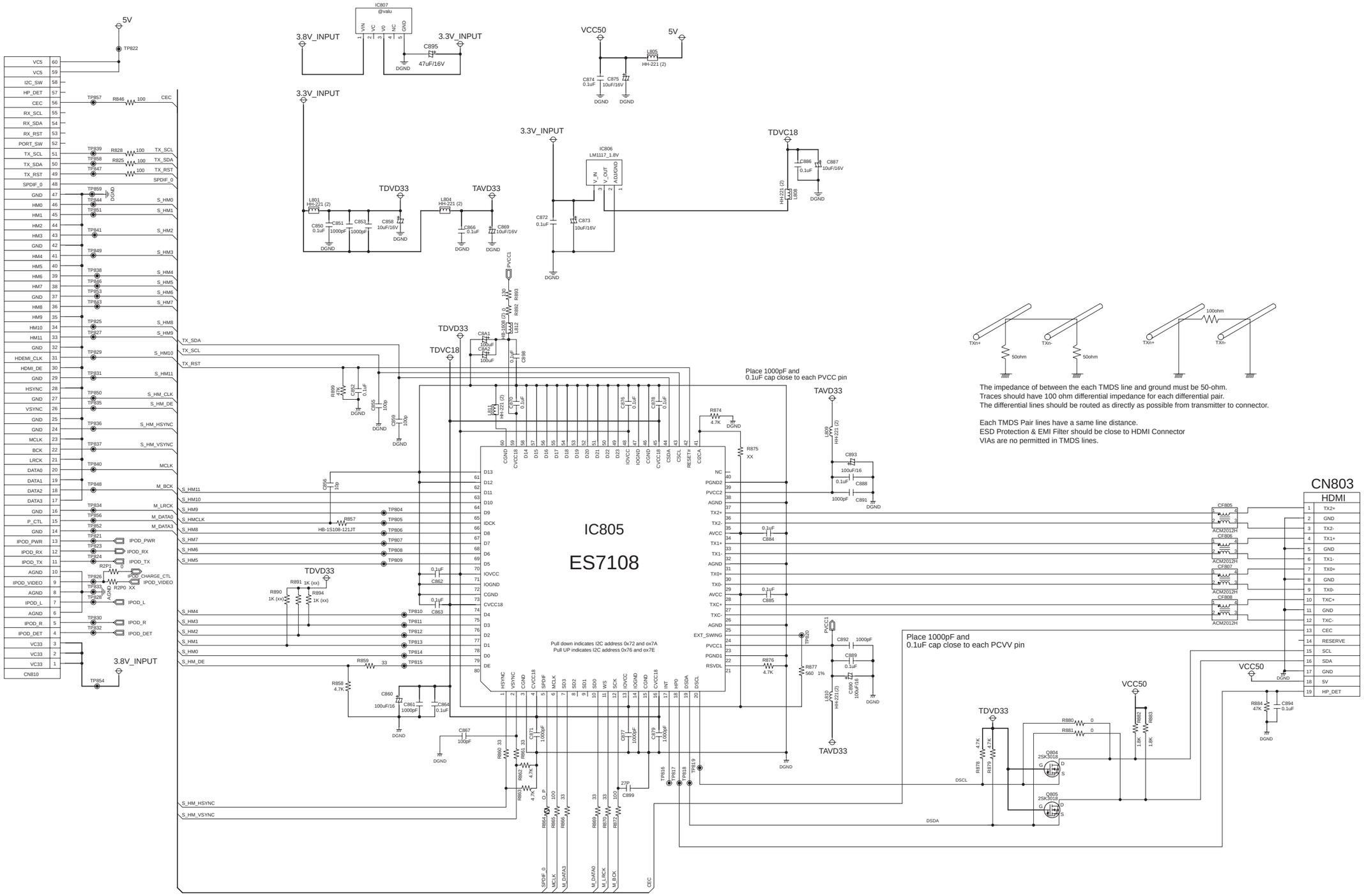

IC601
PS9830
PWM_RST
PWM/TUNER_CLK
PWM/TUNER_DAT
PWM_CLK
PWM_DAT
3.3V
X601
12.288MHZ
R657 1M
R656 120
R608 100
R603 100
R602 100
R609 1.2K
TP623
TP613
TP614
C602 104
C654 104
C650 104
C656 22pF
C657 22pF
C653 104
C6Y9
C6Y8
L602 HH-221 (2)
3P
103
L601 HH-221 (2)
C623 104
C621 104
C622 220U/6.3V
GND
C618 10/16
C617 104
C603 104
C620 10/16
C619 104
L603 HH-221 (2)
C614 104
C615 104
C652 220U/6.3V
C616 104
C605 104
C608 104
C606 104
C607 104
C610 104
C609 104
C612 104
C613 104
C611 103
IO_VSS1
PLL_DVSS
PLL_DVDD
IO_VDD4
IO_VSS5
PLL_AVDD
IO_VSS7
PLL_AVSS
IO_VSS9
IO_VDD10
MBCK
MLRCK
DVDD13
DVSS14
MSDIN0
MSDIN1
MSDIN2
MSDIN3
SBCK
SLRCK
IO_VSS21
IO_VDD22
SSDIN0
SSDIN1
SSDIN2
SSDIN3
EXT_MUTE
IO_VSS28
IO_VDD29
MIC_MCLK
MIC_BCK
MIC_LRCK
MIC_SDIN
DVDD34
DVSS35
PWM_SWL_M
PWM_SWL_P
IO_VSS38
IO_VDD39
PWM_HP_R_M
PWM_HP_R_P
DVDD42
DVSS43
IO_VSS44
PWM_HP_L_M
PWM_HP_L_P
IO_VDD47
PWM1_M
PWM1_P
IO_VSS50
PWM8_P
PWM8_M
IO_VSS73
IO_VDD72
PWM7_P
PWM7_M
IO_VSS69
PWM6_P
PWM6_M
DVDD66
IO_VDD65
IO_VSS64
DVSS63
PWM5_P
PWM5_M
IO_VSS60
PWM4_P
PWM4_M
IO_VSS57
IO_VDD56
PWM3_P
PWM3_M
IO_VSS53
PWM2_P
PWM2_M
IO_VSS50
TP601 RR+
TP602 RR-
TP603 RL+
TP604 RL-
TP605 C+
TP606 C-
TP607 WF+
TP608 WF-
TP609 FR+
TP610 FR-
TP611 FL+
TP612 FL-
BCK
LRCK
ADATA0 (F)
ADATA1 (R)
ADATA2 (C/W)
ADATA3 (D/M)
TP622
TP621
TP620
TP619
TP618
TP617
R627 0_P
R628 0_P
R629 100
R630 100
R631 100
R626 100
3.3V
FL-
FL+
FR-
FR+
WF-
WF+
C-
C+
RL-
RL+
RR-
RR+
< AMP SECTION >
P_CTL
M_RST
5V_P
RX_RST
PORT_S/W
HP_DET
I2C_S/W
MIC_DET
DVD_RST
DVD_DO
DVD_DI
DVD_CLK
DVD_CE
3.3V
5.6VA
5V
VKK
F (+)
F (-)
5345_RST
TUNER_L
TUNER_R
DEMO_SEL
PWM_RST
PWM/TUNER_CLK
PWM/TUNER_DAT
CS5345/HDMI_I2C_CLK
CS5345/HDMI_I2C_DAT
IPOD_PWR
IPOD_DET
IPOD_CHARGE_CTL
SCART_TV_MODE
16:9_4:3
SCART_RGB_VIDEO
CEC_TX/RX
< MICON SECTION >
[WITH MAIN BOARD]
VKK
F (+)
F (-)
5V
5.6VA
MIC_DET
P_CTL
DVD_CE
DVD_CLK
DVD_DI
DVD_DO
DVD_RST
LRCK
BCK
ADATA3 (D/M)
ADATA2 (C/W)
ADATA1 (R)
ADATA0 (F)
M_RST
TP656
TP657
TP658
TP660
TP625
TP626
TP6Y9
TP653
TP655
TP661
TP662
TP632
TP633
TP634
TP635
TP636
TP637
TP638
TP663
TP664
GND
PN601
5V_P
DEMO_SEL
I2C_S/W
3.3V
HP_DET
5345_RST
CS5345/HDMI_I2C_CLK
CS5345/HDMI_I2C_DAT
TUNER_L
TUNER_R
RX_RST
PORT_S/W
CEC_TX/RX
IPOD_DET
IPOD_PWR
IPOD_CHARGE_CTL
SCART_RGB_VIDEO
16:9_4:3
SCART_TV_MODE
TP665
TP646
TP630
TP6Y8
TP631
TP642
TP644
TP699
TP640
TP641
TP647
TP696
TP624
TP666
TP667
TP645
TP651
TP649
TP668
GND
PN602

■ Micom section



CHANGES	
	1. ***(2) : SMD 2012 TYPE

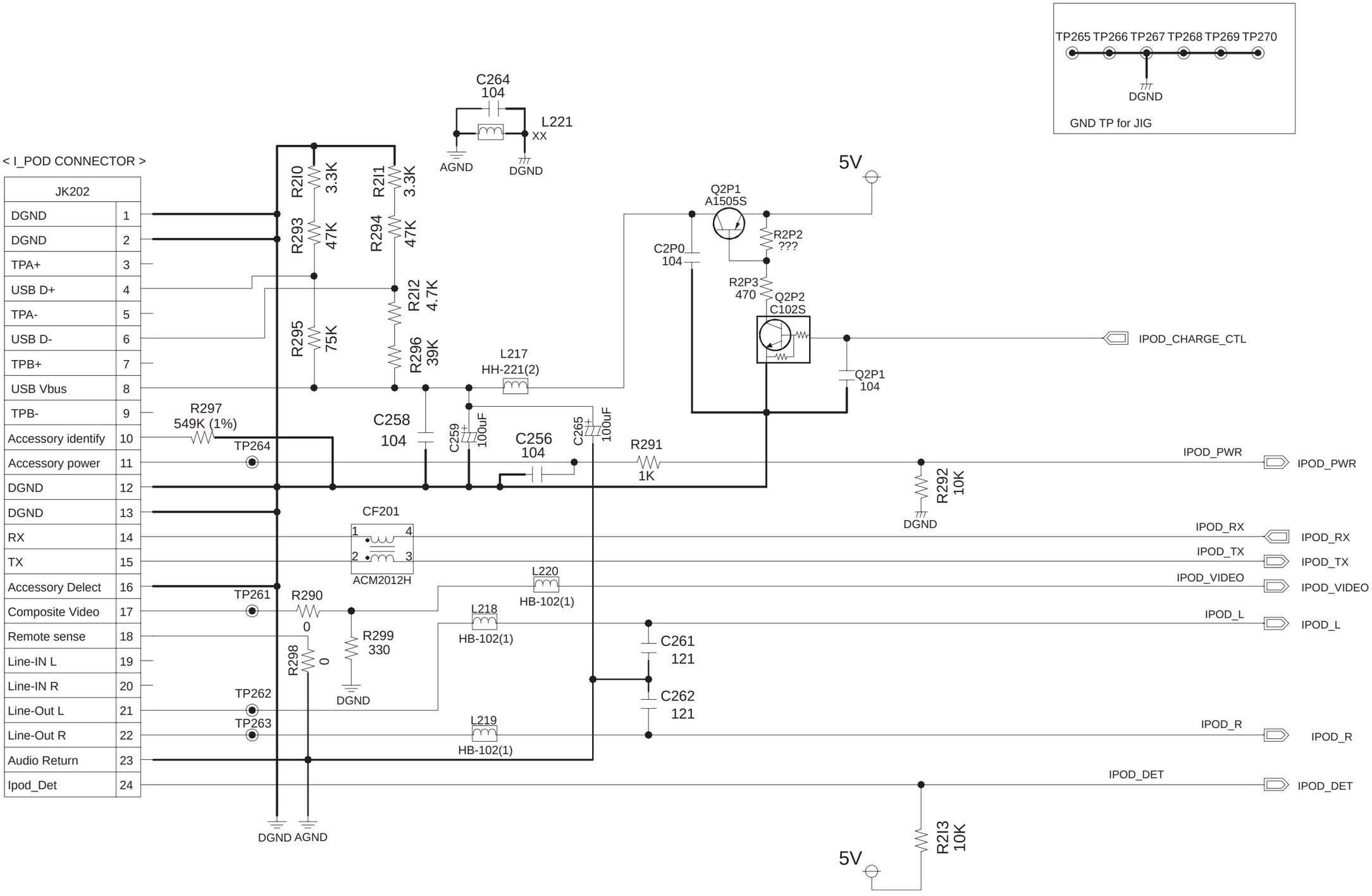
■ HDMI section 1 (for TH-G40J, TH-G30J)



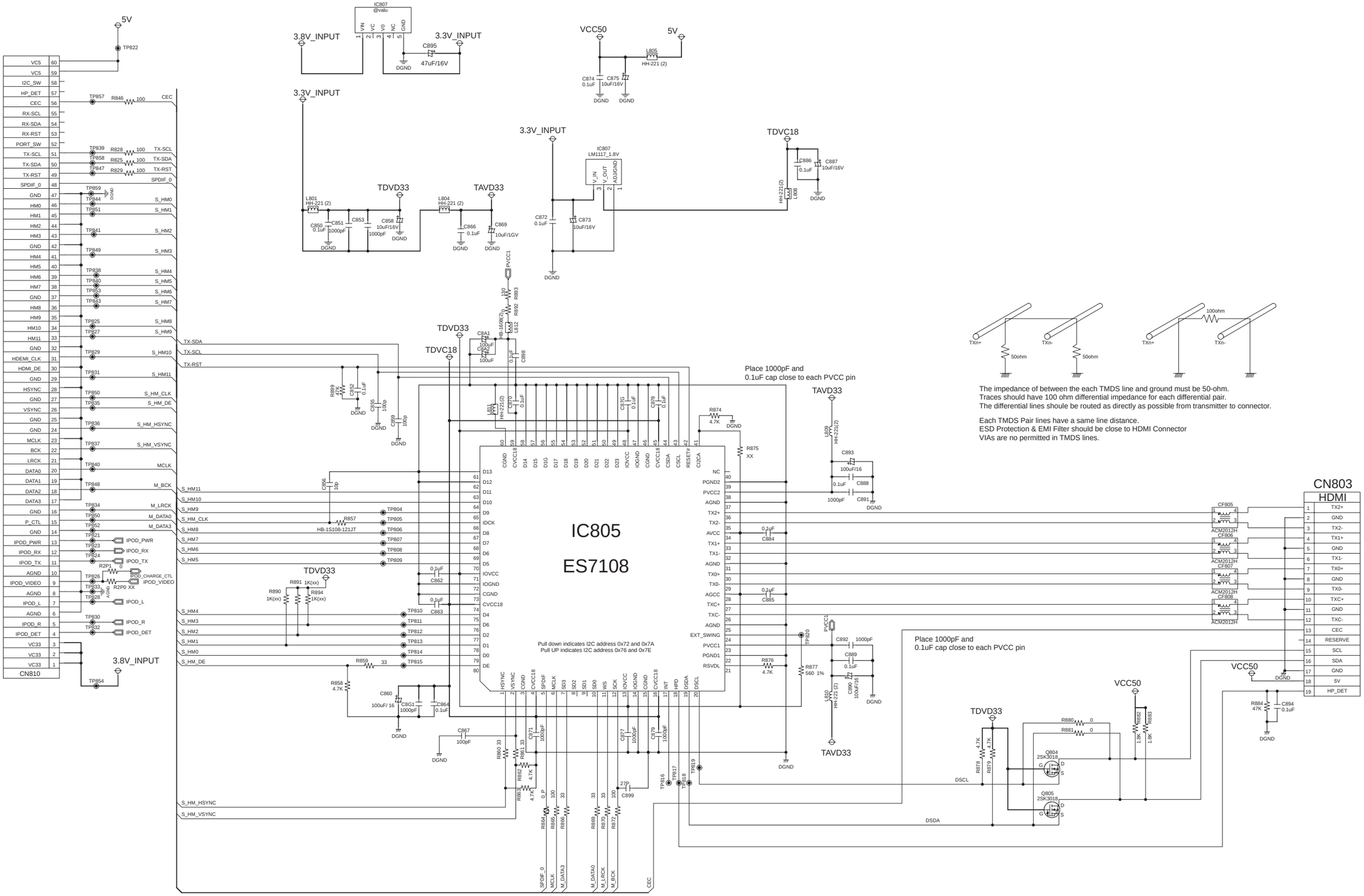
The impedance of between the each TMDS line and ground must be 50-ohm.
Traces should have 100 ohm differential impedance for each differential pair.
The differential lines should be routed as directly as possible from transmitter to connector.

Each TMDS Pair lines have a same line distance.
ESD Protection & EMI Filter should be close to HDMI Connector
VIAs are no permitted in TMDS lines.

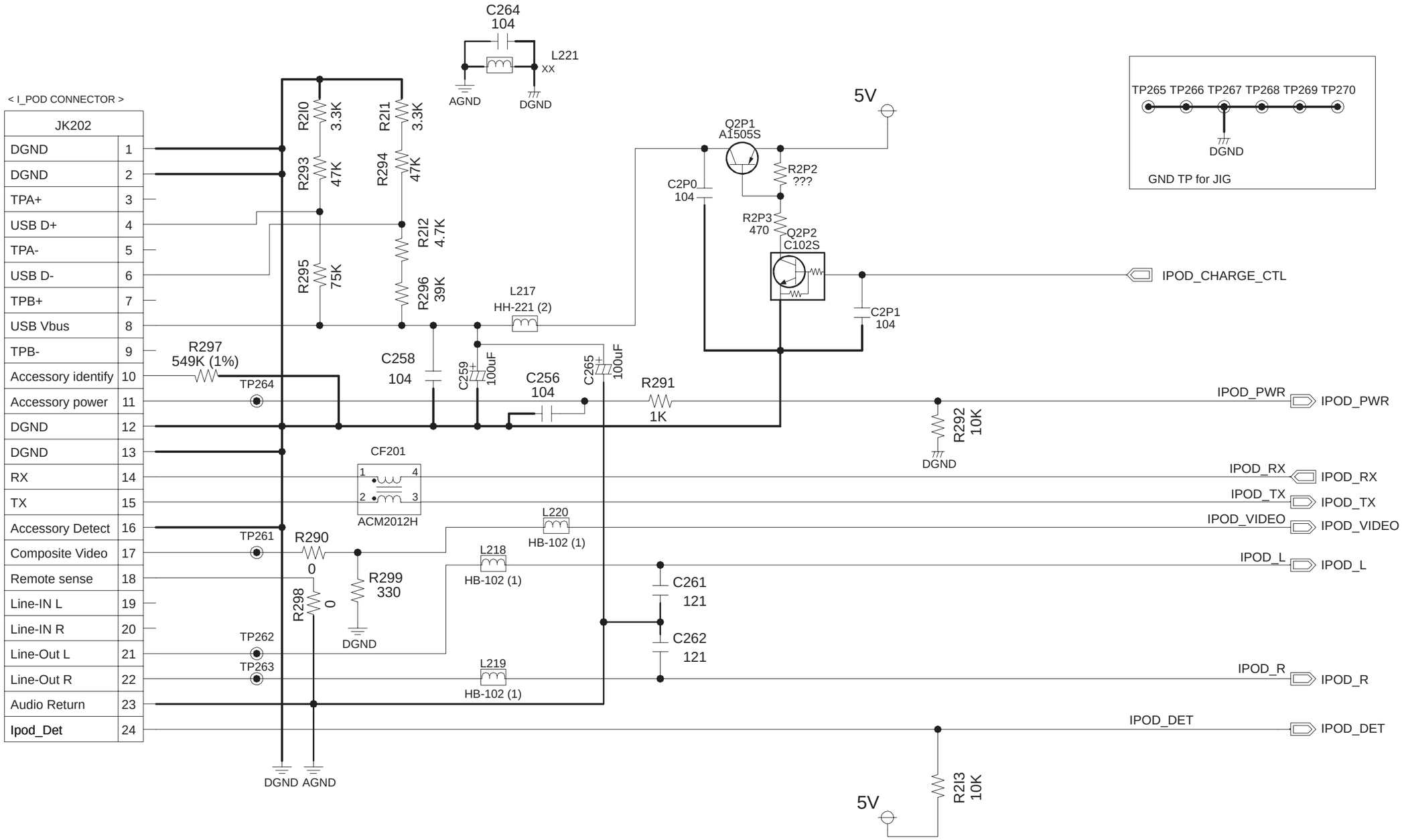
■ HDMI section 2 (for TH-G40J)



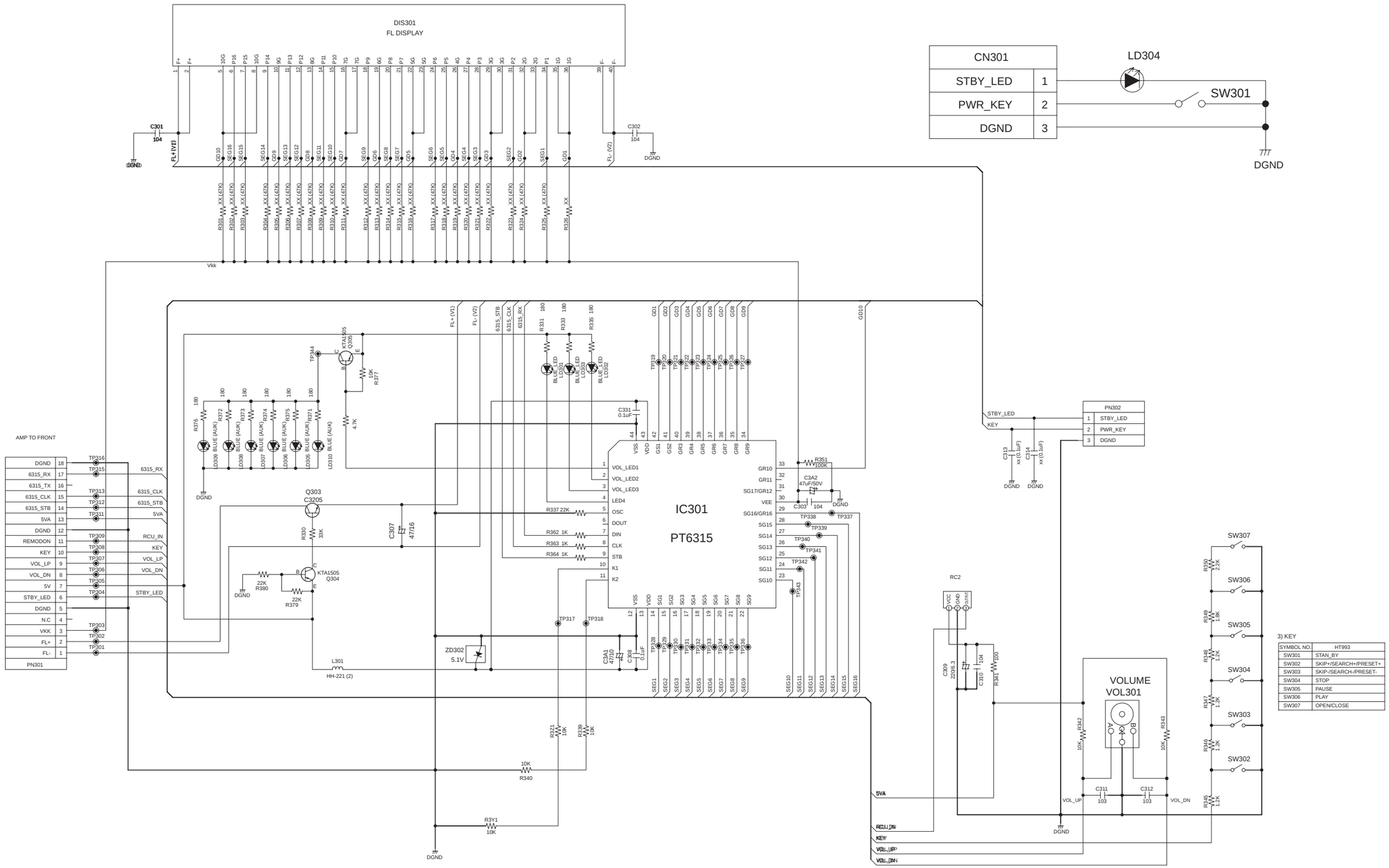
■ HDMI section 1 (for TH-G40C, TH-G40UJ, TH-G30C)



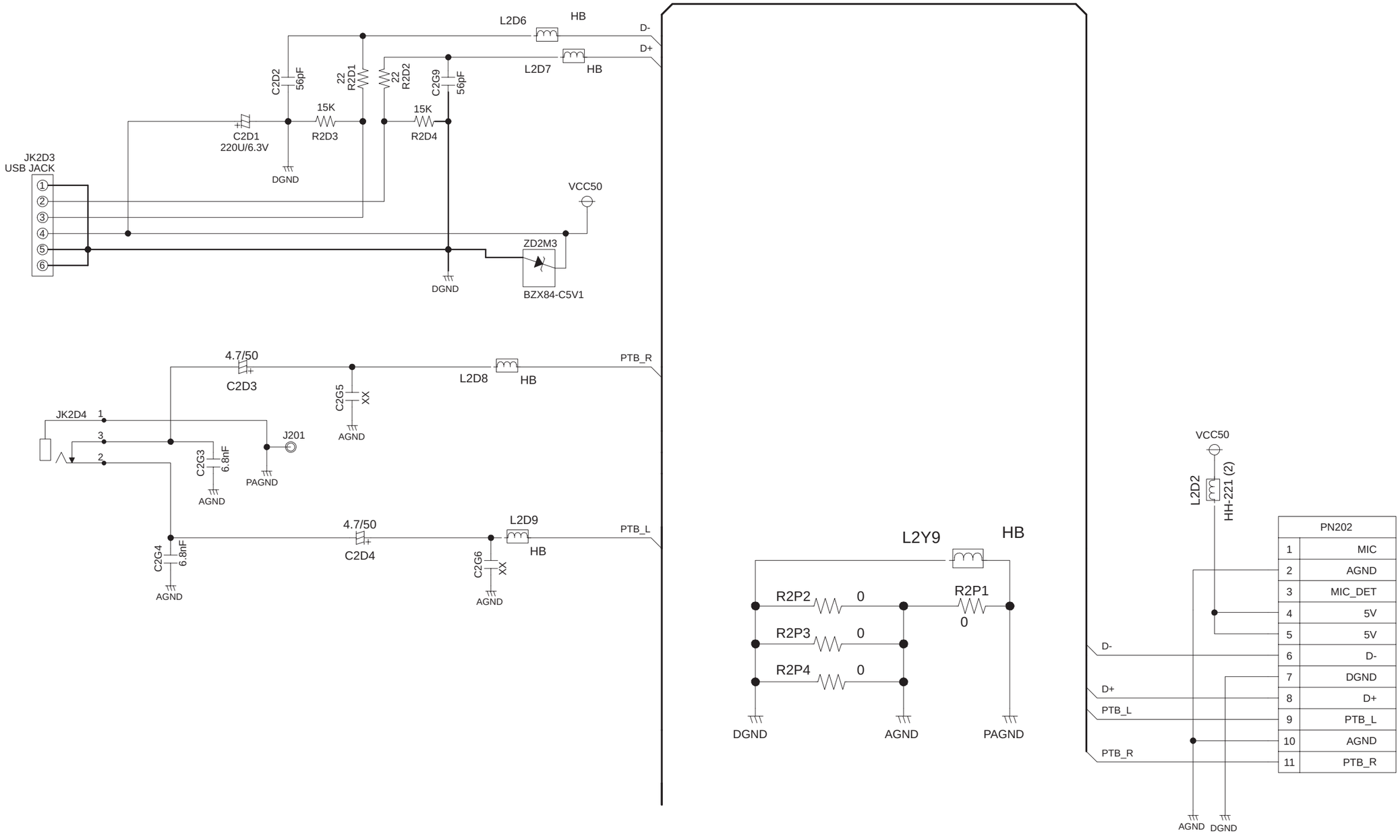
■ HDMI section 2 (for TH-G40C, TH-G40UJ)



■ Front key & Timer section



■ USB section

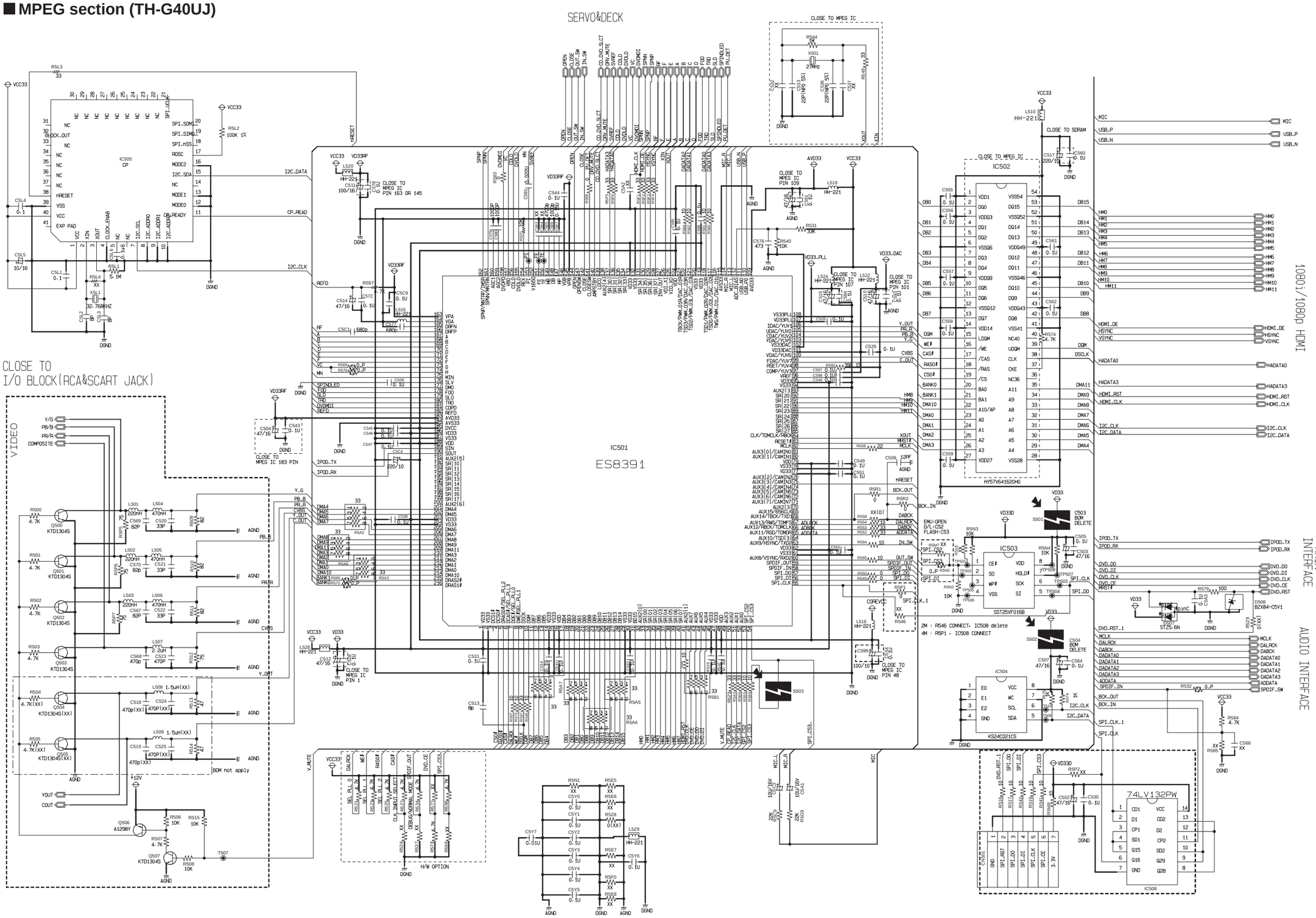

L2D6
HB
D-
D+
L2D7
HB
C2D2
56pF
22
R2D1
22
R2D2
C2G9
56pF
15K
15K
C2D1
220U/6.3V
R2D3
R2D4
DGND
JK2D3
USB JACK
VCC50
ZD2M3
DGND
BZX84-C5V1
4.7/50
C2D3
L2D8
HB
PTB_R
C2G5
XX
AGND
JK2D4
1
3
2
J201
C2G3
6.8nF
AGND
PAGND
4.7/50
C2D4
L2D9
HB
PTB_L
C2G4
6.8nF
AGND
C2G6
XX
AGND
L2Y9
HB
R2P2
0
R2P1
0
R2P3
0
R2P4
0
DGND
AGND
PAGND
VCC50
L2D2
HH-221 (2)
PN202
1 MIC
2 AGND
3 MIC_DET
4 5V
5 5V
6 D-
7 DGND
8 D+
9 PTB_L
10 AGND
11 PTB_R
D-
D+
PTB_L
PTB_R
AGND
DGND

CIRCUIT VOLTAGE CHART

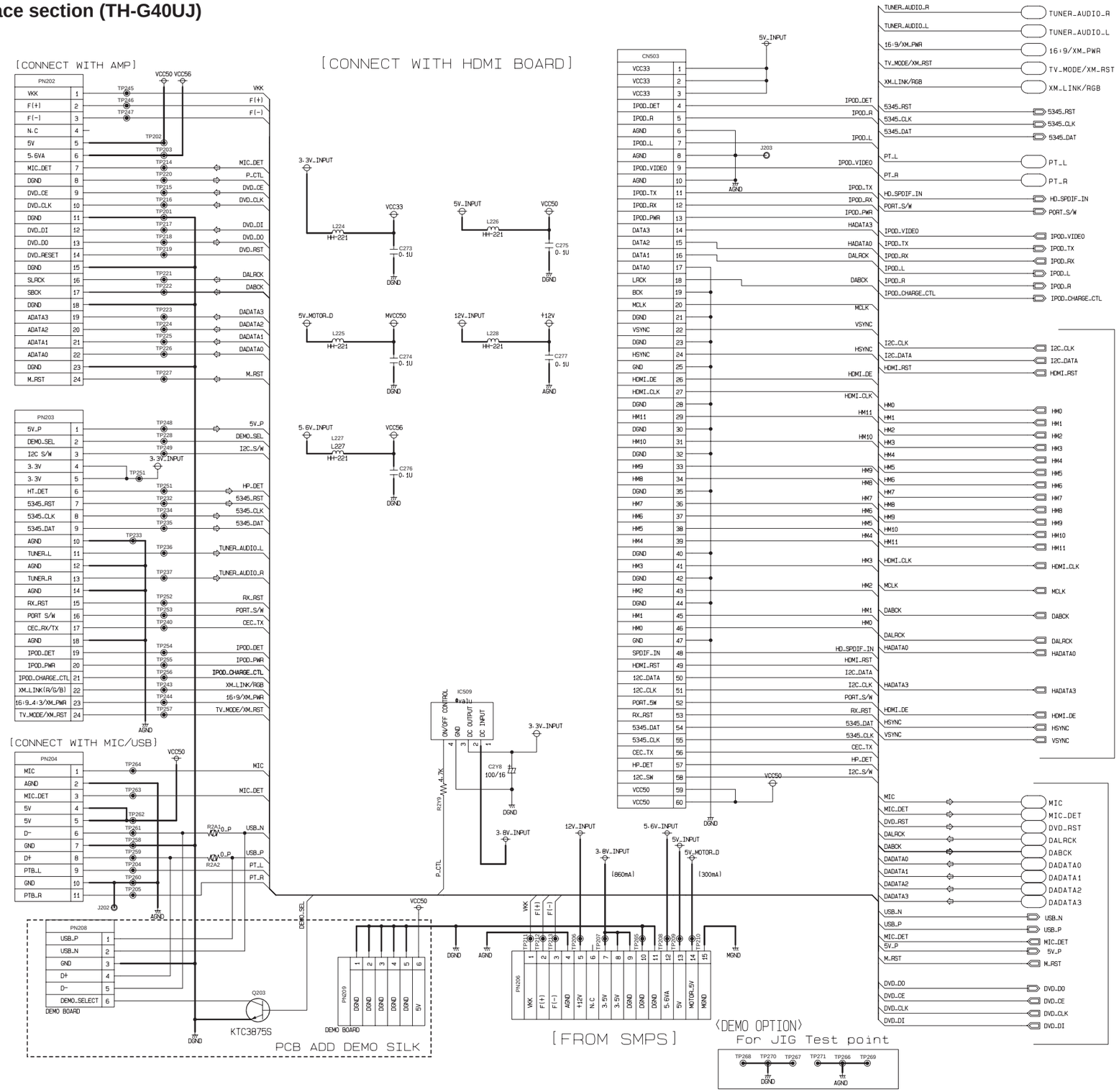
MPEG (IC501)		
Names	**Pin Numbers**	**Voltage**
COREVCC 1.5	16, 48, 79, 124, 185, 188	1.51 V
VD33_DAC	97, 101	3.47 V
VD33_PLL	107	3.47V
AVD33	109	3.47V
VD33RF	145,163,183	3.47V
VD33	1, 14, 30, 46, 62, 77, 95, 119, 133, 186, 203	3.47V
SDRAM (IC502)		
Names	**Pin Numbers**	**Voltage**
VCC33	1, 3, 9, 14, 27, 43, 49	3.47 V
FLASH (IC503)		
Names	**Pin Numbers**	**Voltage**
VD33	1, 3, 8	3.47 V
EEPROM (IC504)		
Names	**Pin Numbers**	**Voltage**
VD33	8	3.47 V
IPOD (IC507)		
Names	**Pin Numbers**	**Voltage**
VCC33	1, 40	3.47 V
ADC (IC201)		
Names	**Pin Numbers**	**Voltage**
VCC50	5, 14, 30	4.87 V
VCC33	36, 46	3.47 V
SERVO (IC401)		
Names	**Pin Numbers**	**Voltage**
12V_INPUT	12	12.04V
MVCC50	5, 19	4.86 V
COREVCC1.5	28	1.56V

ADG884 (IC804)		
Names	**Pin Numbers**	**Voltage**
EEP_VCC(VCC50)	1	4.32V
HDMI TX (IC805)		
Names	**Pin Numbers**	**Voltage**
TDVD33	13, 28, 34, 48, 70	3.23 V
TAVD33	23, 38	3.29 V
TDVC18	4, 16, 45, 59, 74	1.8 V
LC87F5R64A (IC101)		
Names	**Pin Numbers**	**Voltage**
5V_P	9, 36, 59	5.04 V
TS5A2053 (IC202)		
Names	**Pin Numbers**	**Voltage**
VCC50	8	4.87V

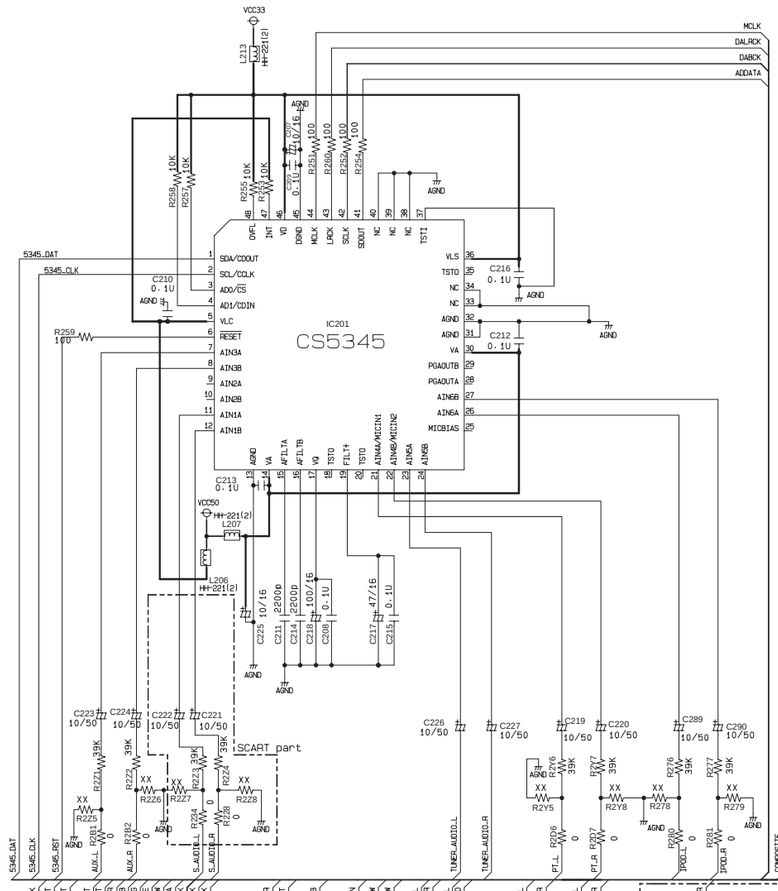
■ MPEG section (TH-G40UJ)



■ Power interface section (TH-G40UJ)



■ I/O section (TH-G40UJ)



With SCART MODEL
1. R2A8 ,R2A9 , R2C0 :75 Ohm
2. R211 (CVBS) : 100 Ohm

W/O SCART MODEL
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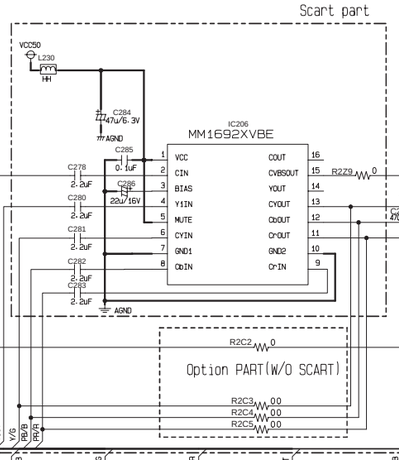

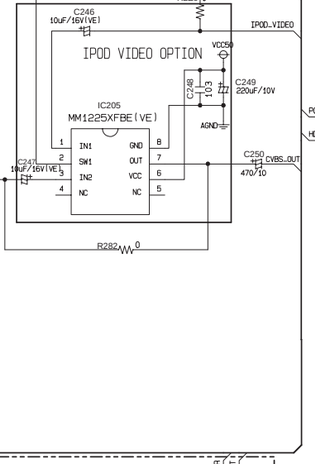

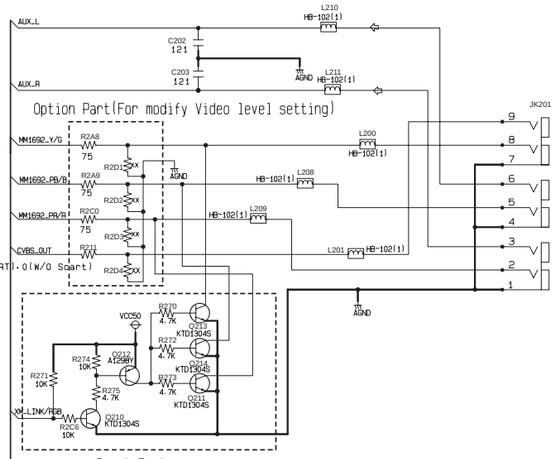

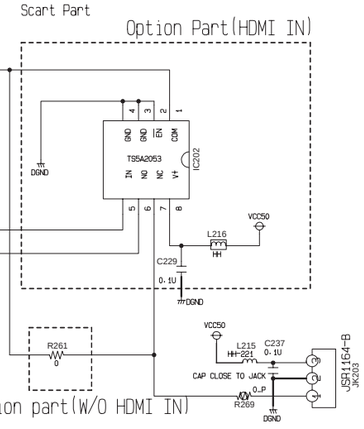

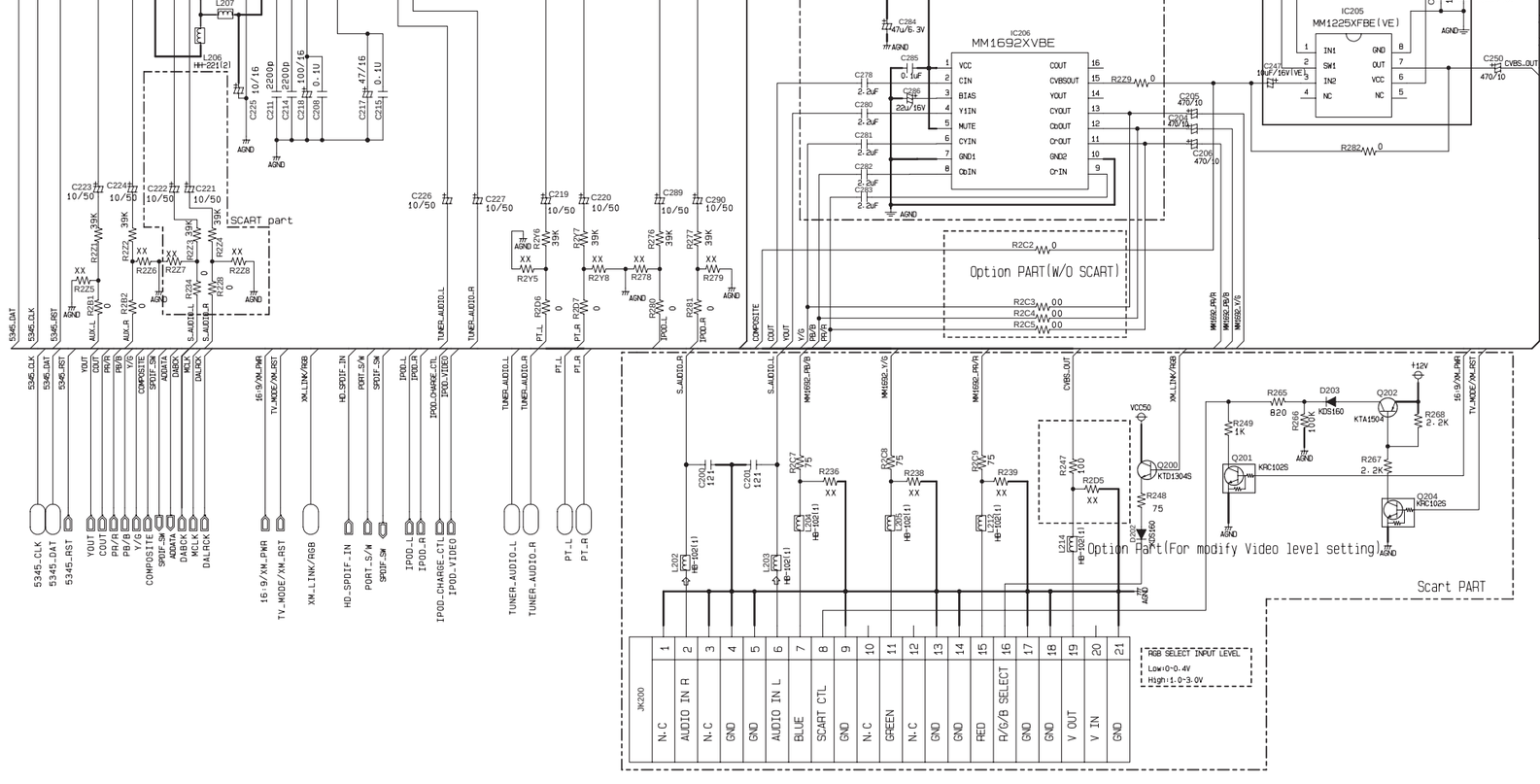

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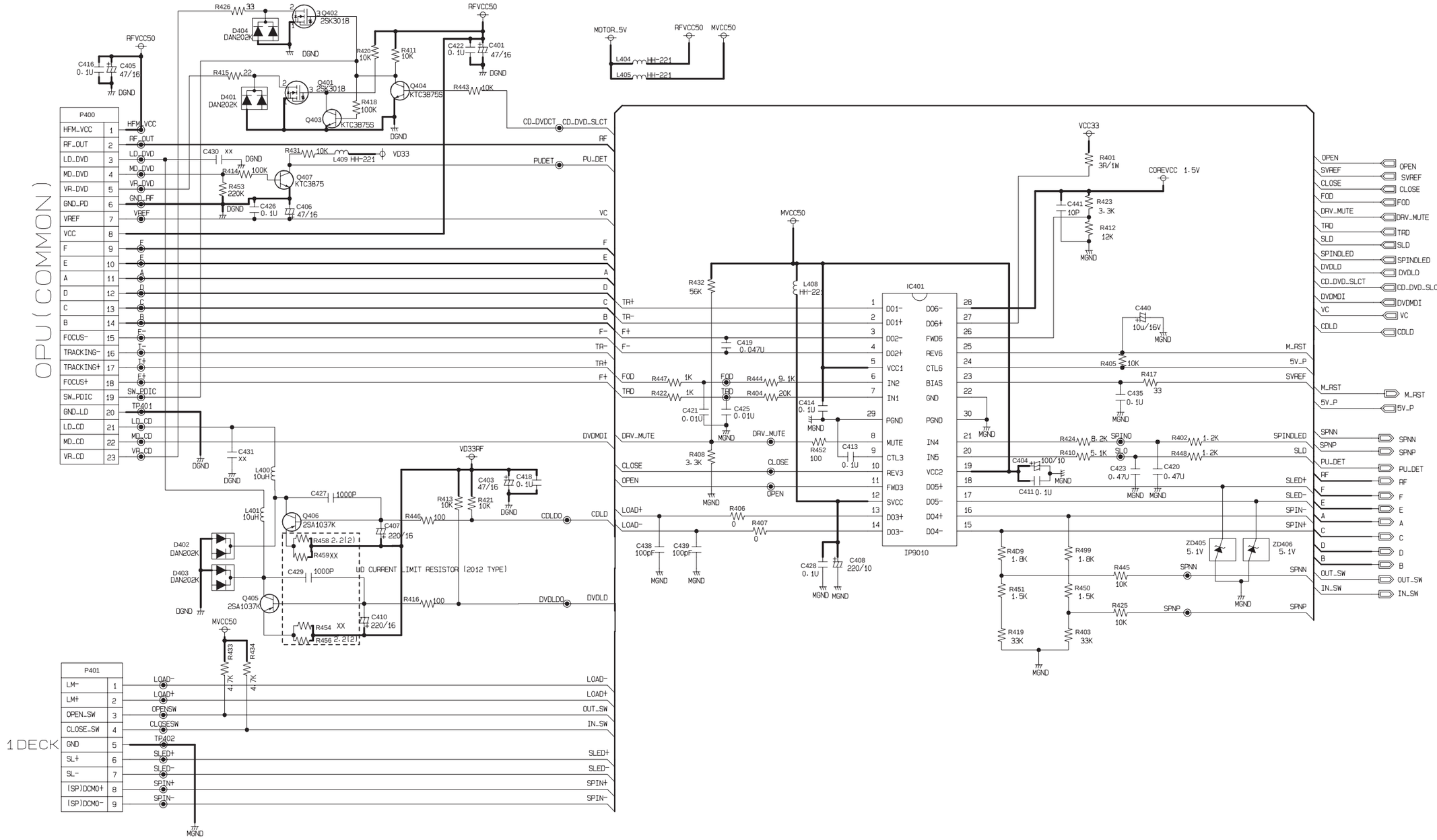
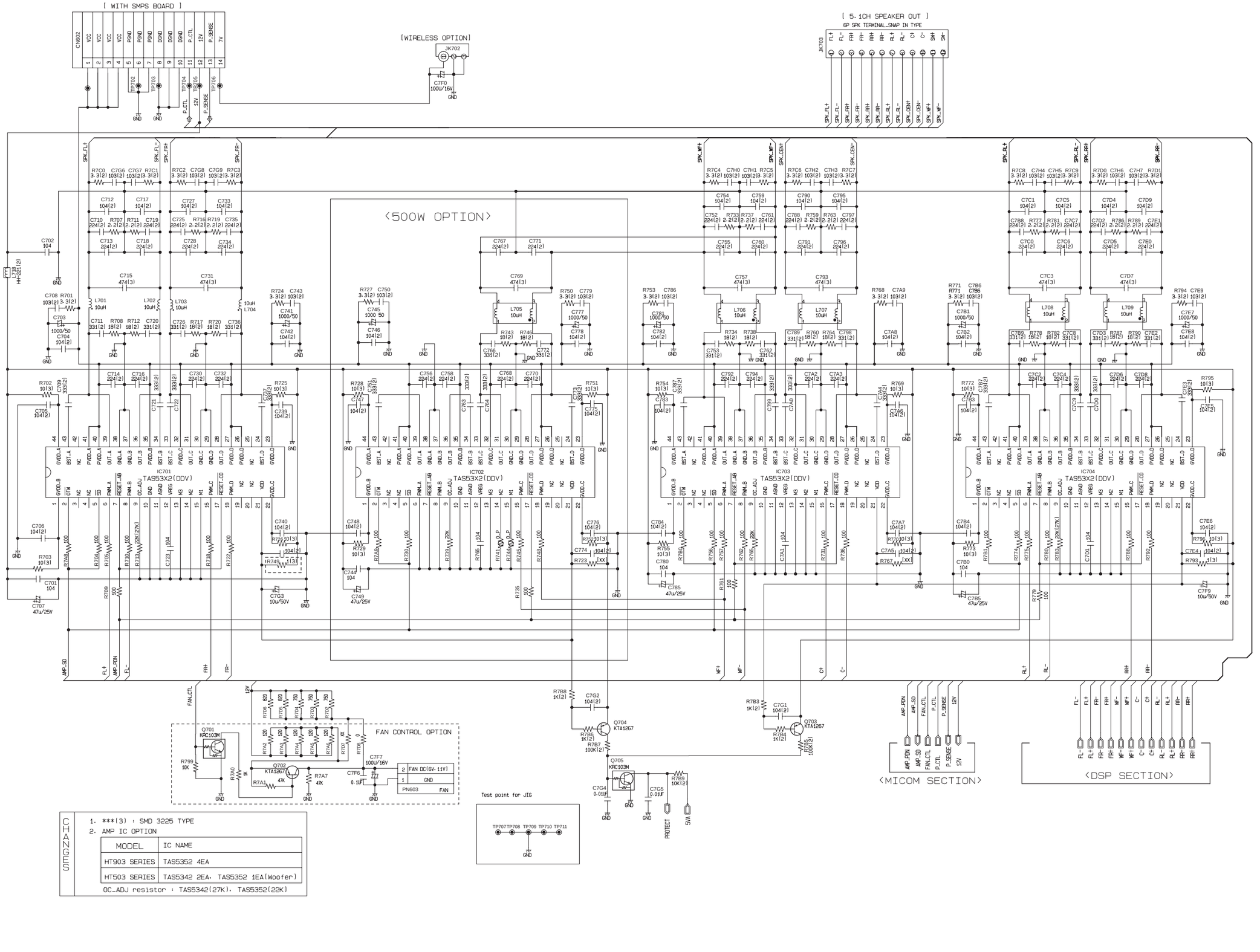
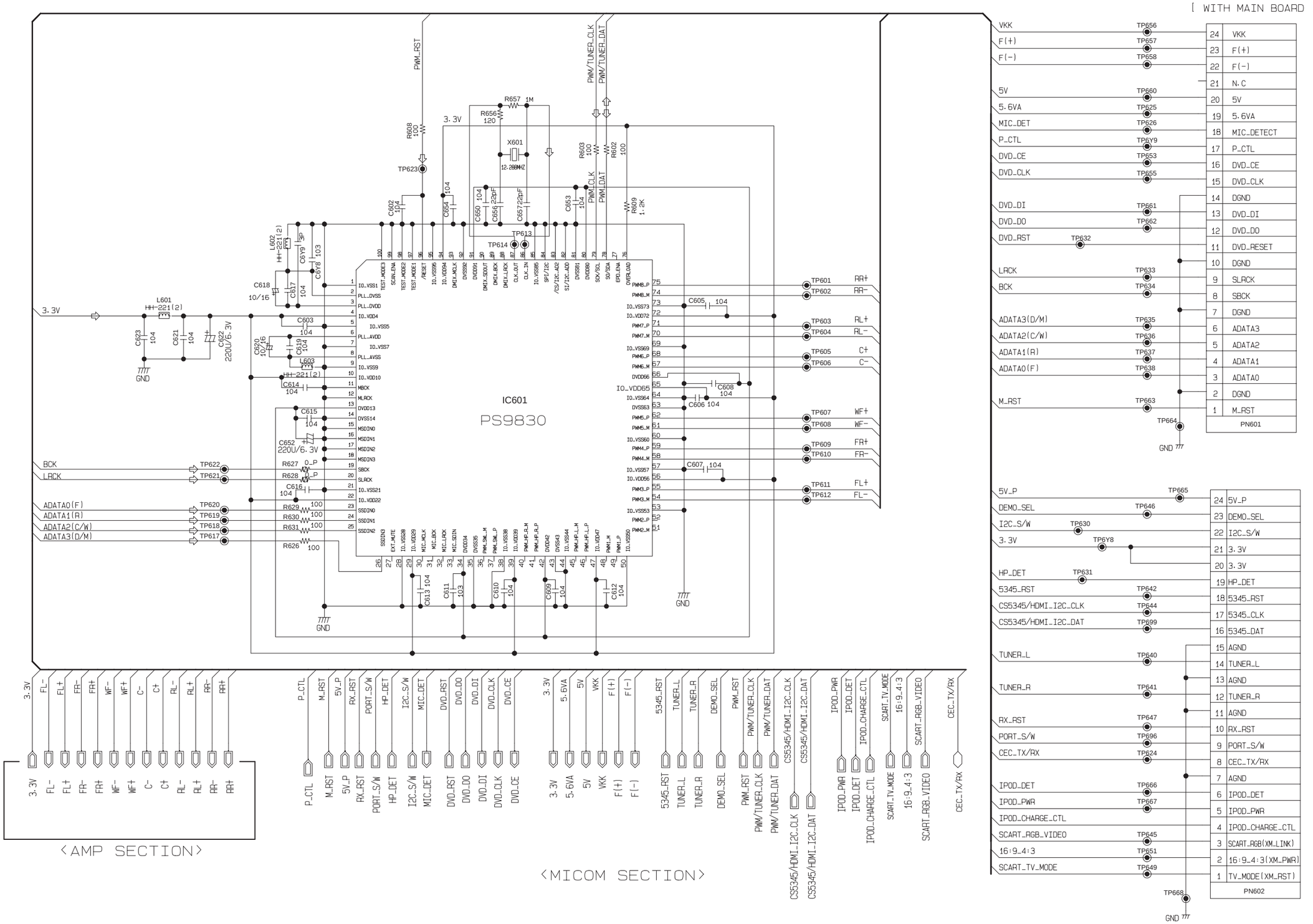
■ Servo section (TH-G40UJ)



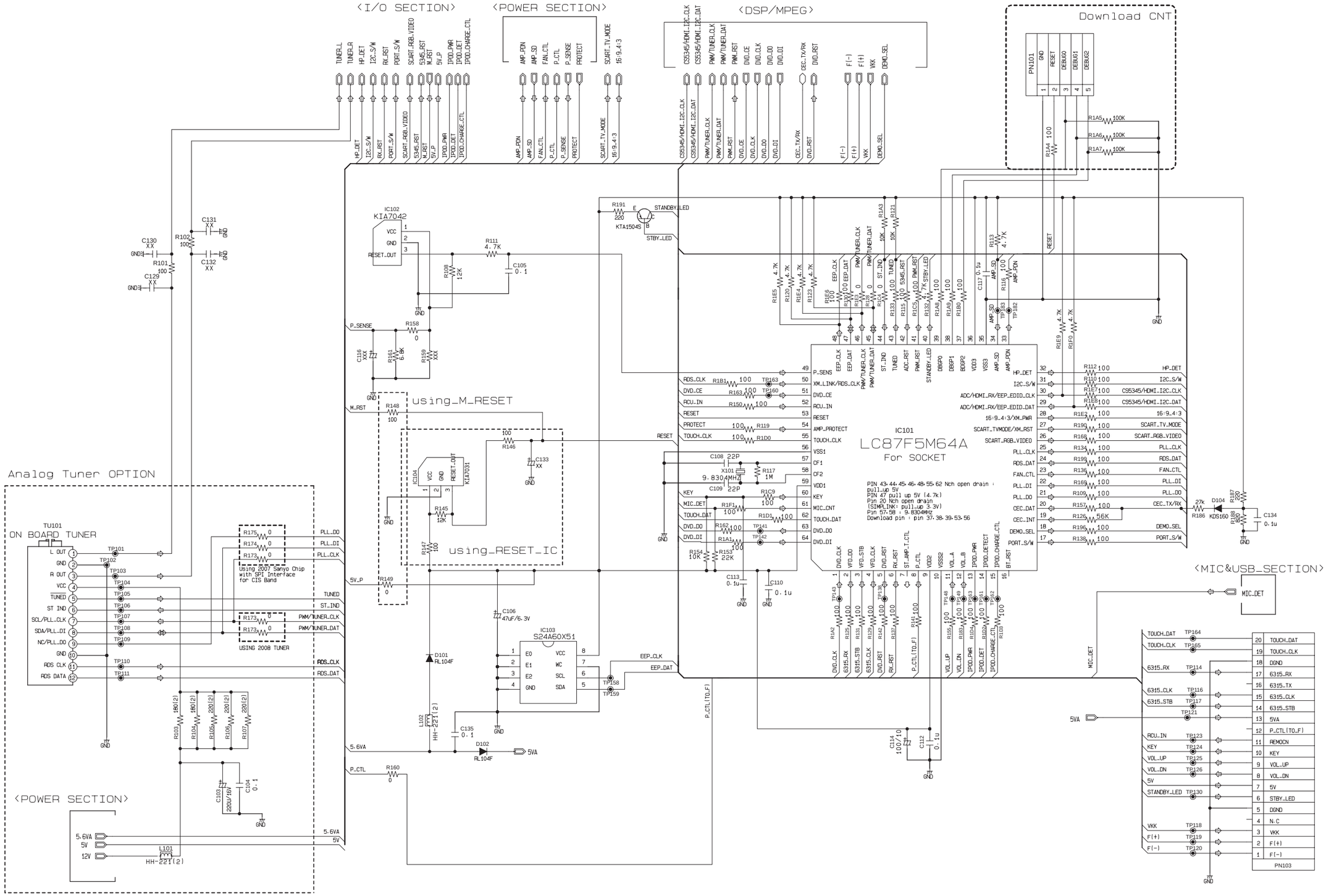
■ Amp section (TH-G40UJ)



■ DSP section (TH-G40UJ)



■ Micom section (TH-G40UJ)

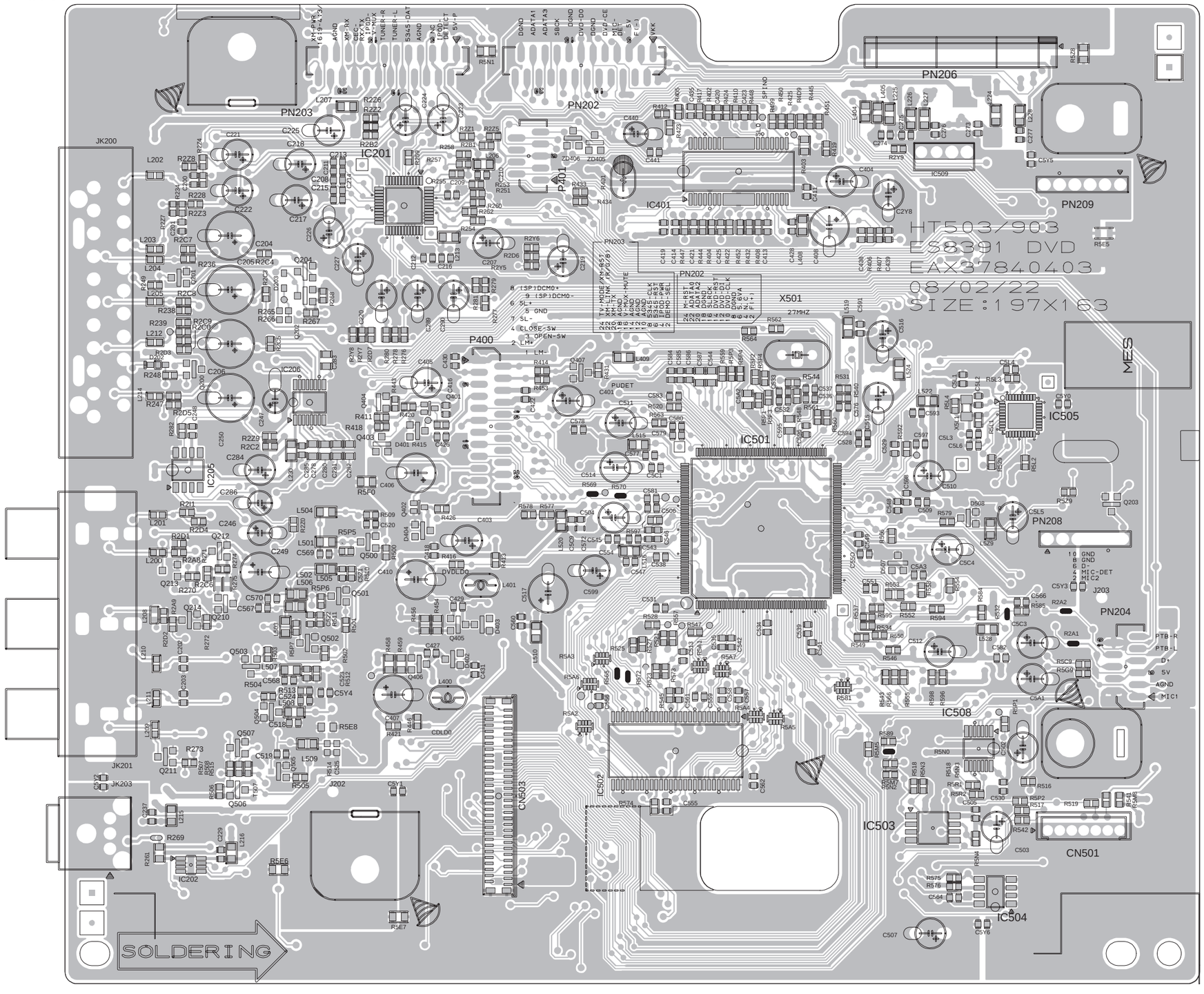


Printed circuit boards

■ Main board

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

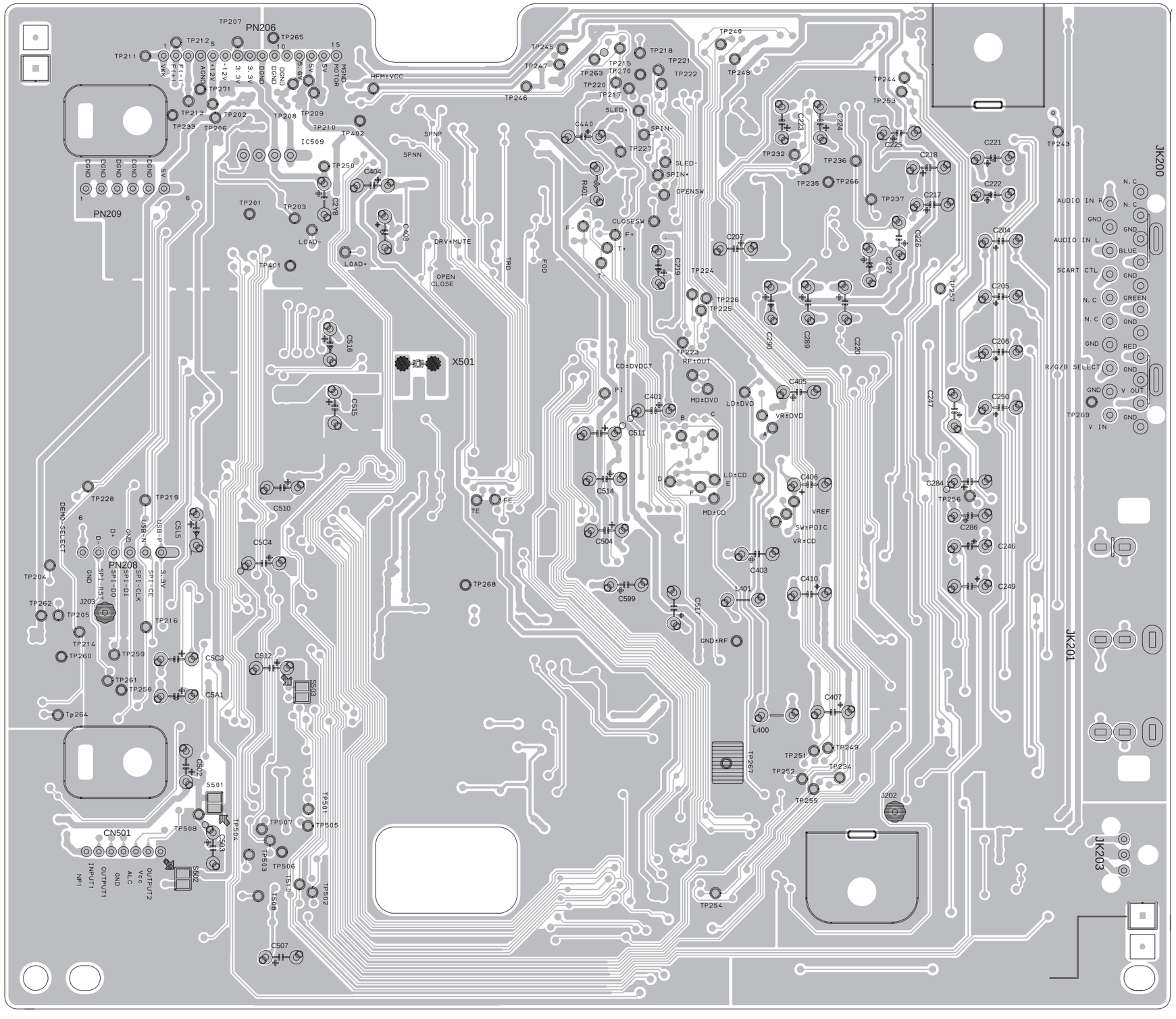
forward side



■ Main board

reverse side

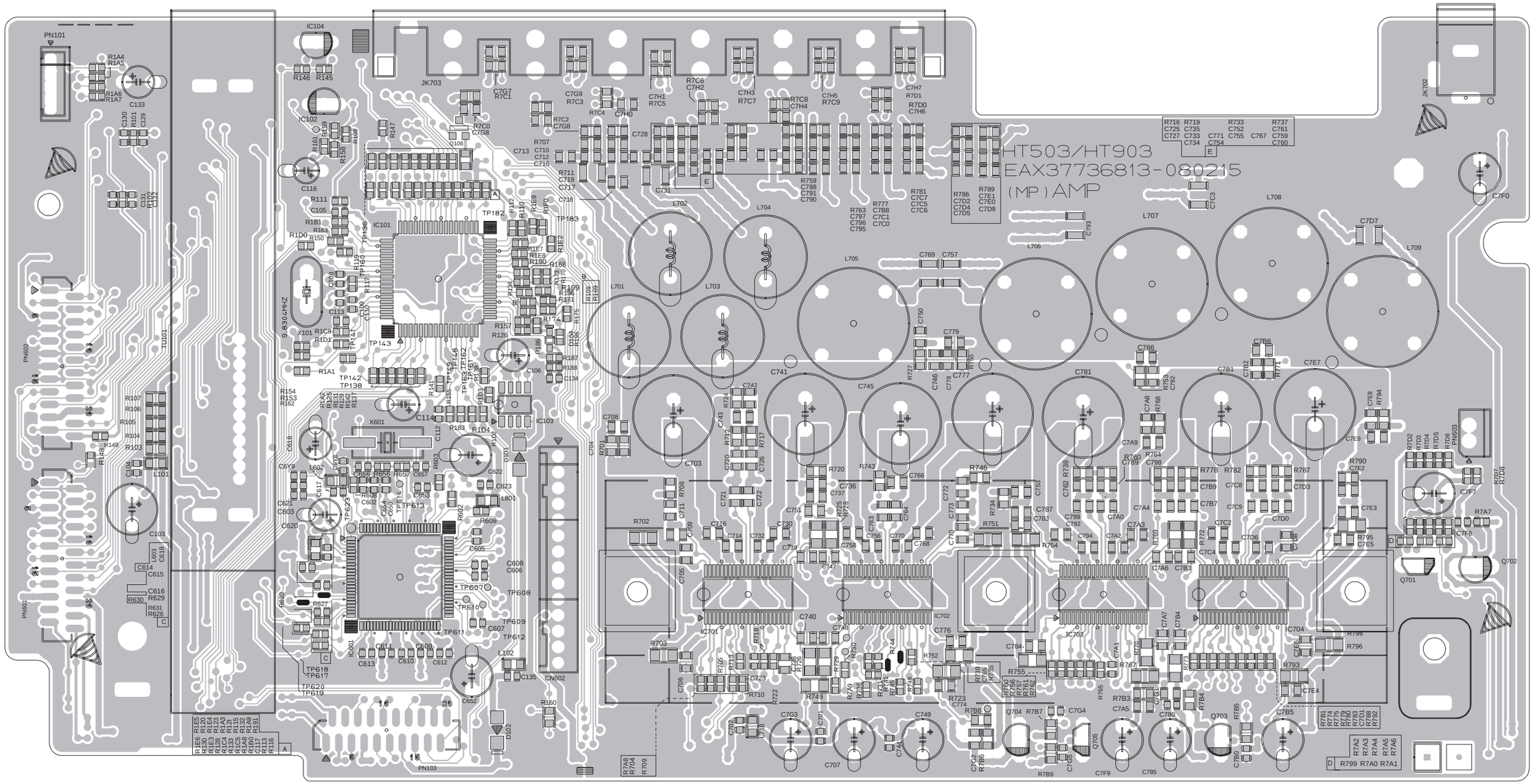
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



■ Amp board

forward side

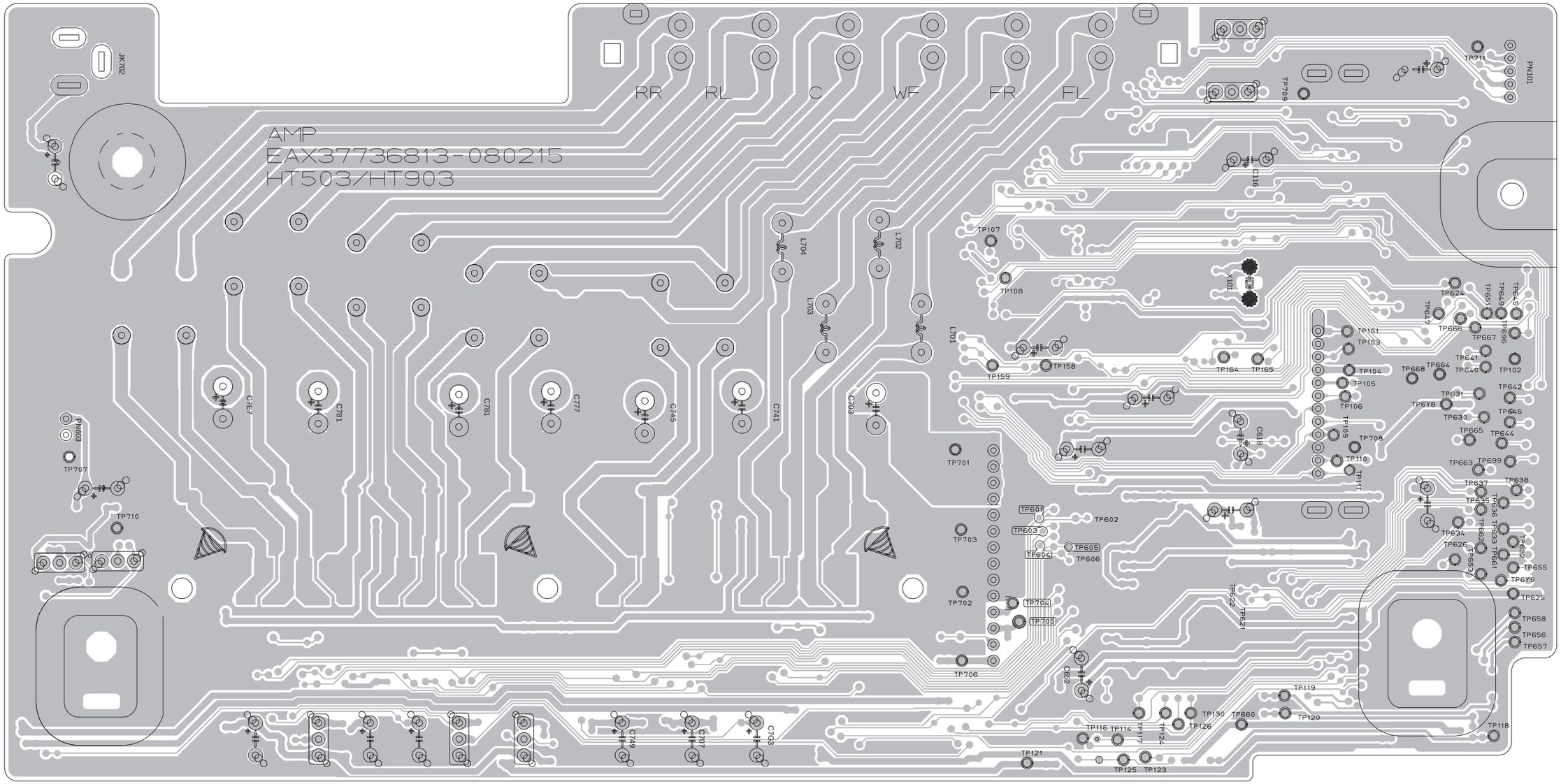
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



■ Amp board

reverse side

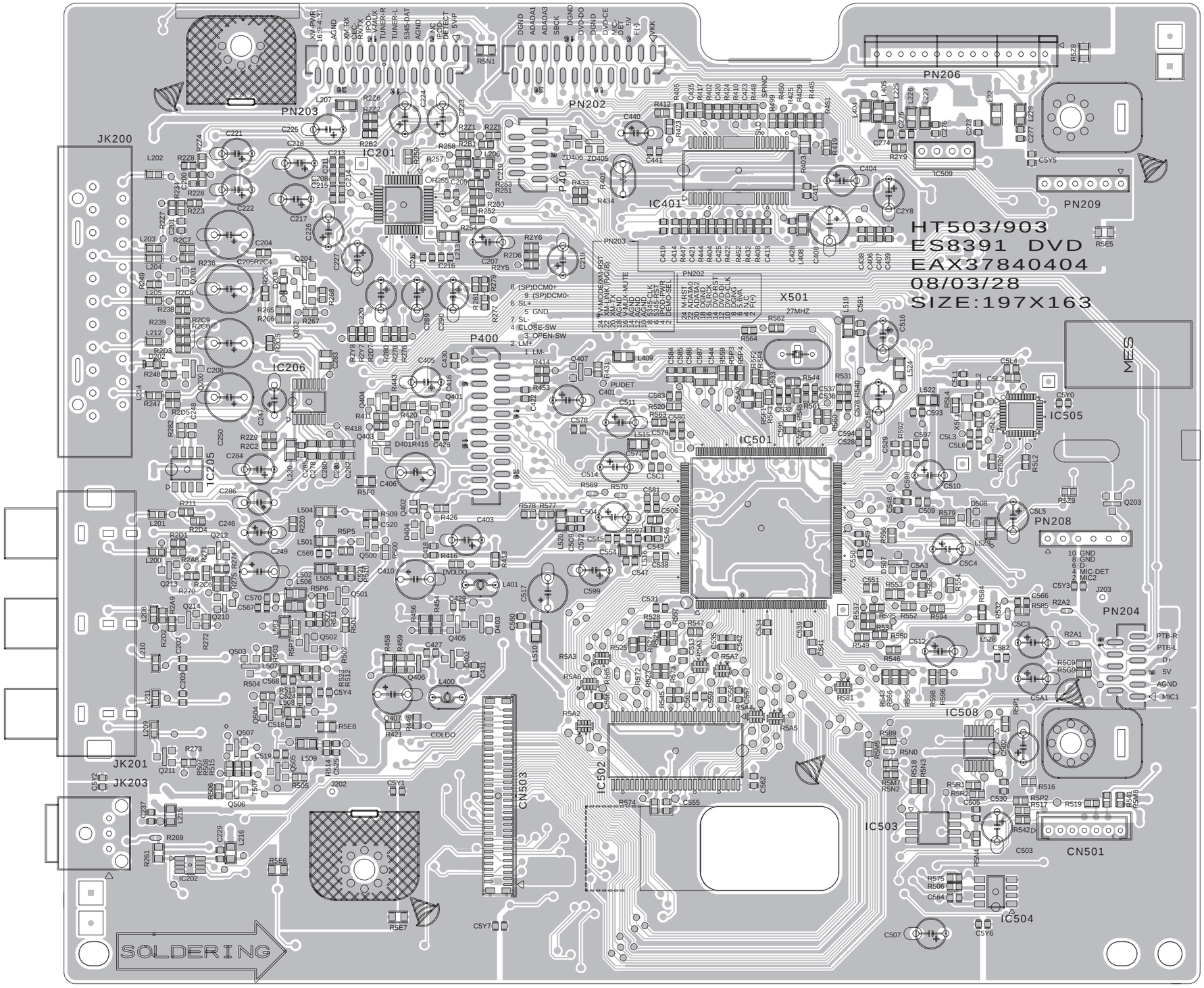
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



■ Main board (TH-G40UJ)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

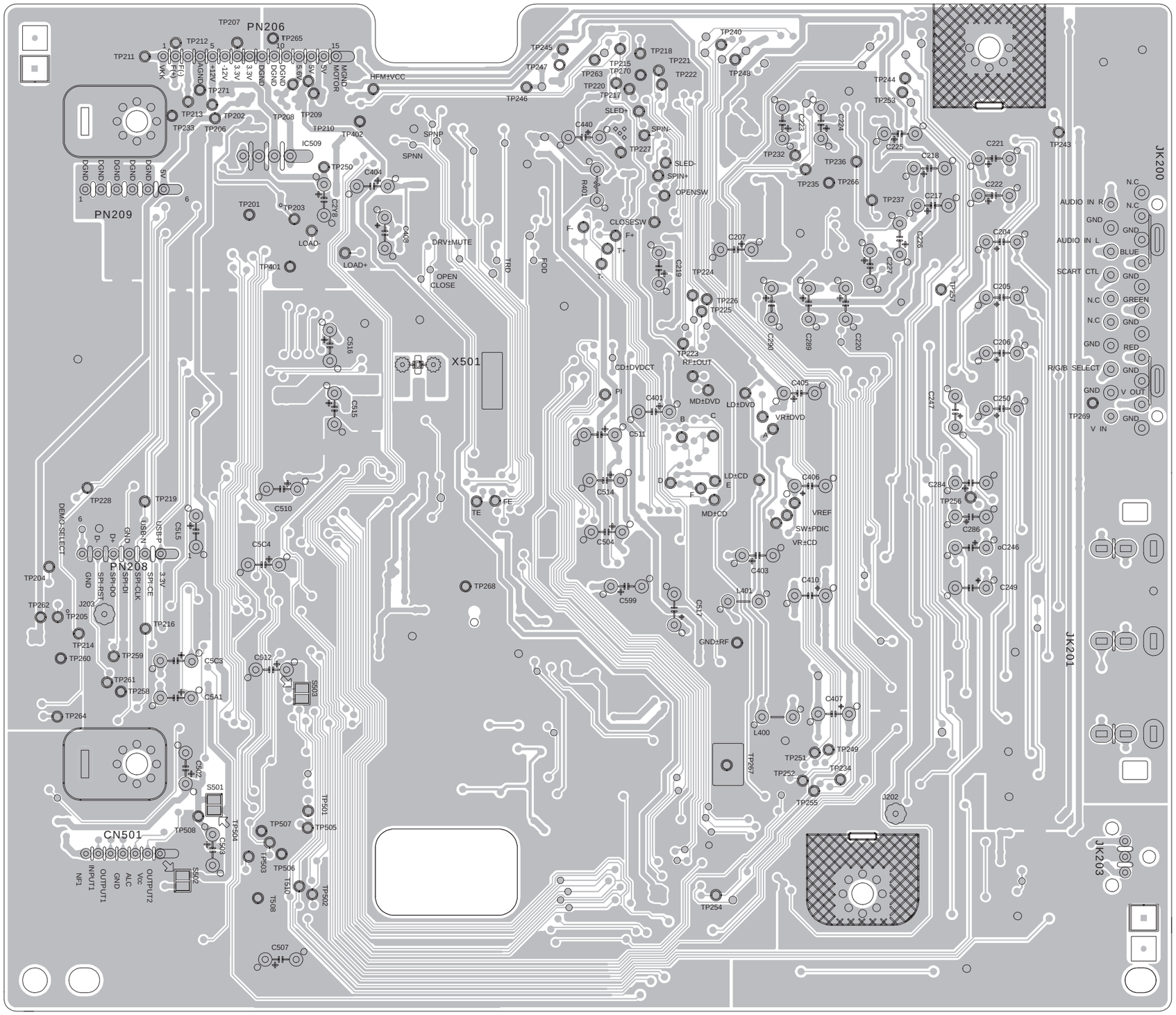
forward side



■ Main board (TH-G40UJ)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

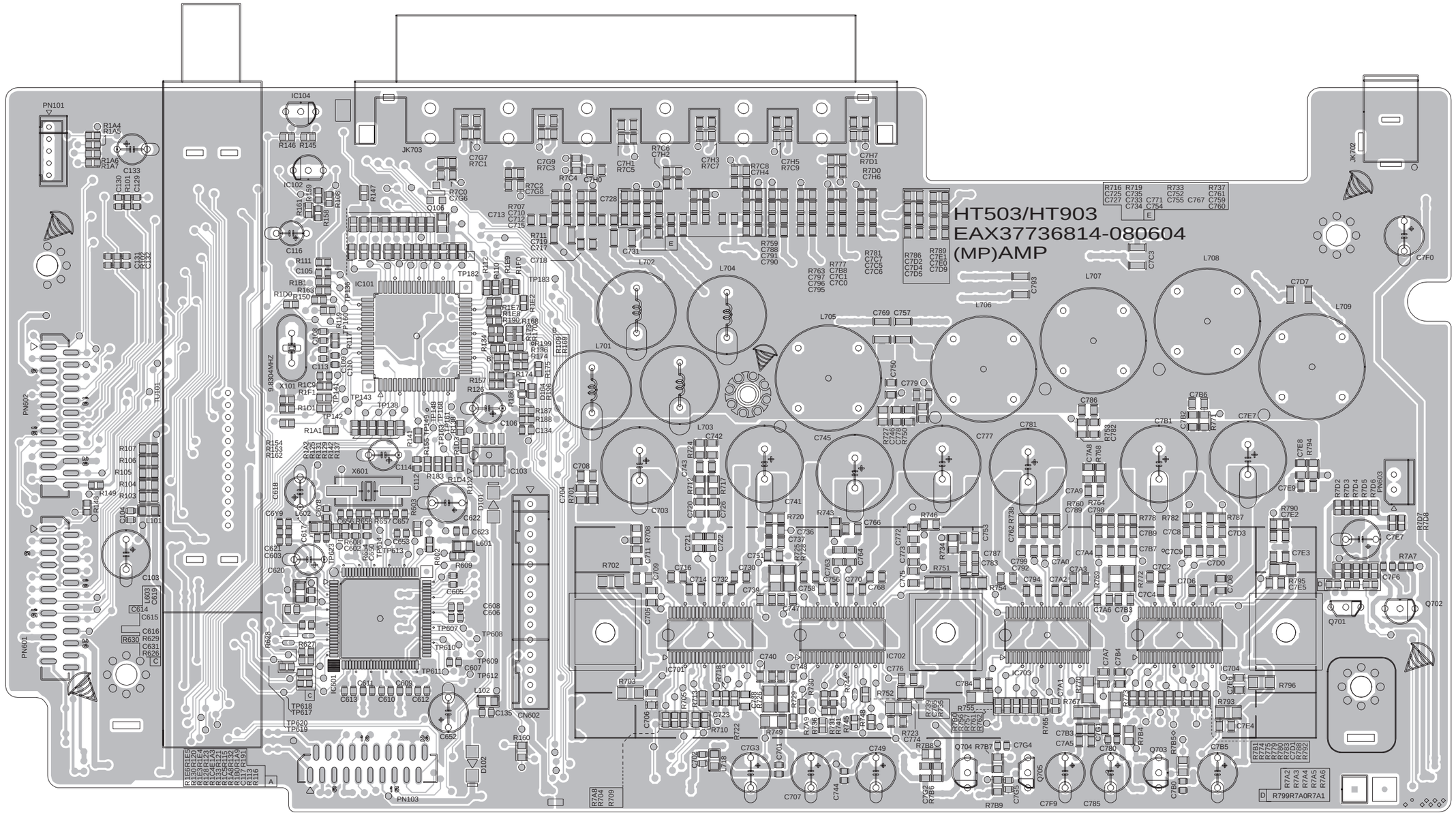
reverse side



■ Amp board (TH-G40UJ)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

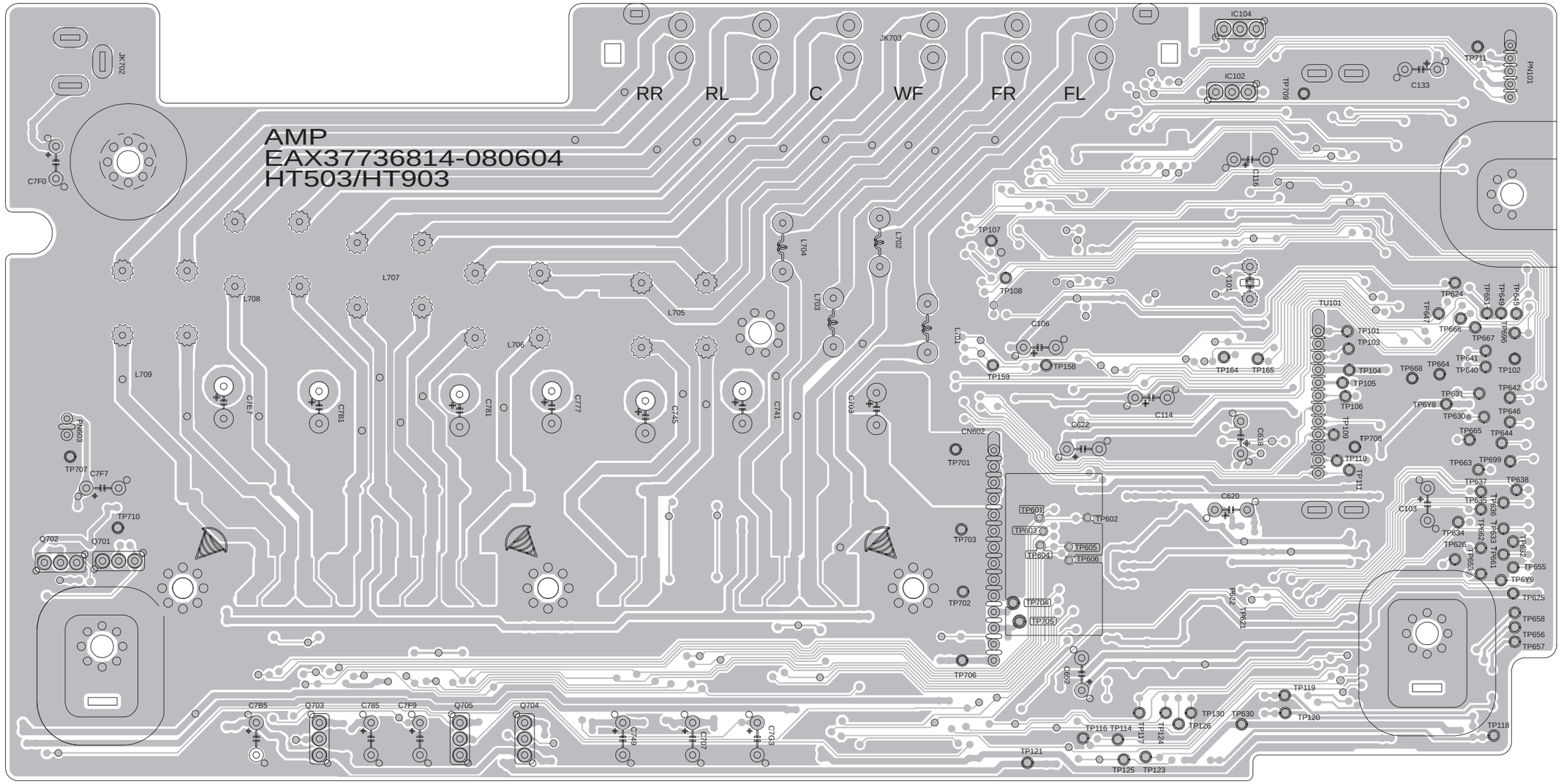
forward side



■ Amp board (TH-G40UJ)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

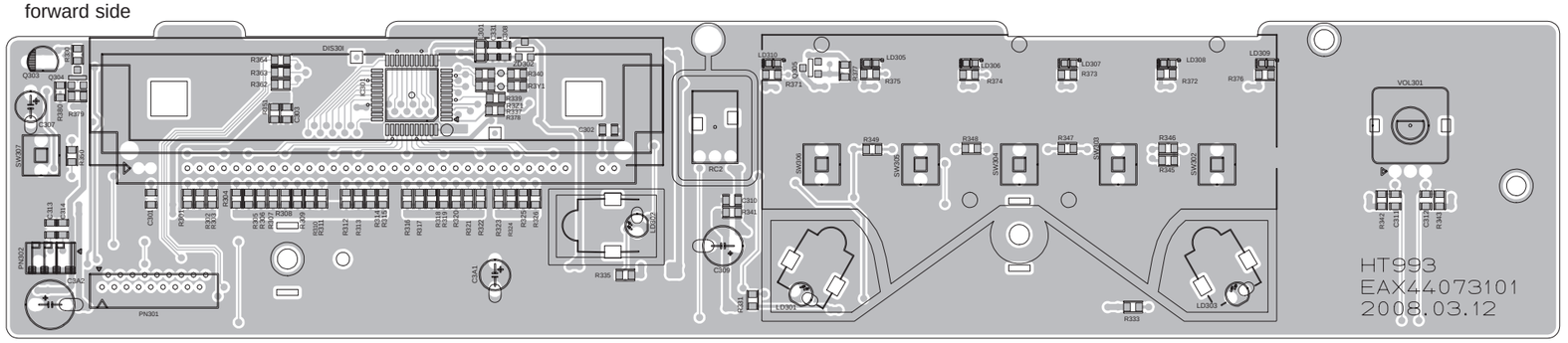
reverse side



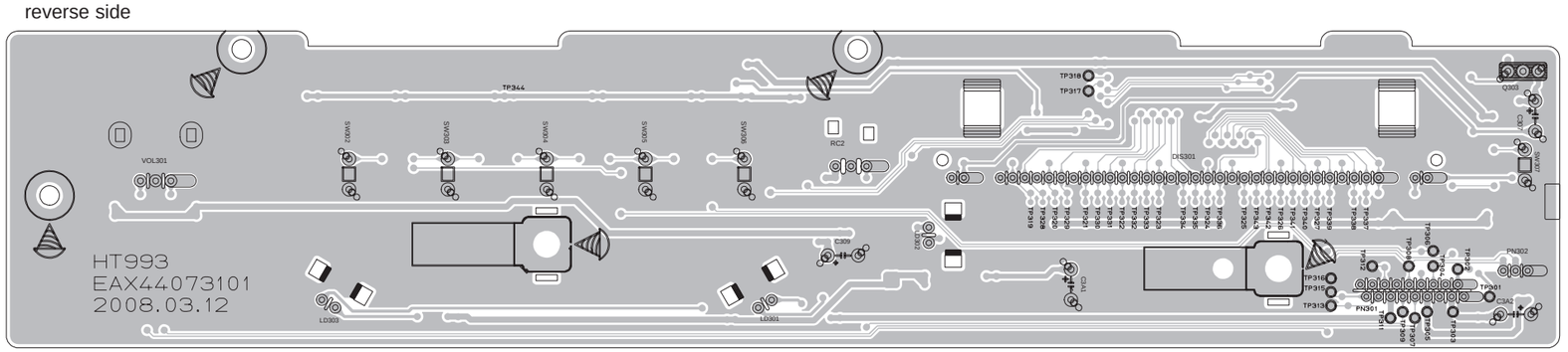
■ Front board

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

forward side



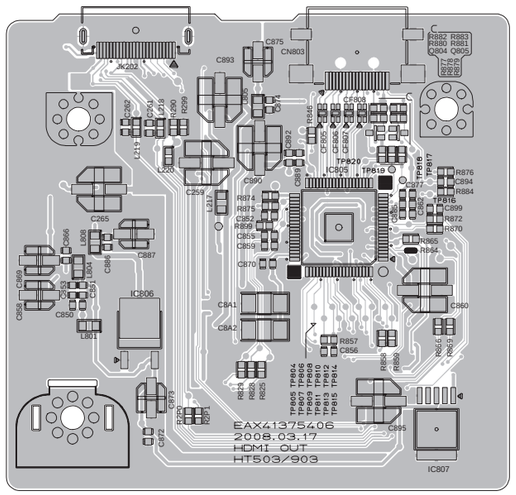
reverse side



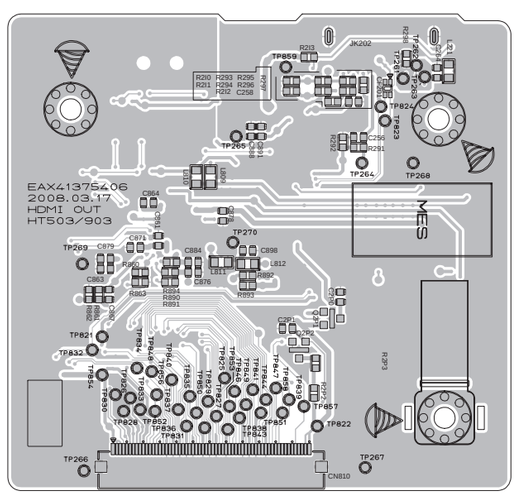
■ HDMI board (for TH-G40J, TH-G30J)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

forward side



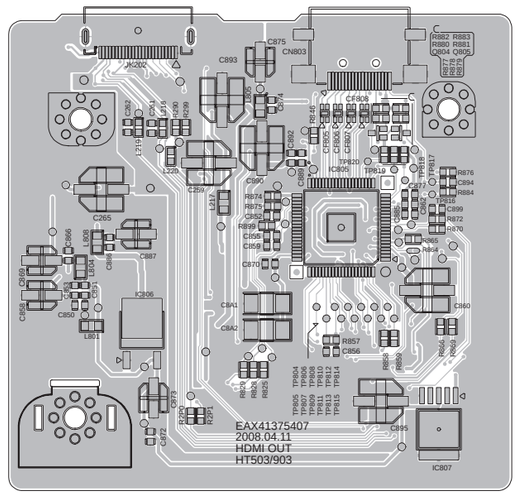
reverse side



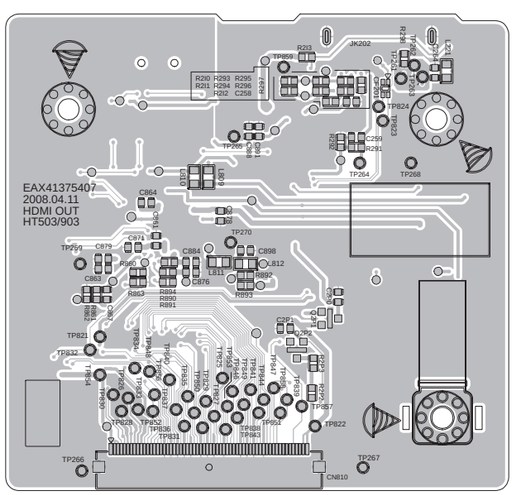
■ HDMI board (for TH-G40C, TH-G40UJ, TH-G30C)

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

forward side

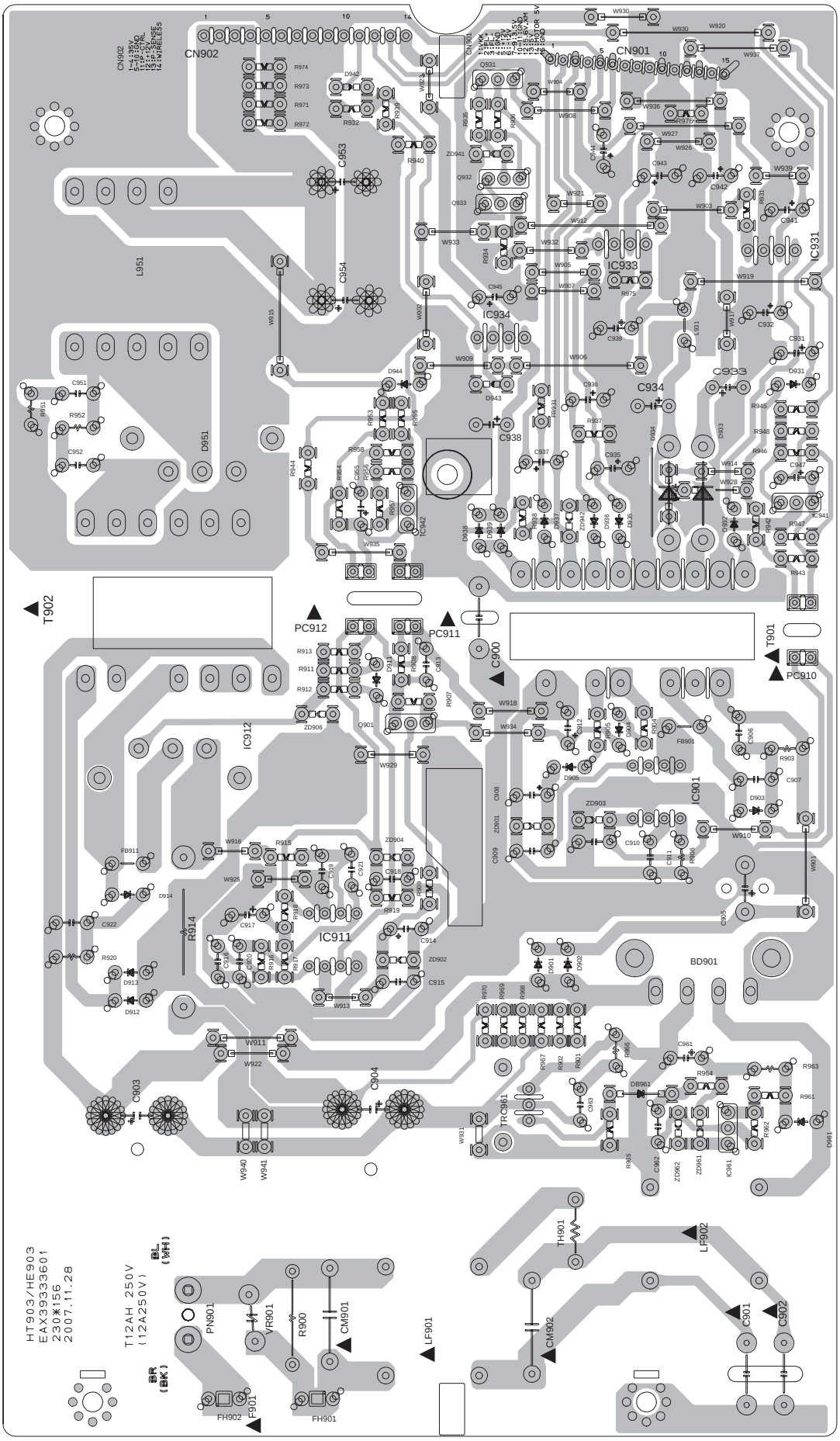


reverse side



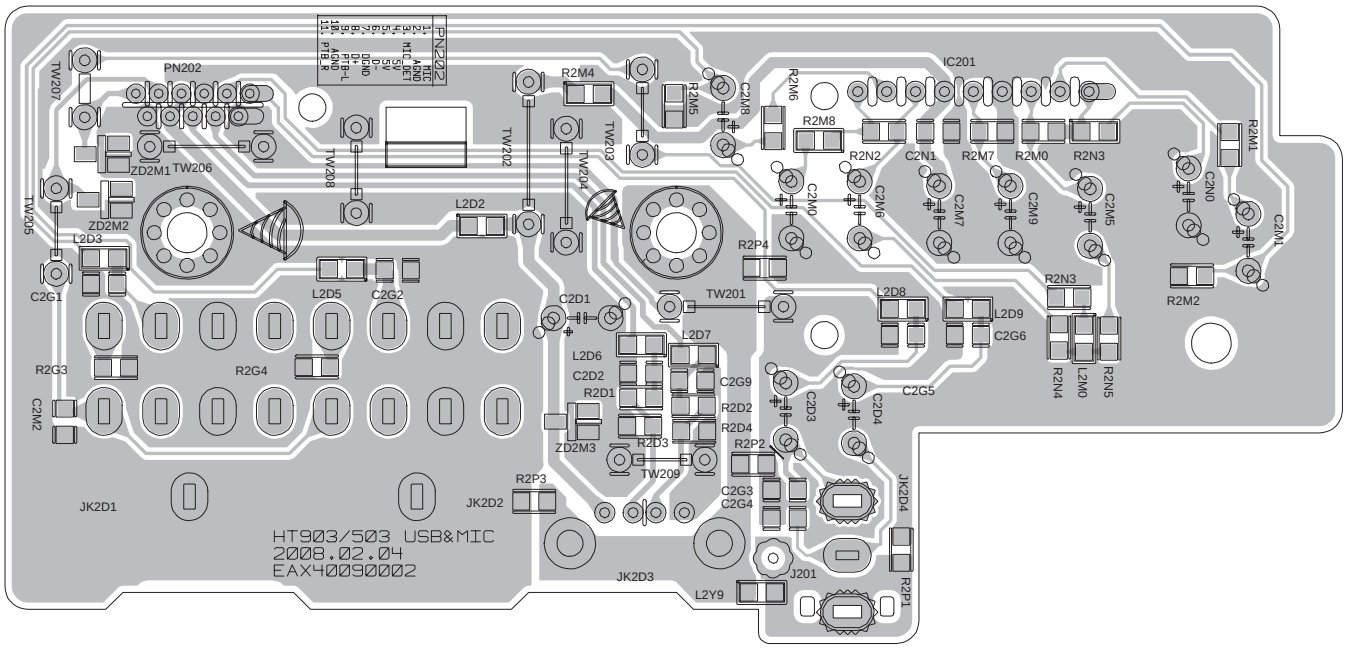
■ SMPS board

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



■ Front jack board

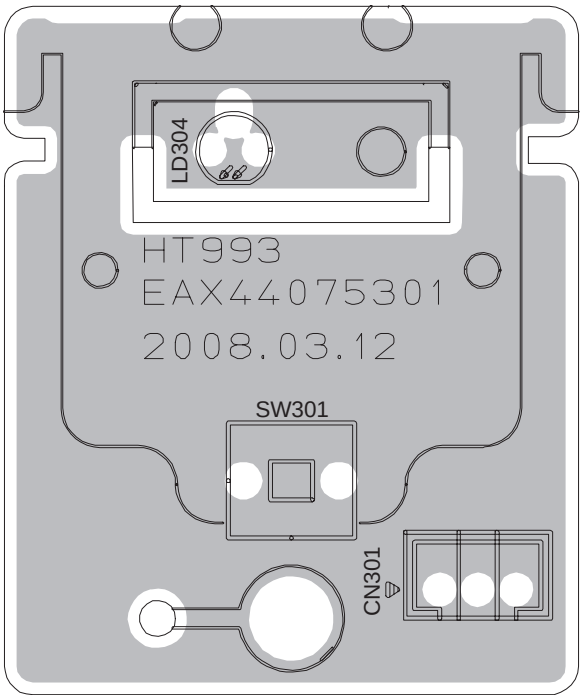
Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)



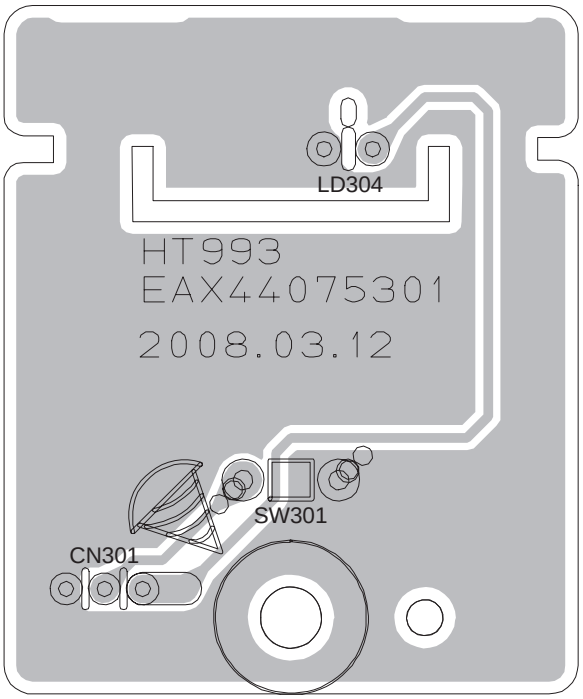
■ Front key board

Lead free solder used in the board (material : Sn-Ag-Cu, melting point : 219 Centigrade)

forward side



reverse side



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JVC
Victor Company of Japan, Limited
Audio/Video Systems Division 10-1,1chome,Ohwatari-machi,Maebashi-city,371-8543,Japan

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