MANUAL DE SERVIÇO

TELEVISORES LED

MODELOS : DL2944(A)W / LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F

ESPECIFICAÇÕES

Tensão de rede: ---------- 110 - 220V ~ (60 Hz) automático.

Consumo-------LE1956(A)W e LE1958(A)W
Stand by ----------<-1,0 Watt
Médio ----------19 Watts

LE2456(A)F e LE2458(A)F
Stand by ----------<-1,0 Watt
Médio ----------33 Watts

DL2944(A)W
Stand by ----------<-1,0 Watt
Médio ----------35 Watts

Sintonizador Analógico / Digital

Impedância de entrada de antena:---------- 75 ohm-tipo desbalanceada para VHF/UHF
Impedância de entrada de cabo:---------- 75 ohm-tipo desbalanceada para CABO
Sintonizador:---------- Circuito de recepção discreto
Sistema de sintonia---------- F.S. (Frequency synthetizer)-PLL
Sistema de televisão:---------- Padrão M-525 linhas
Faixa de prequencia de recepç 54MHz a 864 MHz
Freqüência intermediária (sinal digital):---------- 44MHz
Freqüências intermediárias (sinal analógico):----Portadora de vídeo ---------- 45,75 MHz
Portadora de som ---------- 41,25 MHz/ 4,5MHz
Portadora de croma---------- 42,17 MHz
freqüências subportadoras de croma (sinal analógico):---------- 3,575611MHz ----- (PALM)
3,582056 MHz ---- (PALN)
3,579545 MHz ---- (NTSC)

Potência de áudio: LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F-- 5W + 5W (RMS) / 8 ohms
DL2944(A)W---------- 10W + 10W (RMS) / 6 ohms

Painel LE1956(A)W / LE1958(A)W

Código ---------- HT185WX1-300 - BOE
Tipo: ---------- TFT - Edge - LED
Resolução ---------- 1366 x 768 pixels
Cor: ---------- 16.7M (8bit/color)
Angulo de visão: ---------- H:170°,V:160° (tip.)
Tempo de resposta: ---------- 5 mseg
Taxa de contraste: ---------- 1000:1 (min.)
Brilho: ---------- 250 cd/m²

Painel LE2456(A)F / LE2458(A)F

Código ---------- HM236WU3-100 - Konka
Tipo: ---------- TFT - Edge - LED
Resolução ---------- 1920 x 1080 pixels
Cor: ---------- 16.7M (8bit/color)
Angulo de visão: ---------- H:176°,V:136° (tip.)
Tempo de resposta: ---------- 5,5 mseg
Taxa de contraste: ---------- 800:1
Brilho: ---------- 200 cd/m²

Painel DL2944(A)W

Código ---------- DLED-29 INX-V290BJ1-PE1 - Konka
Tipo: ---------- TFT - Direct - LED
Resolução ---------- 1366 x 768 pixels
Cor: ---------- 16.7M (8bit/color)
Angulo de visão: ---------- H:176°,V:176° (typ.)
Tempo de resposta: ---------- 8 mseg
Taxa de contraste: ---------- 1200:1
Brilho: ---------- 250 cd/m²

Peso/ Dimensões(LxAxP):-----LE1956(A)W / LE1958(A)W ---------- 2,9 Kg (c/ pedestal: 450 x 338 x 188 mm)
(s/ pedestal: 450 x 292 x 62 mm)
LE2456(A)F / LE2458(A)F ---------- 3,8 Kg (c/ pedestal: 557 x 398 x 188 mm)
(s/ pedestal: 557 x 350 x 63,5 mm)
DL2944(A)W ---------- 6,4 Kg (c/ pedestal: 670 x 456 x 206 mm)
(s/ pedestal: 670 x 411 x 92 mm)

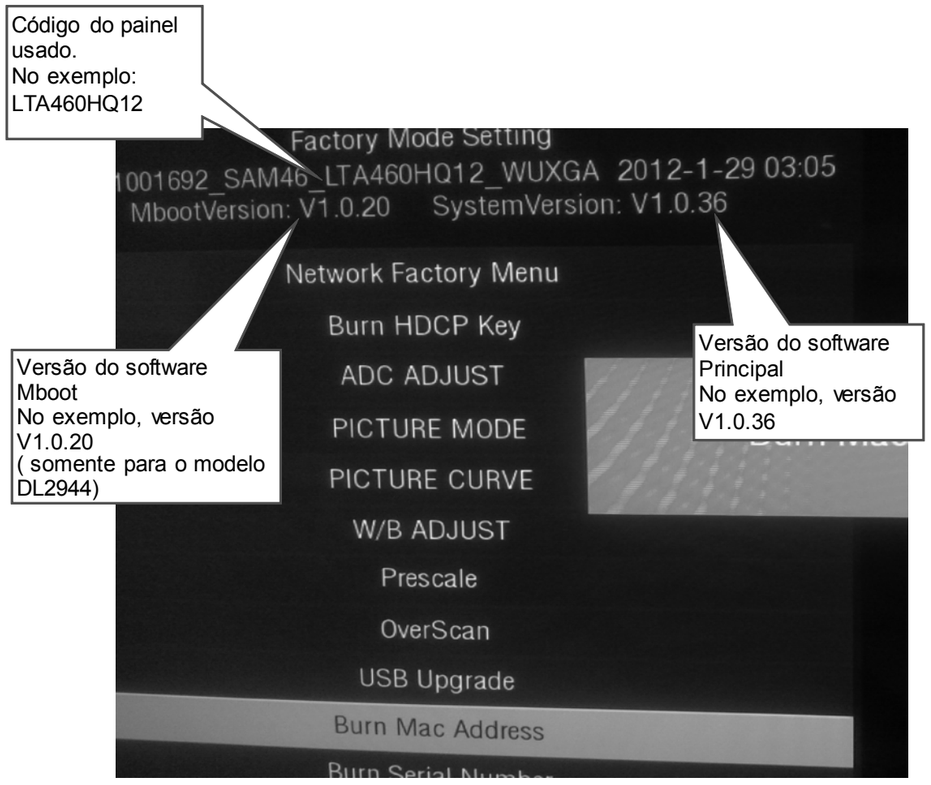
NE: 770.473

INDÍCE

CHECAGEM

VERIFICAÇÃO DA VERSÃO DO SOFTWARE (Menu de Serviço).

Usando o Controle Remoto no Menu Imagem, digite "2008". Esta opção abre o Menu de Fábrica do aparelho.



INFORMAÇÕES UTEIS

DESBLOQUEIO DO APARELHO

Caso o cliente esquecer o código de bloqueio das entradas / classificação indicativa, entre com o código "1980" para desbloquear

TECLAS DE OPERAÇÃO DO MENU DE SERVIÇO

Utilize a tecla "Enter" para acessar os menus de serviço, tecla "Menu" para voltar 1 menu anterior e teclas ∇, Δ, $<$ e $>$ para selecionar ou ajustar

ATUALIZAÇÃO DE SOFTWARE

GRAVAÇÃO DO SOFTWARE (Via USB).

Deverá ser gravado o software a ser instalado na raiz (Não colocá - lo em pastas ou subpastas) de um dispositivo USB e renomeado para " merge.bin ".

Pode-se utilizar o Menu do usuário para atualizá - lo:
Abrir o Menu e mover até o Menu " Config. ", no submenu escolher a opção " Atualização de Software (USB) e confirmar na opção "Sim".

cont.

ATUALIZAÇÃO DE SOFTWARE

Pode-se utilizar o Menu de fábrica para atualizá - lo:
No Menu Imagem, digitar "2008" para abrir o Menu de Fábrica e selecionar a opção " Atualização de Software (USB) e confirmar na opção "Sim".

Para ambas as atualizações, é necessário esperar a atualização completa do software. Após a atualização deve-se fazer o "Factory Reset" e após isso desligar e ligar o TV da energia elétrica.

ATUALIZAÇÃO DE SOFTWARE PRINCIPAL (somente para o modelo DL2944(A)W)

GRAVAÇÃO DO SOFTWARE PRINCIPAL (Via USB).

Deverá ser gravado o software “MstarUpgrade.bin” a ser instalado na raiz (Não colocá - lo em pastas ou subpastas) de um dispositivo USB.
Conectar o dispositivo em uma das portas USB.

Pode-se utilizar o Menu do usuário para atualizá - lo:
Abrir o Menu e mover até o Menu " Config. ", no submenu escolher a opção " Atualização de Software ", selecione "USB" e confirmar na opção "Sim".

Pode-se utilizar o Menu de fábrica para atualizá - lo:
No Menu digitar "2008" para abrir o Menu de Fábrica e selecionar a opção " USB Upgrade " e selecione a opção Software Upgrade

Pode -se fazer a atualização da seguinte forma:
- Com o TV em stand by e o pen drive conectado, pressione e mantenha pressionado a tecla POWER no painel frontal do TV até que apareça uma tela azul com a barra de percentagem de atualização do SW.

Em todas as atualizações, é necessário esperar a atualização completa do software. Após a atualização deve-se fazer o "Factory Reset" e após isso desligar e ligar o TV da energia elétrica.

ATUALIZAÇÃO DE SOFTWARE MBOOT (somente para o modelo DL2944(A)W)

GRAVAÇÃO DO SOFTWARE MBOOT (Via USB).

Deverá ser gravado o software “MBOOT.bin” a ser instalado na raiz (Não colocá - lo em pastas ou subpastas) de um dispositivo USB.
Conectar o dispositivo em uma das portas USB.

Utilizar o Menu de fábrica para atualizá - lo:
No Menu digitar "2008" para abrir o Menu de Fábrica e selecionar a opção " USB Upgrade " e selecione a opção MBoot Upgrade

AJUSTE DO GANHO DE VIDEO (após a troca do painel LCD ou Atualização de Software)

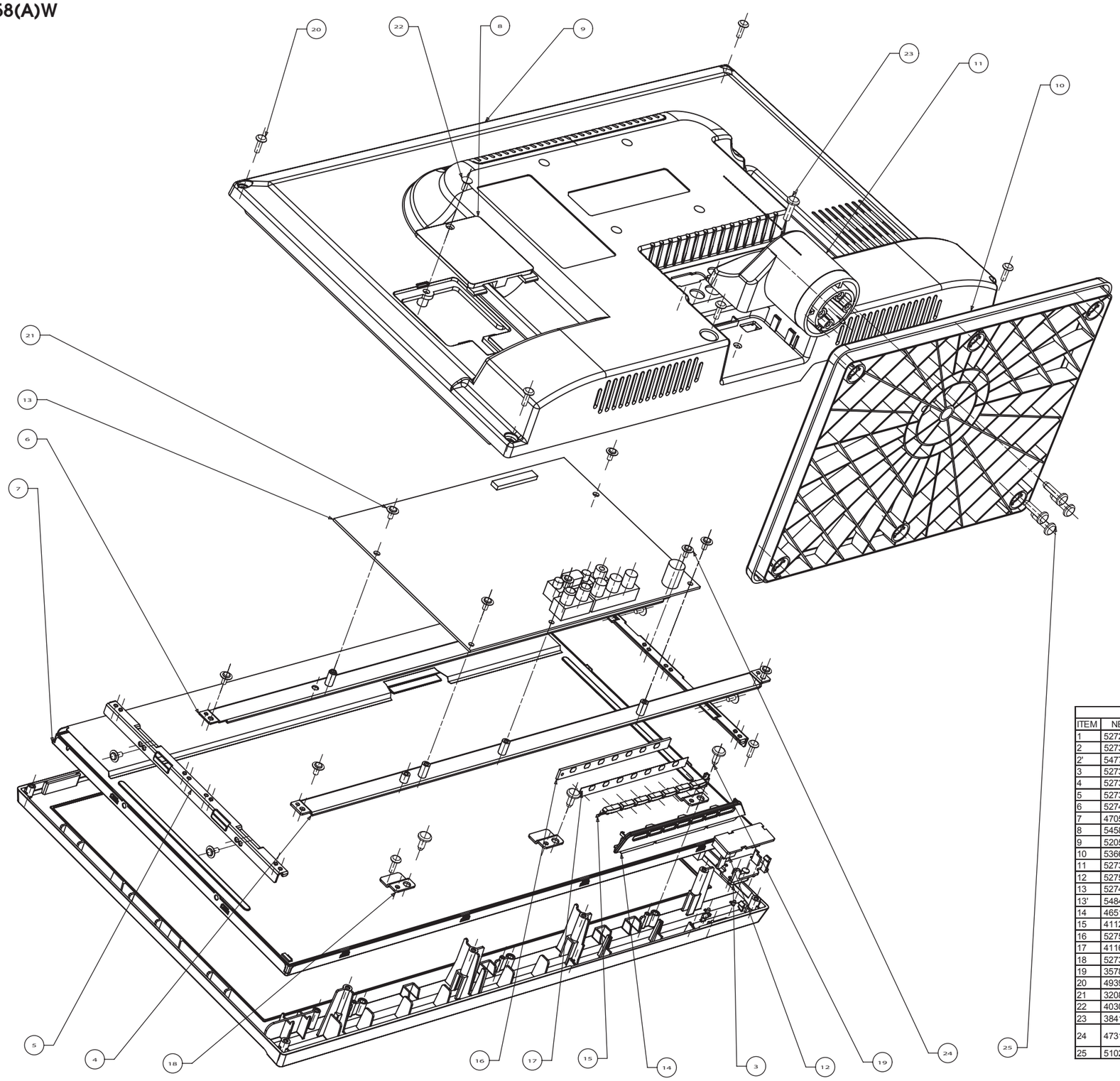
AJUSTE DE GANHO ADC (OFFSET) DE VÍDEO COMPONENTE E PC-RGB

Conecte um sinal de barras coloridas ou escala de cinza na entrada a ser ajustada, Componente (YPbPr) ou PC-RGB.
Selecione a entrada a ser ajustada (Componente ou PC) e depois entre no Modo de Serviço
Selecione o menu de ajuste "ADC ADJUST".
No menu "ADC ADJUST", selecione o item "AUTO ADC" e inicie o auto ajuste através das teclas direcionais "**<**" ou "**>**".

Obs: Na entrada Componente (YPbPr) é necessário ajustar em HD (720 ou 1080) e SD (480).

VISTA EXPLODIDA

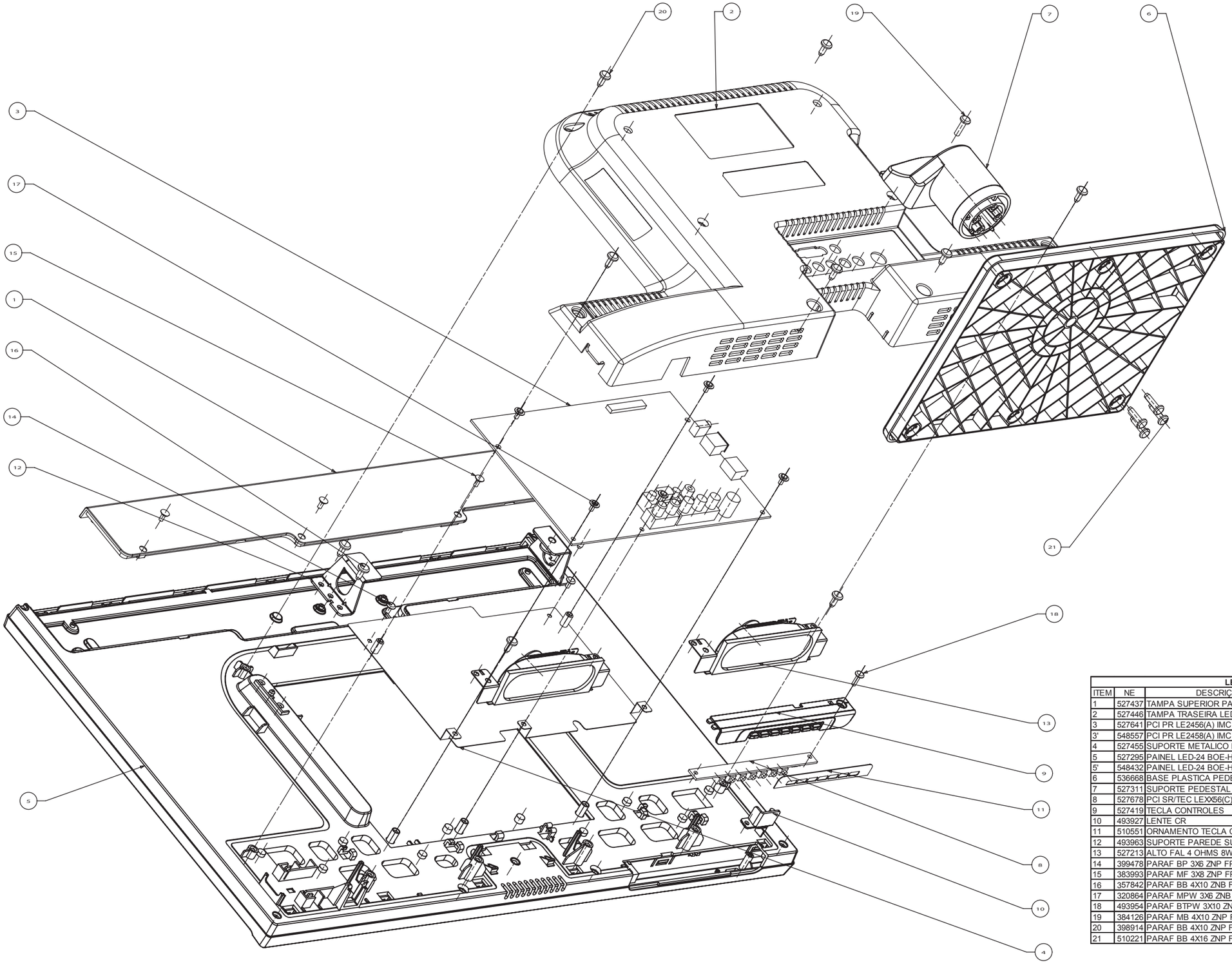
LE1956(A)W / LE1958(A)W



LE1956(A)W / LE1958(A)W				
ITEM	NE	DESCRIÇÃO	QTDE	POSIÇÃO
1	527213	ALTO FAL 4 OHMS 8W	2	W661 / W660
2	527348	GABINETE FRONTAL LED-19	1	A201A (**modelo LE1956**)
2'	547727	GABINETE FRONTAL SEMP LED-19	1	A201A (**modelo LE1958**)
3	527320	LENTE VISOR	1	A201B
4	527393	SUPORTE PAINEL HORIZ INFERIOR	1	AG163E
5	527375	SUPORTE PAINEL DIR/ESQ	2	AG163B / AG163C
6	527400	SUPORTE PAINEL HORIZ SUPERIOR	1	AG163D
7	470577	PAINEL LED 19 BOE HT185WX1-300	1	AG163A
8	545854	SUPORTE CABO FORCA	1	A401E
9	520504	TAMPA TRASEIRA LED-19 C/IMPRES	1	A401A
10	536668	BASE PLASTICA PEDESTAL 19/24	1	AG161A
11	527311	SUPORTE PEDESTAL	1	AG161C
12	527516	PCI SENS LE1956(A) IMC	1	PCISR2
13	527491	PCI PR LE1956(A)W IMC	1	PCIPR4 (**modelo LE1956**)
13'	548423	PCI PR LE1958(A)W IMC	1	PCIPR4 (**modelo LE1958**)
14	465182	SUPORTE TECLA CONTROLES	1	A201K
15	411212	TECLA CONTROLES LATERAL	1	A201J
16	527534	PCI TECLAS LE1956(A) IMC	1	PCITC2
17	411640	FILME TECLAS 334*L229810/00	1	TEC01
18	527366	SUPORTE PAINEL INFERIOR	3	AG163F / AG163G / AG163H
19	357842	PARAF BB 4X10 ZNB FPH	3	AG163FA / AG163GA / AG163HA
20	493954	PARAF BTPW 3X10 ZNP FPH	8	A401DA ~ A401DF / W660A / W661A
21	320864	PARAF MPW 3X6 ZNB FPH	5	PCIPRAA ~ PCIPRAE
22	403061	PARAF BTF 3X8 ZNP FPH	1	A401EA
23	384126	PARAF MB 4X10 ZNP FPH	1	AG161CA
24	473182	PARAF MP 3X3 ZNB FPH	6	AG163CA~CB / AG163DA~DB / AG163EA~EB
25	510221	PARAF BB 4X16 ZNP FPH	4	AE152AA ~ AE152AD

VISTA EXPLODIDA

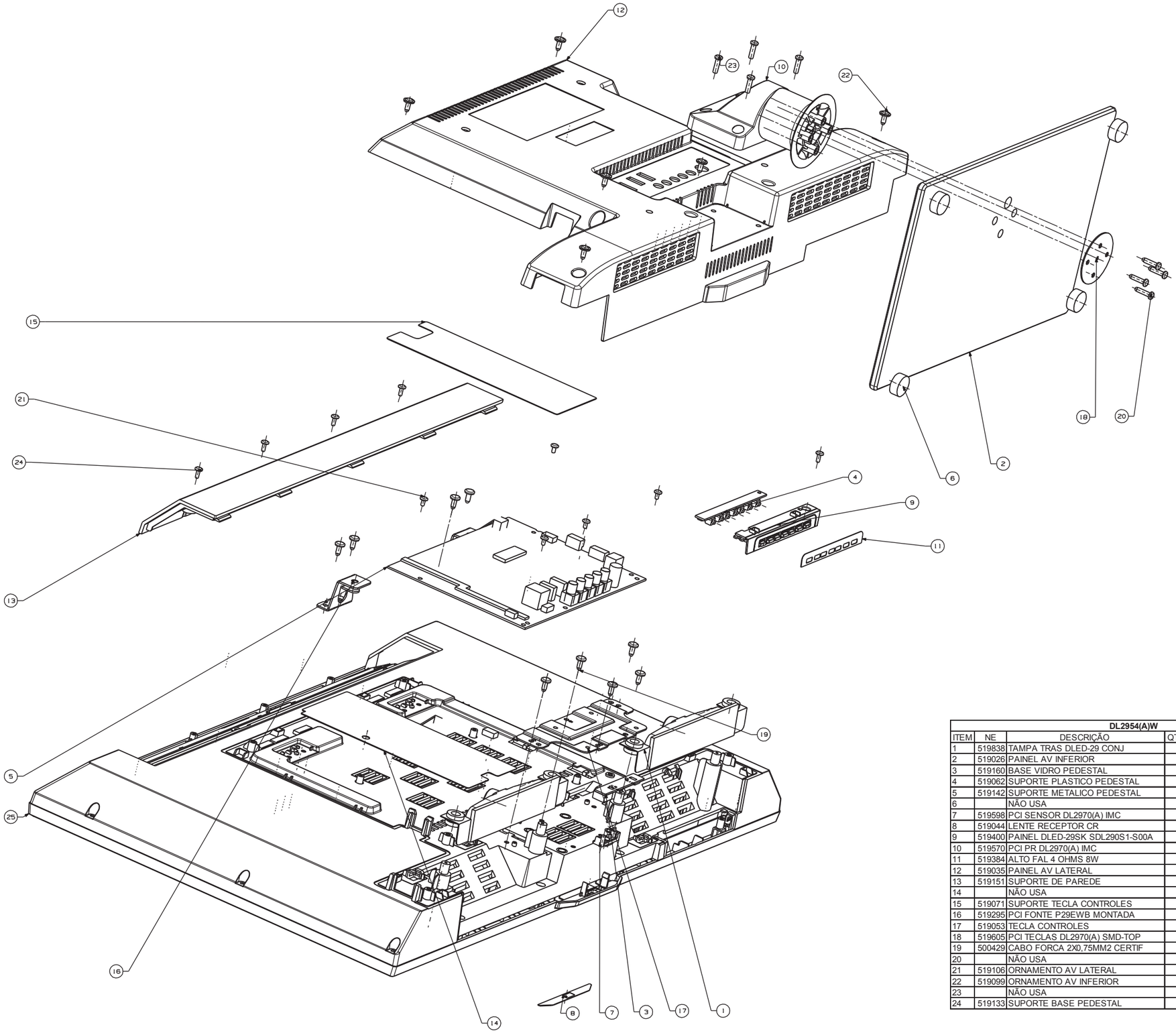
LE2456(A)F / LE2458(A)F



LE2456(A)F / LE2458(A)F				
ITEM	NE	DESCRIÇÃO	QTDE	POSIÇÃO
1	527437	TAMPA SUPERIOR PAINEL 24	1	AG164
2	527446	TAMPA TRASEIRA LED-24	1	A401AA
3	527641	PCI PR LE2456(A) IMC	1	PCIPR4 (**modelo LE2456**)
3'	548557	PCI PR LE2458(A) IMC	1	PCIPR4 (**modelo LE2458**)
4	527455	SUPORTE METALICO PCI PRINCIPAL	1	PCIPRA
5	527295	PAINEL LED-24 BOE-HM236WU3-100	1	AG163A (**modelo LE2456**)
5'	548432	PAINEL LED-24 BOE-HM236WU3-100	1	AG163A (**modelo LE2458**)
6	536668	BASE PLASTICA PEDESTAL 19/24	1	AG161A
7	527311	SUPORTE PEDESTAL	1	AG161C
8	527678	PCI SR/TEC LEXX56(C) IMC	1	PCITC2
9	527419	TECLA CONTROLES	1	A413A
10	493927	LENTE CR	1	A201
11	510551	ORNAMENTO TECLA CONTROLES	1	A413B
12	493963	SUPORTE PAREDE SUP	2	AG163B / AG163C
13	527213	ALTO FAL 4 OHMS 8W	2	W661 / W660
14	399478	PARAF BP 3X6 ZNP FPH	2	PCIPRAA / PCIPRAB
15	383993	PARAF MF 3X8 ZNP FPH	4	AG164AA ~ AG164AD
16	357842	PARAF BB 4X10 ZNB FPH	4	AG163BA ~BB / AG163CA ~ CB
17	320864	PARAF MPW 3X6 ZNB FPH	5	PCIPRCA ~ PCIPRCE
18	493954	PARAF BTPW 3X10 ZNP FPH	1	A413AB
19	384126	PARAF MB 4X10 ZNP FPH	1	AG161CA
20	398914	PARAF BB 4X10 ZNP FPH	8	A401DA ~ DF / W660A / W661A
21	510221	PARAF BB 4X16 ZNP FPH	4	AE152AA ~ AE152AD

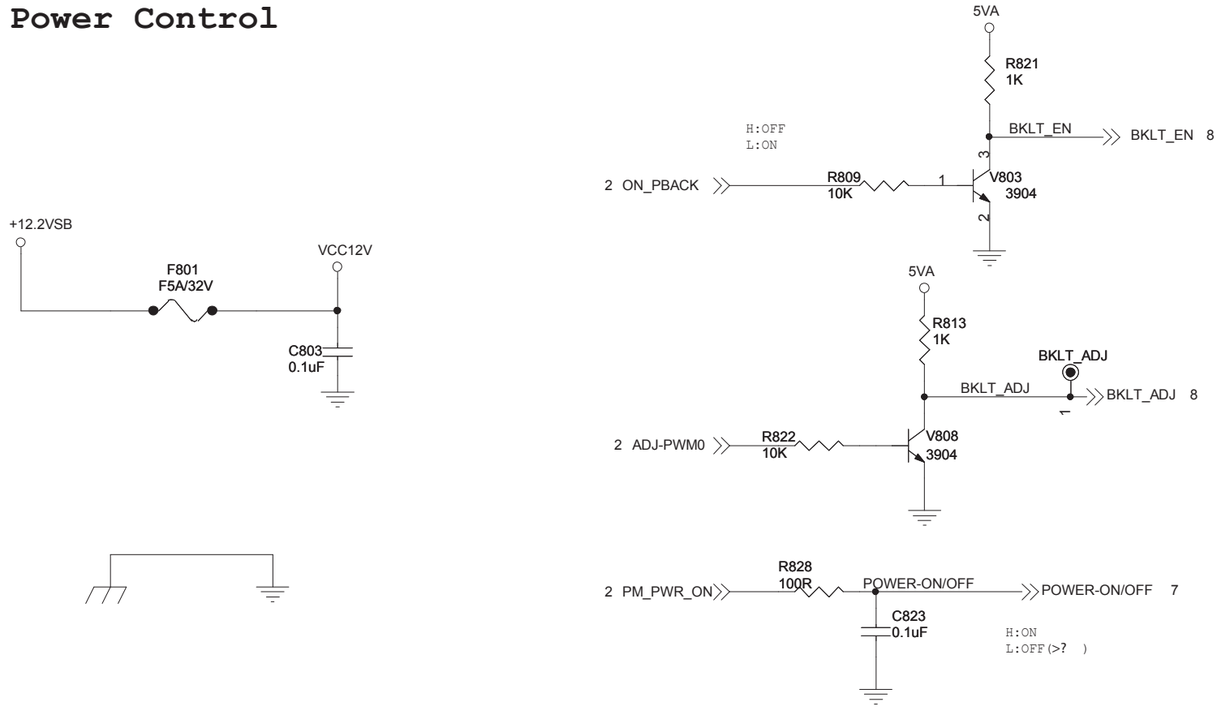
VISTA EXPLODIDA

DL2944(A)W

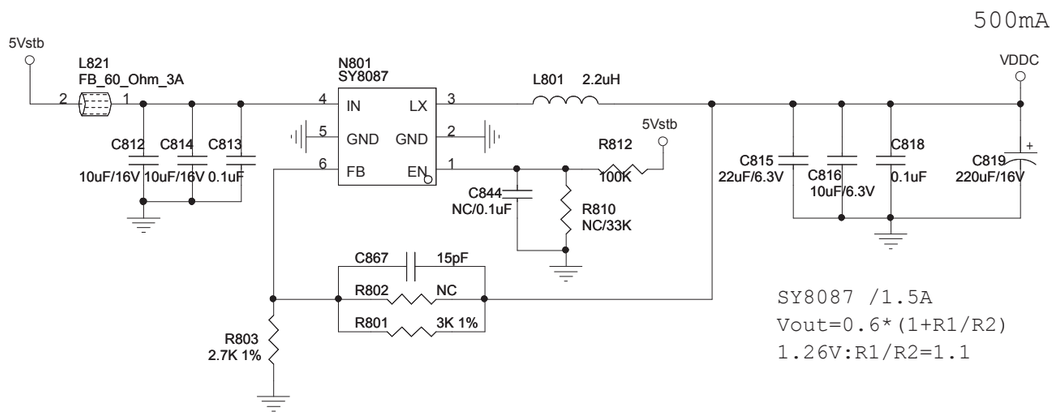


DL2954(A)W				
ITEM	NE	DESCRIÇÃO	QTDE	POSIÇÃO
1	519838	TAMPA TRAS DLED-29 CONJ	1	A401
2	519026	PAINEL AV INFERIOR	1	AC132A
3	519160	BASE VIDRO PEDESTAL	1	AG161A
4	519062	SUPORTE PLASTICO PEDESTAL	1	AG162A
5	519142	SUPORTE METALICO PEDESTAL	1	AG162B
6		NÃO USA		
7	519598	PCI SENSOR DL2970(A) IMC	1	PCISR2
8	519044	LENTE RECEPTOR CR	1	A201A
9	519400	PAINEL DLED-29SK SDL290S1-S00A	1	AG163A
10	519570	PCI PR DL2970(A) IMC	1	PCIPR3
11	519384	ALTO FAL 4 OHMS 8W	2	W661A / W660A
12	519035	PAINEL AV LATERAL	1	AC132B
13	519151	SUPORTE DE PAREDE	4	AA125A-B-C-D
14		NÃO USA		
15	519071	SUPORTE TECLA CONTROLES	1	A201B
16	519295	PCI FONTE P29EWB MONTADA	1	PCIFT
17	519053	TECLA CONTROLES	1	A201C
18	519605	PCI TECLAS DL2970(A) SMD-TOP	1	PCITC2
19	500429	CABO FORCA 2X0,75MM2 CERTIF	1	MCN4
20		NÃO USA		
21	519106	ORNAMENTO AV LATERAL	1	A401D
22	519099	ORNAMENTO AV INFERIOR	1	A401C
23		NÃO USA		
24	519133	SUPORTE BASE PEDESTAL	1	AG161C

Power Control

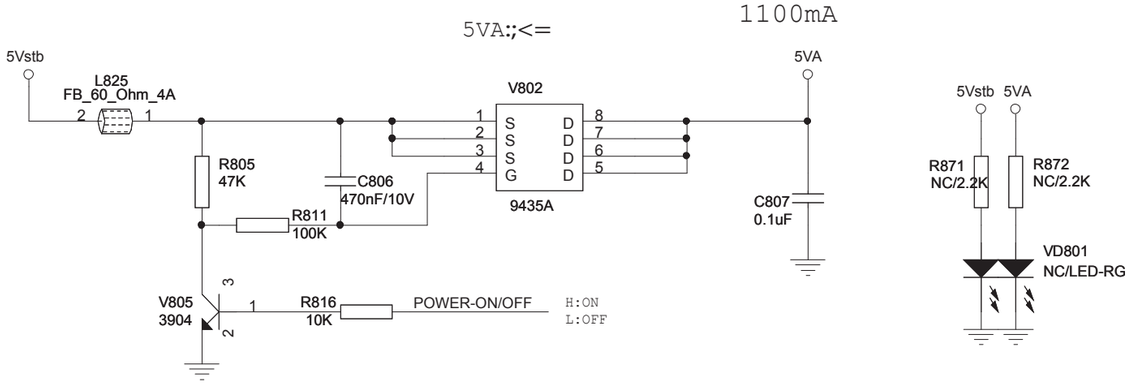


+1.26V For Mstar core

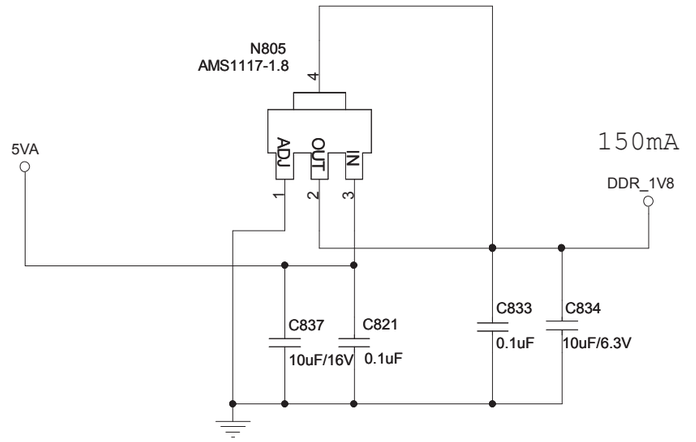


PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)

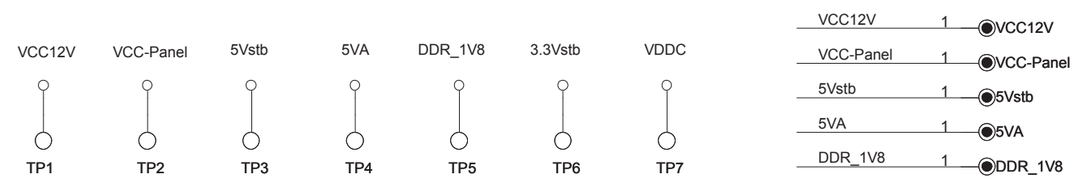
5VA Power



1.8V MSD1306 DDR Power

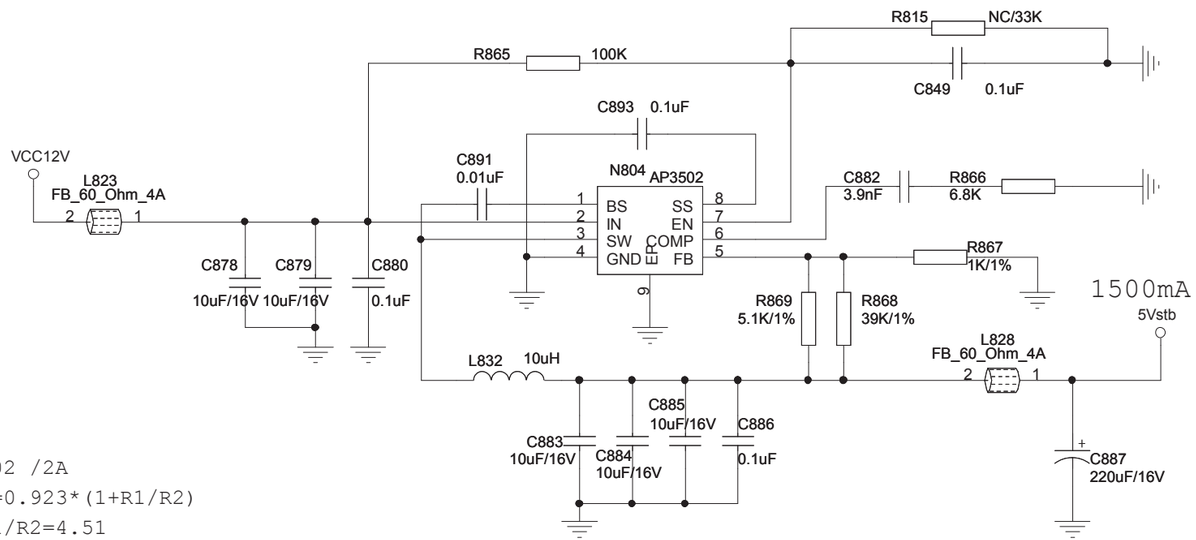


Power TEST POINT

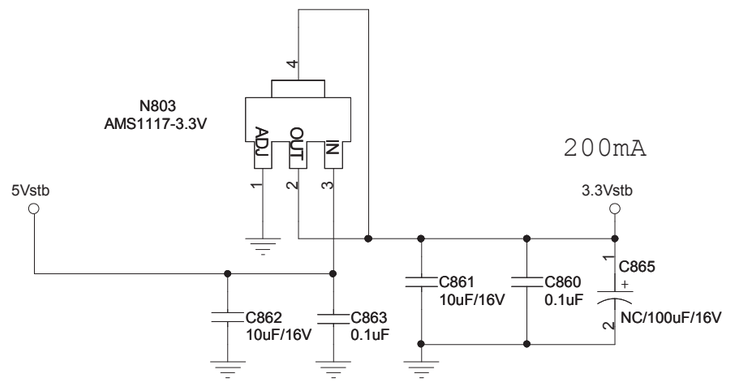


PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)

12V to 5Vstb

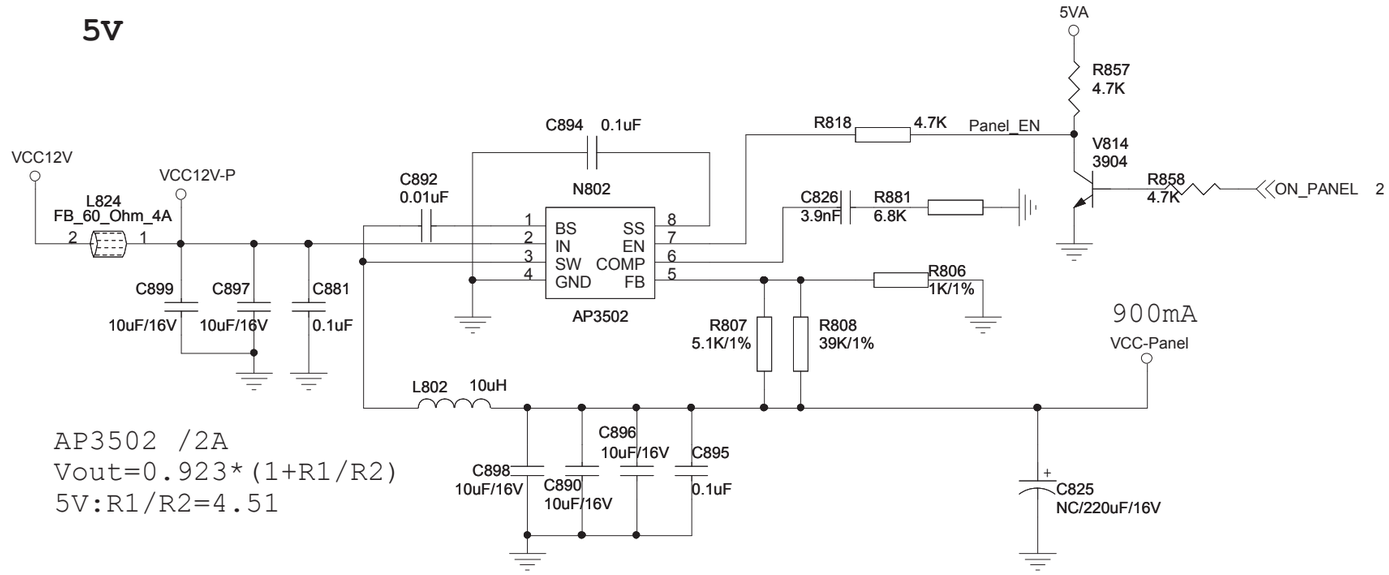


+3.3V Power



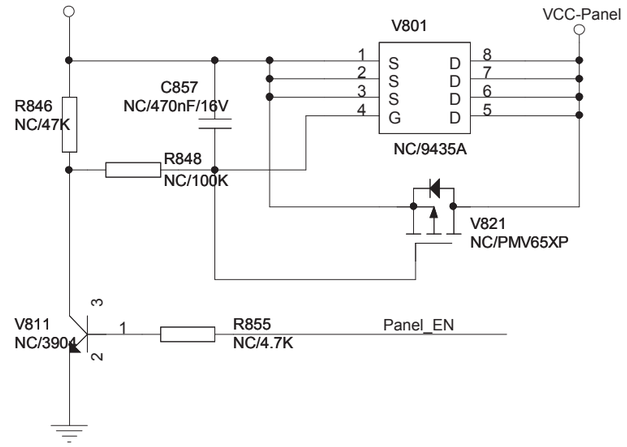
Panel Power

5V

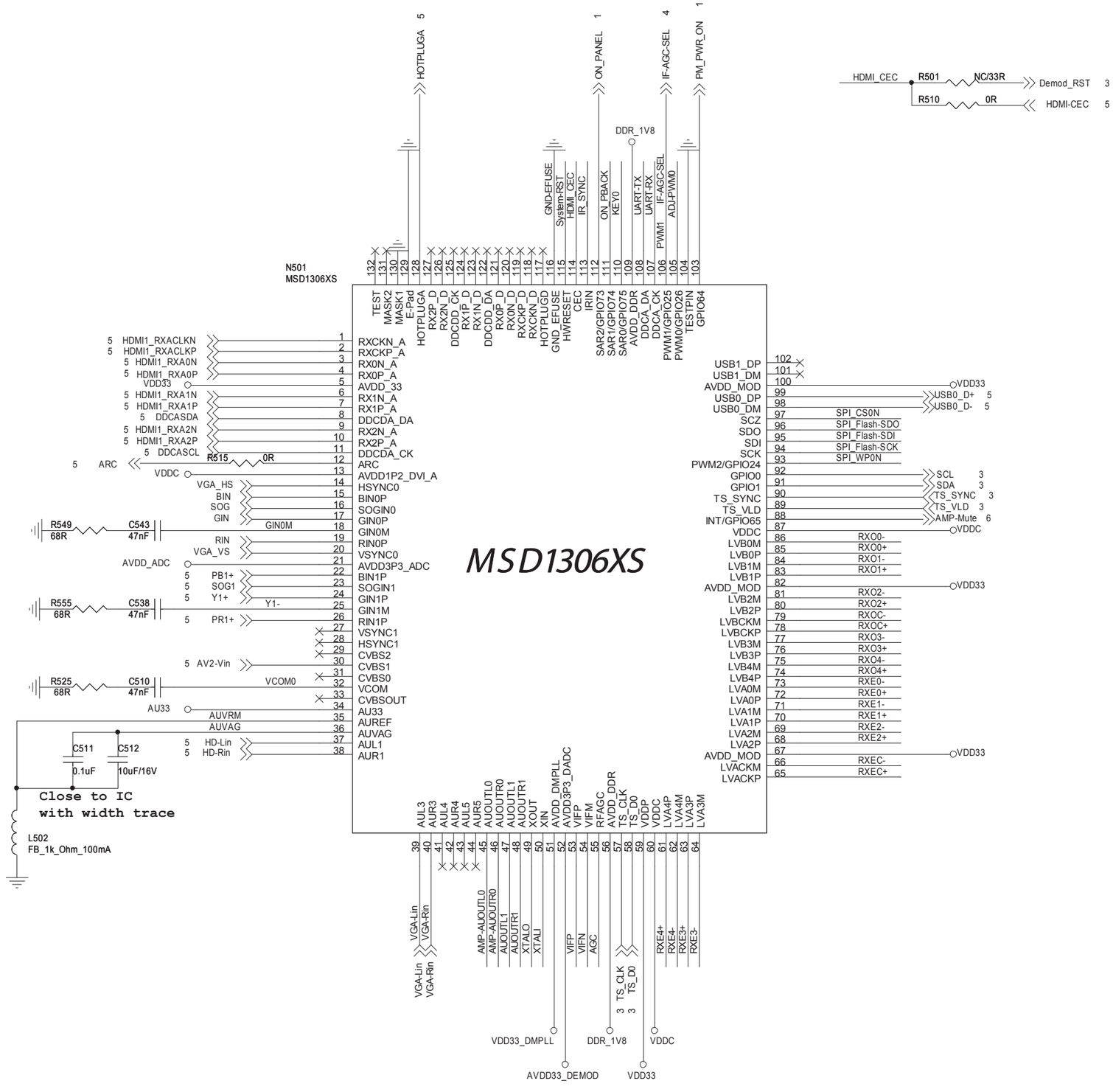


AP3502 /2A
Vout=0.923*(1+R1/R2)
5V:R1/R2=4.51

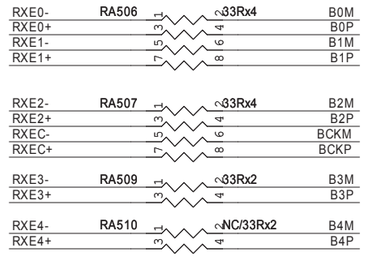
12v

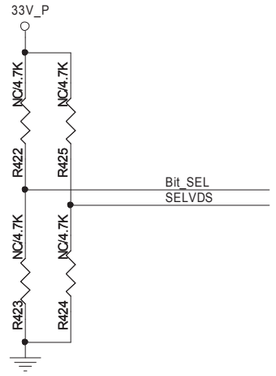


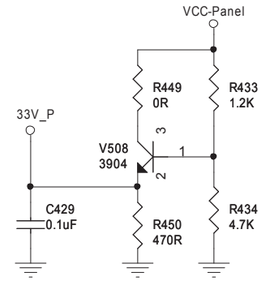
PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



LVDS

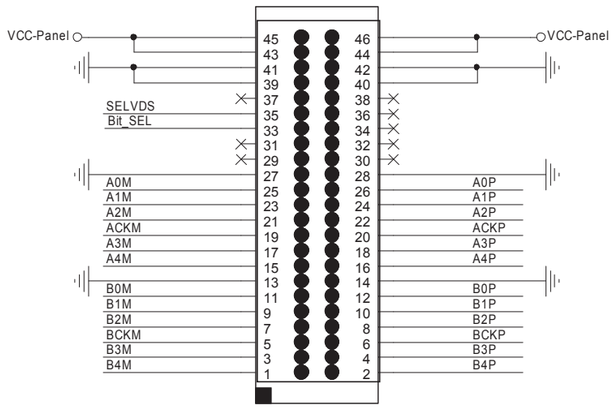






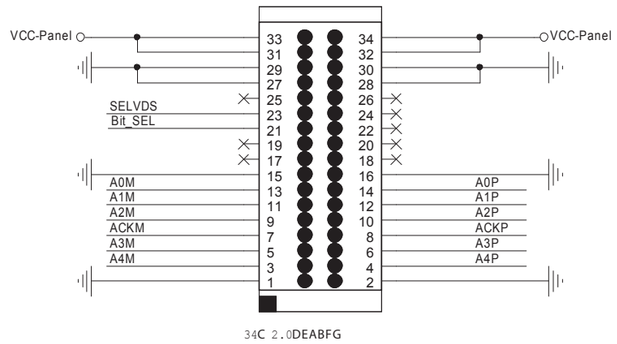
2.0 DEAB

NC/XS505



46C 2.0DEABFG

XS506

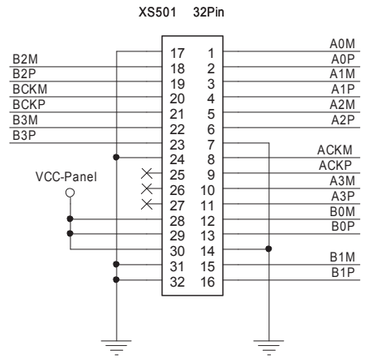


34C 2.0DEABFG

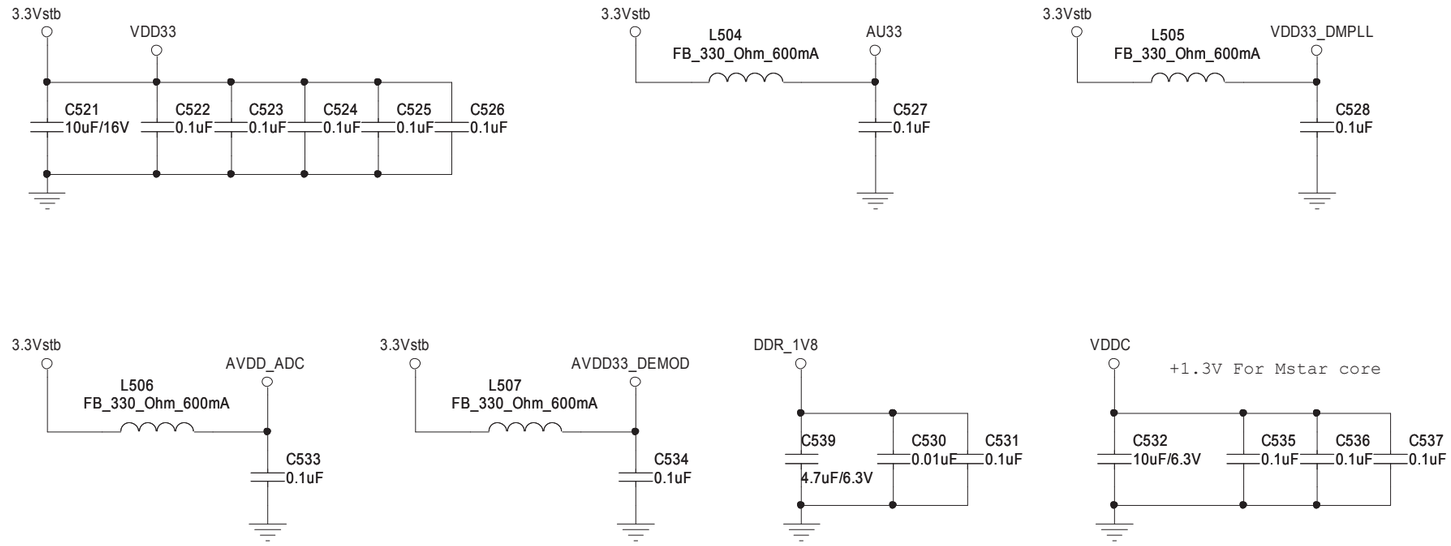
XS505 XS506

XS506

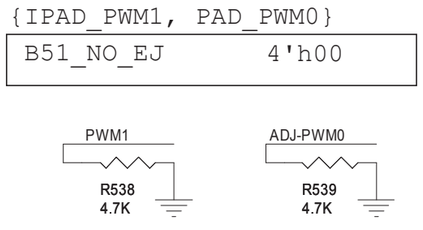
24' BOE@ FFCAB



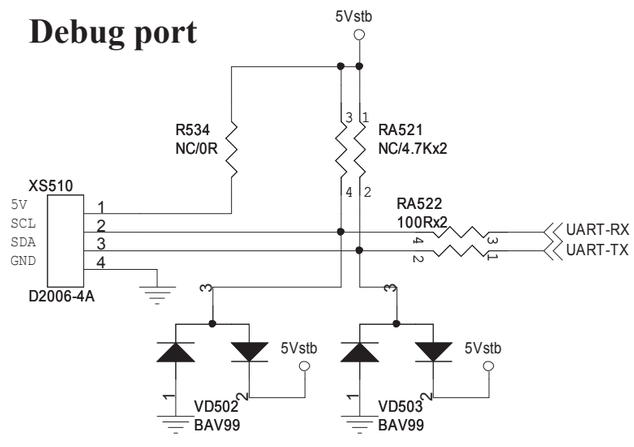
Power Filter



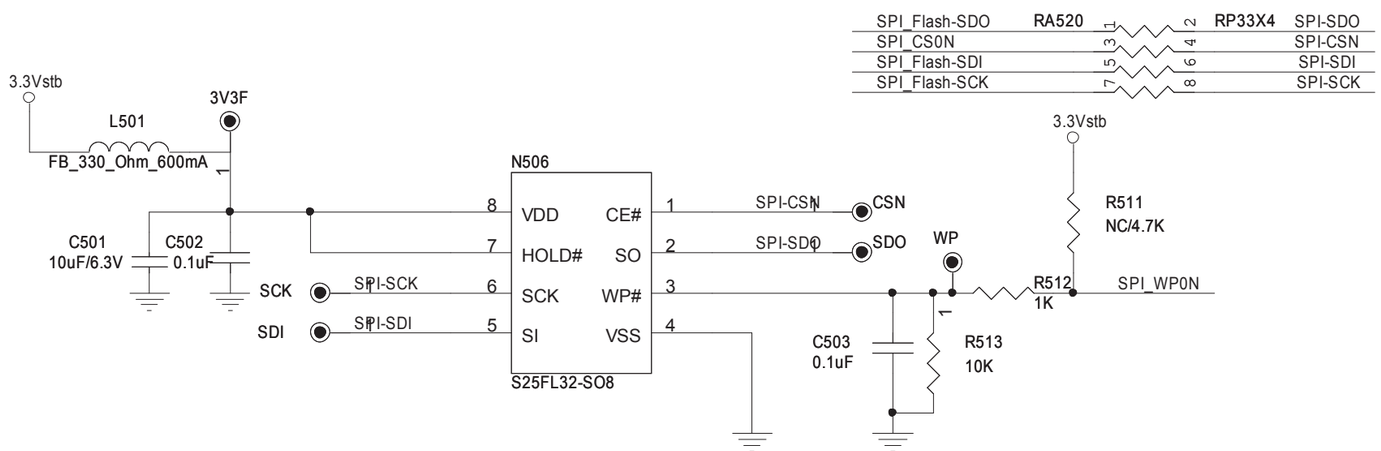
CHIP_Config



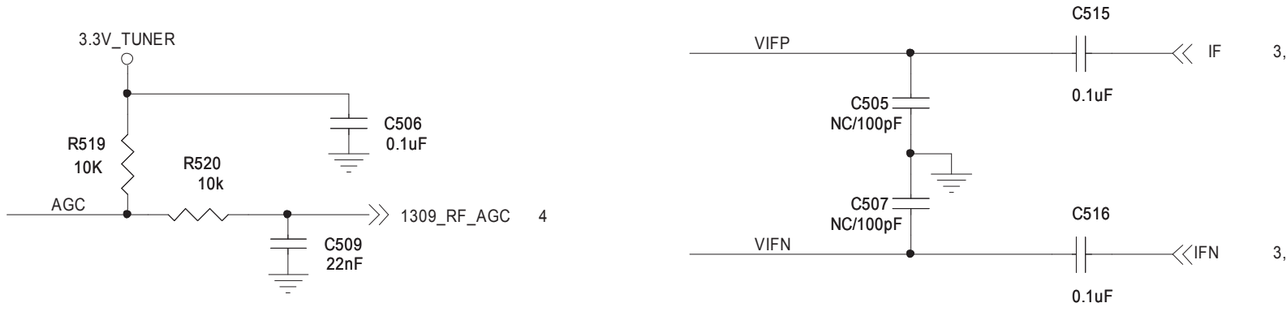
Debug port

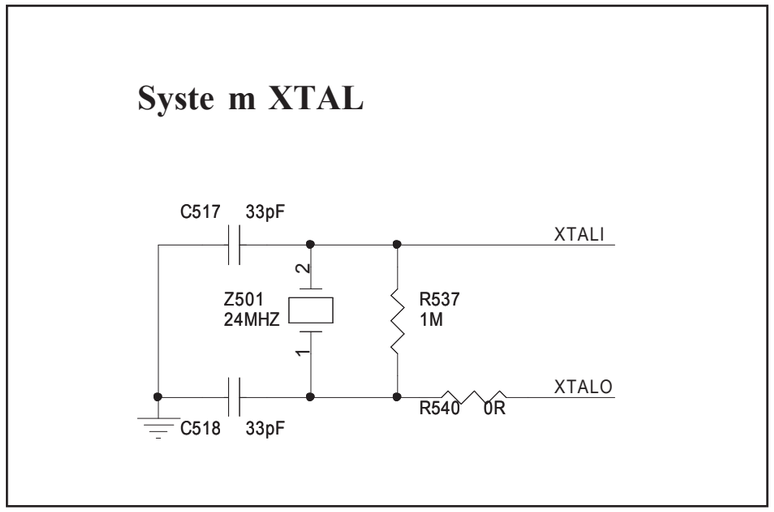


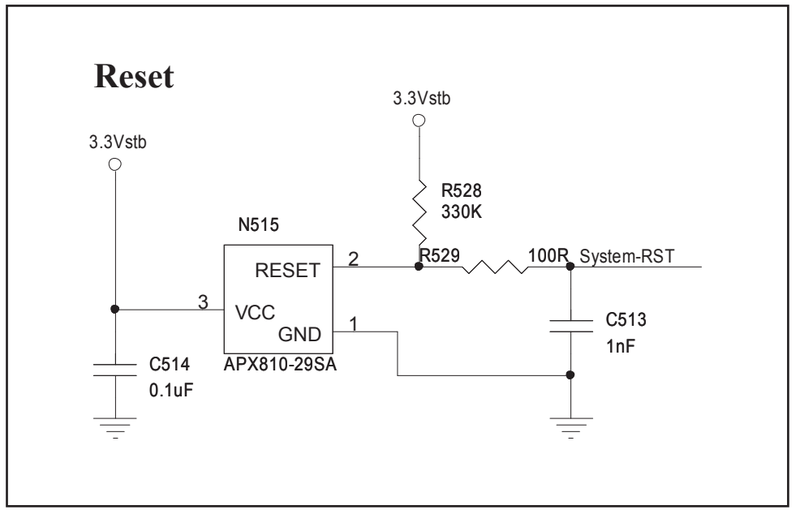
Flash 32M bit

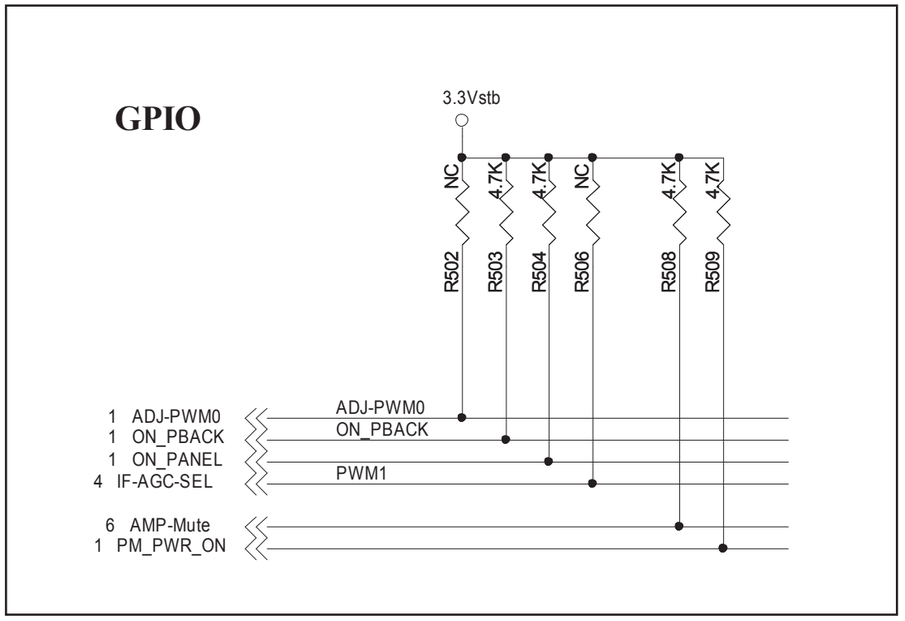


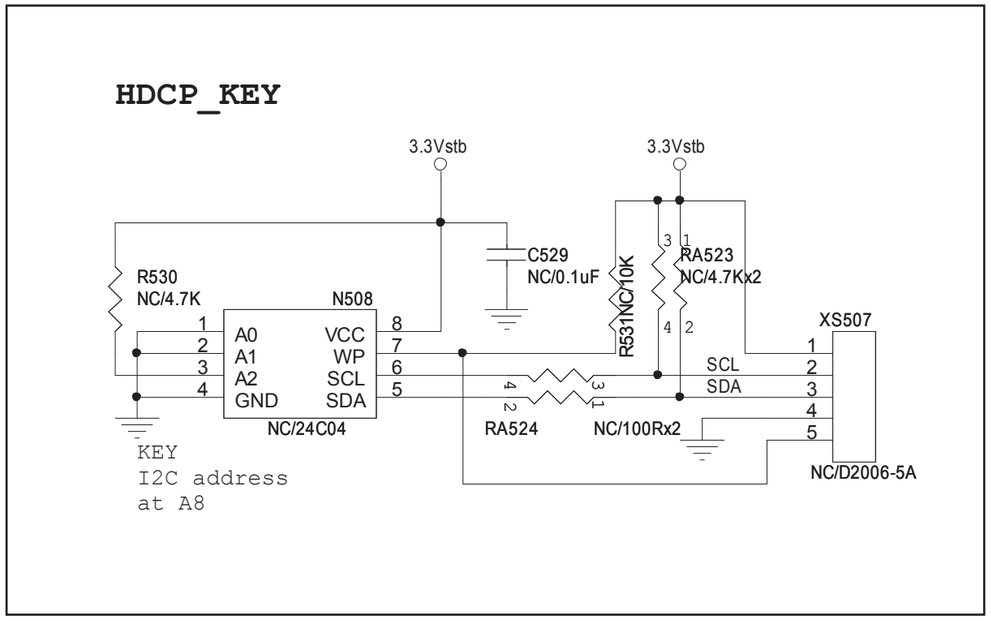
Tuner AGC& IF



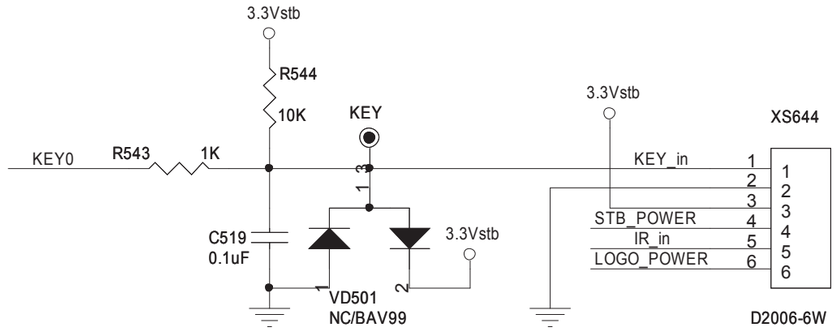

Syste m XTAL
C517 33pF
XTALI
2
Z501
24MHZ
1
R537
1M
XTALO
R540 0R
C518 33pF

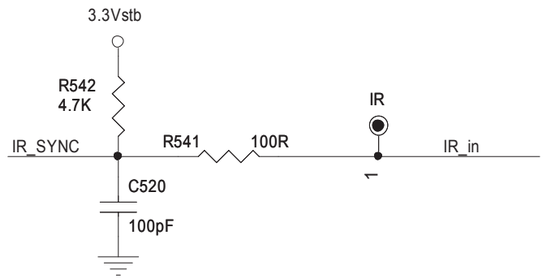

Reset
3.3Vstb
3.3Vstb
R528
330K
N515
RESET
2
R529
100R
System-RST
3
VCC
GND
1
C513
1nF
C514
0.1uF
APX810-29SA

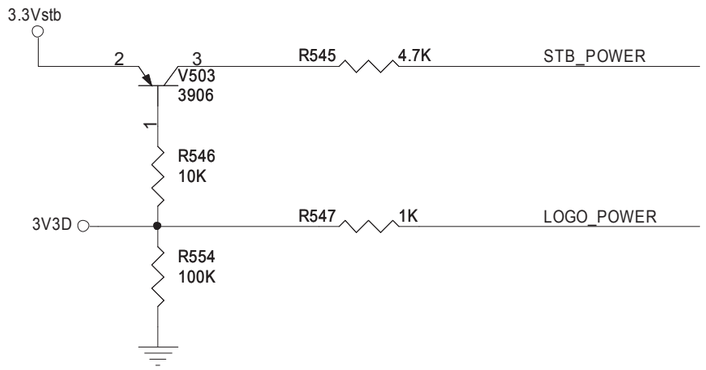

GPIO
3.3Vstb
NC
4.7K
4.7K
NC
4.7K
4.7K
R502
R503
R504
R506
R508
R509
1 ADJ-PWM0
1 ON_PBACK
1 ON_PANEL
4 IF-AGC-SEL
ADJ-PWM0
ON_PBACK
PWM1
6 AMP-Mute
1 PM_PWR_ON


HDCP_KEY
3.3Vstb
3.3Vstb
C529
NC/0.1uF
R530
NC/4.7K
N508
A0
A1
A2
GND
VCC
WP
SCL
SDA
NC/24C04
R531NC/10K
RA523
NC/4.7Kx2
XS507
SCL
SDA
RA524
NC/100Rx2
NC/D2006-5A
KEY
I2C address
at A8

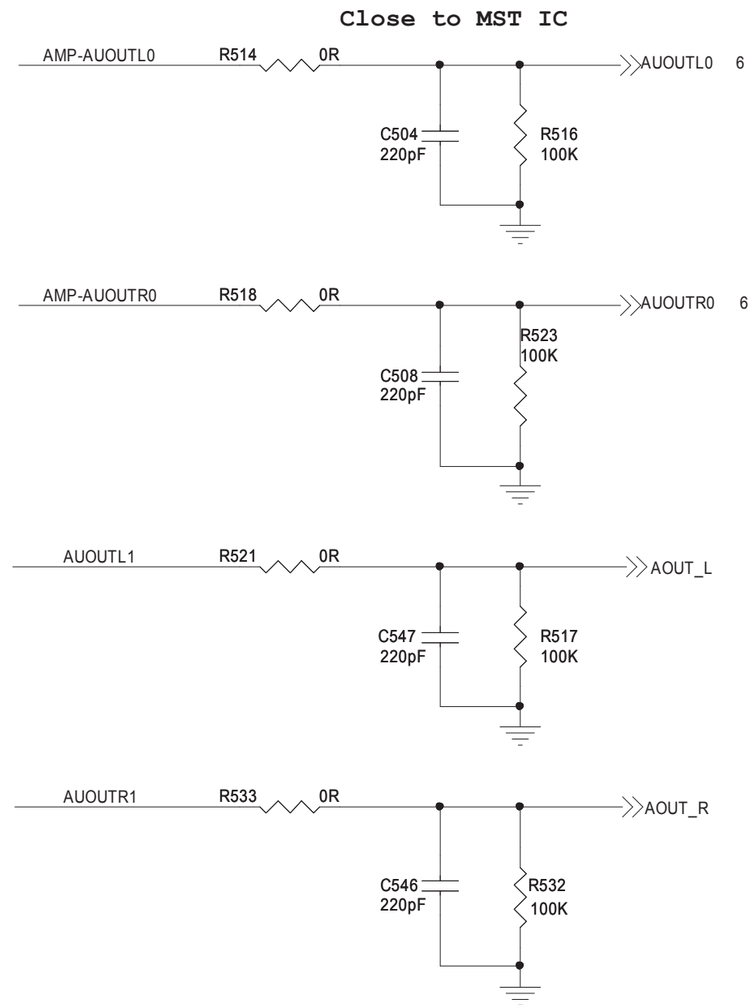
IR_KEY_LED



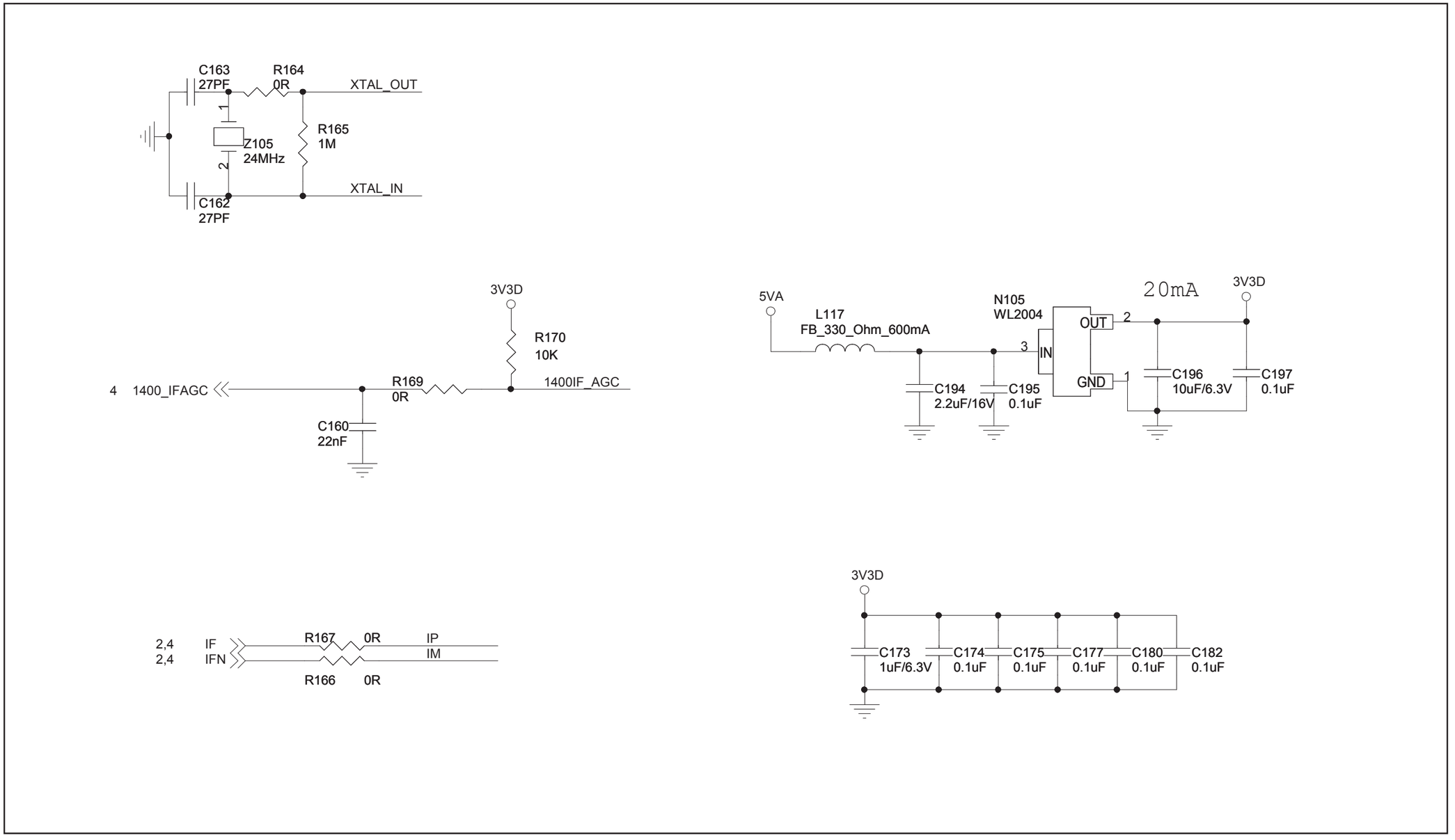




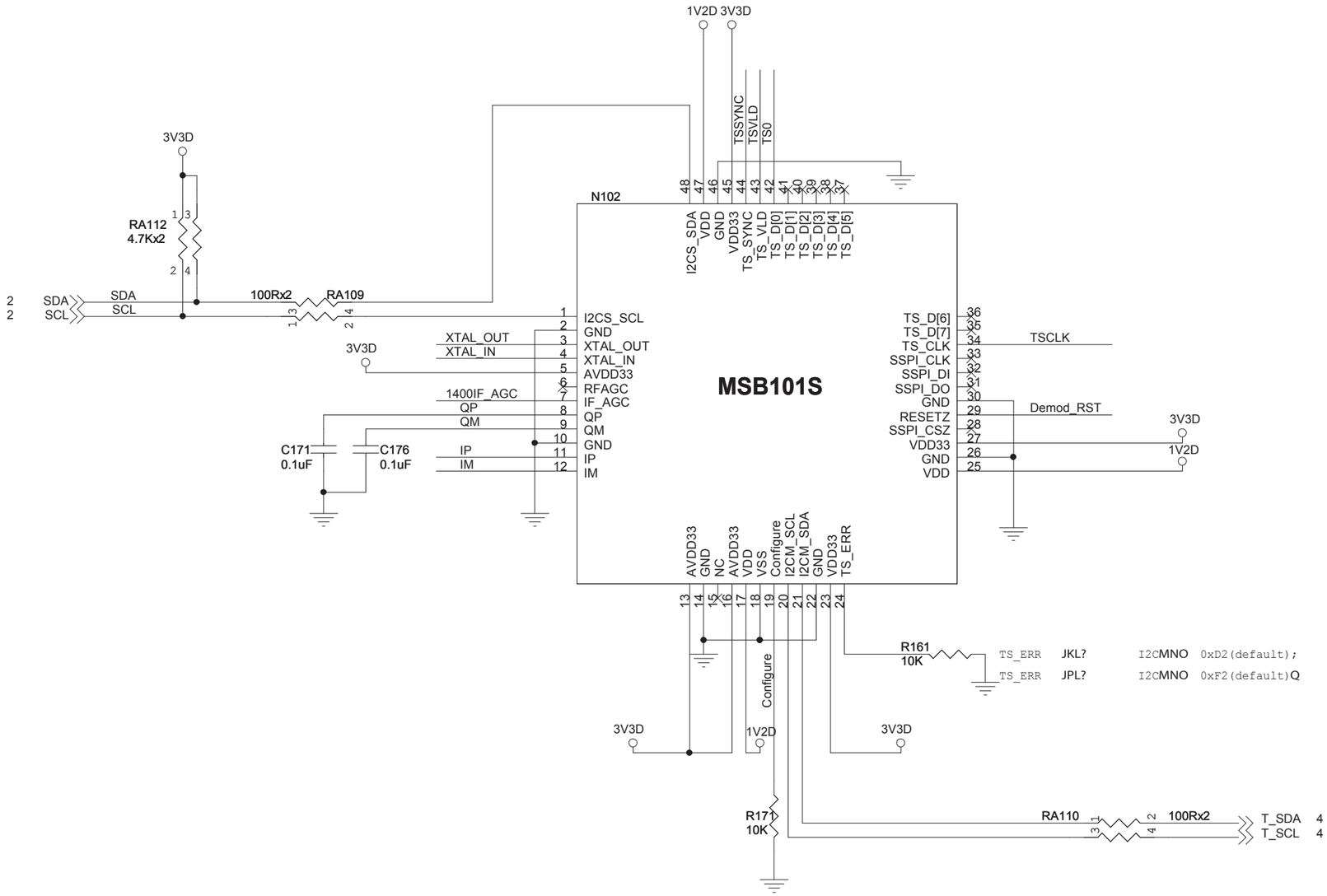
Audio



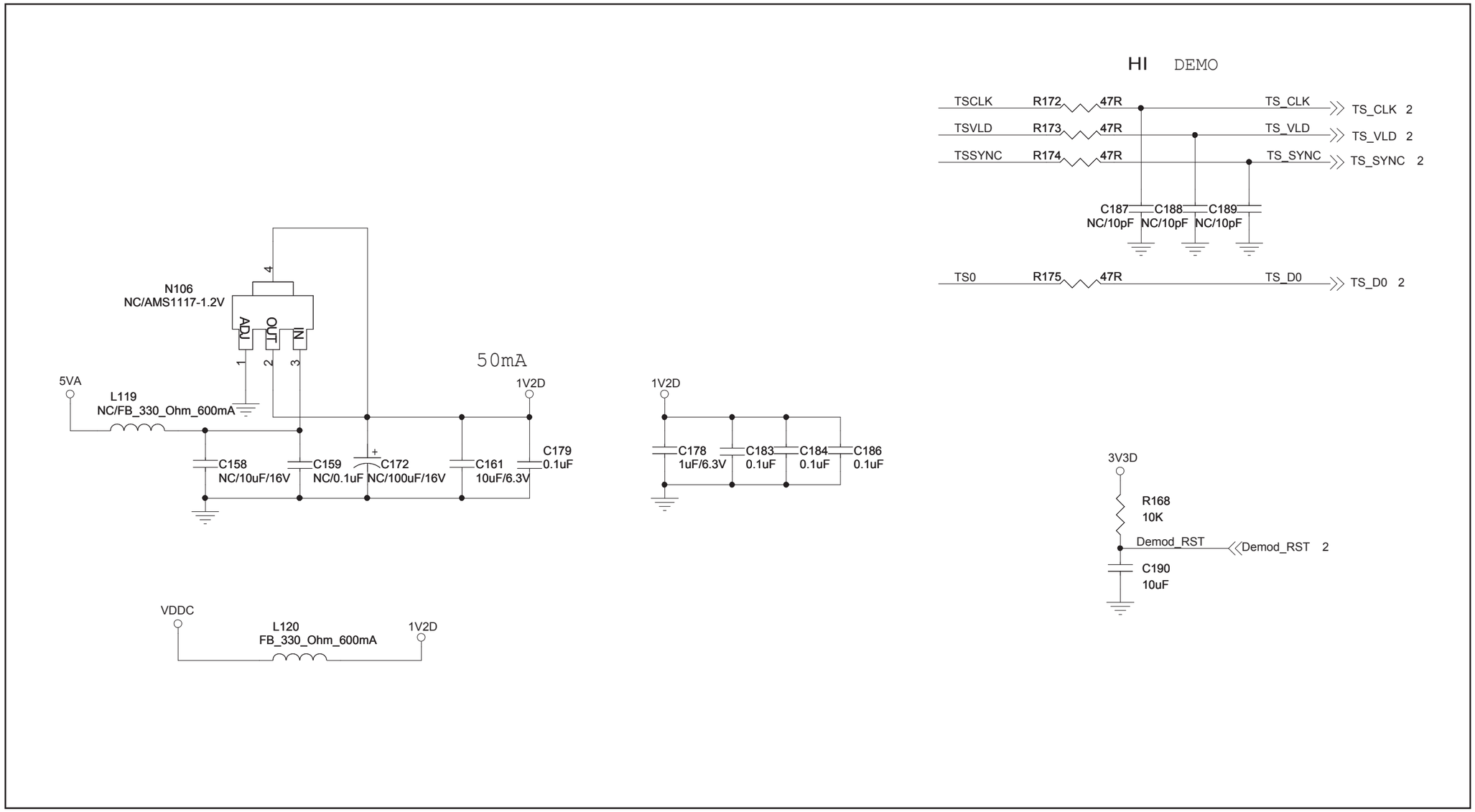
PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



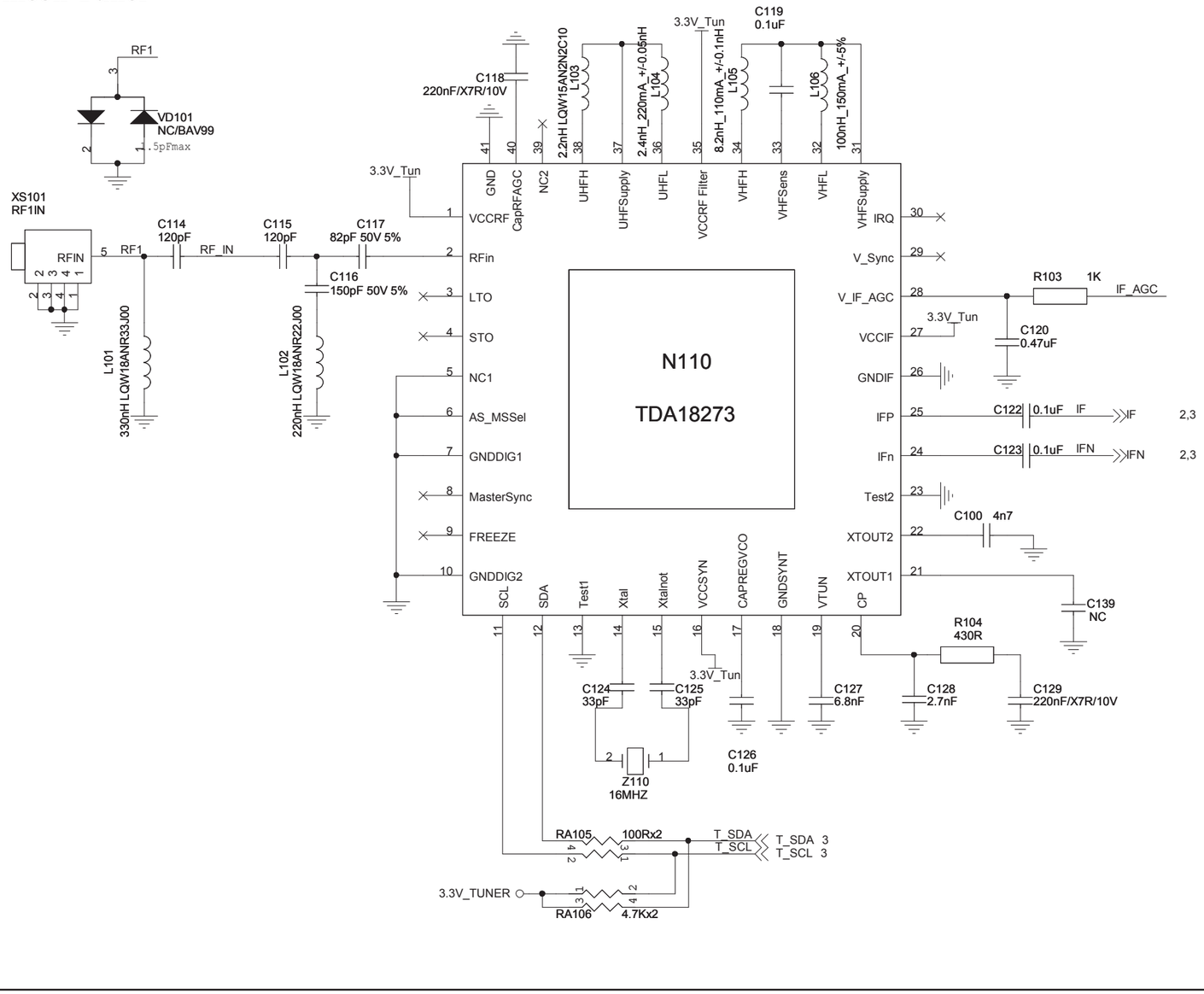
PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



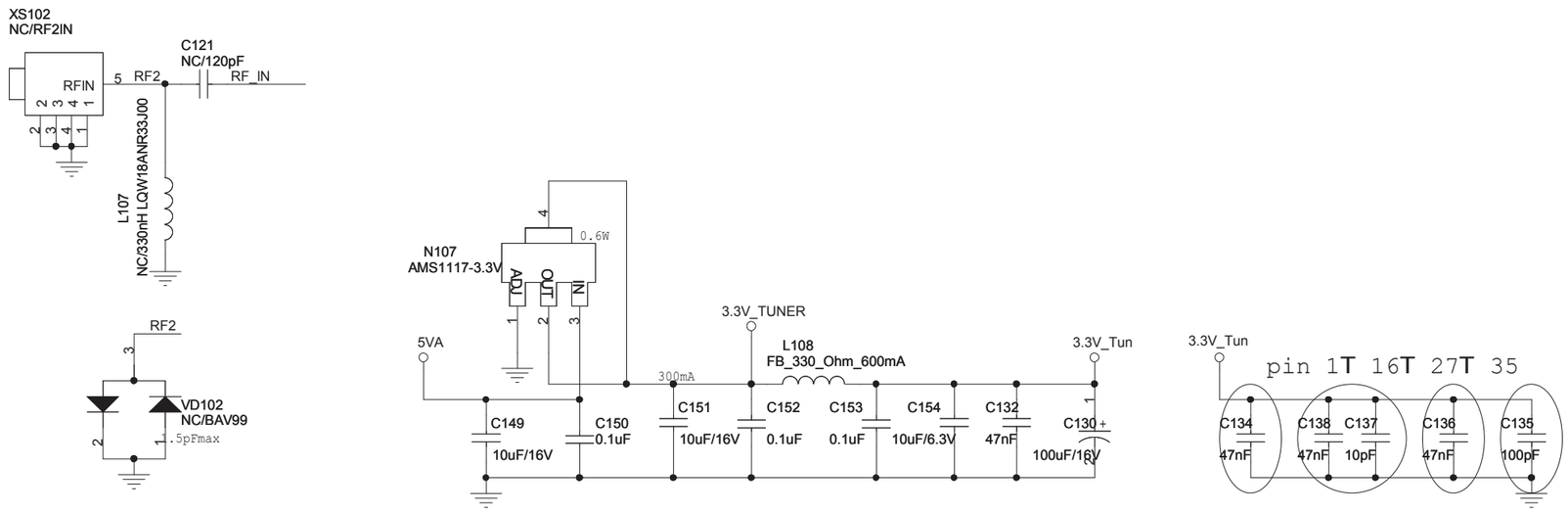
PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



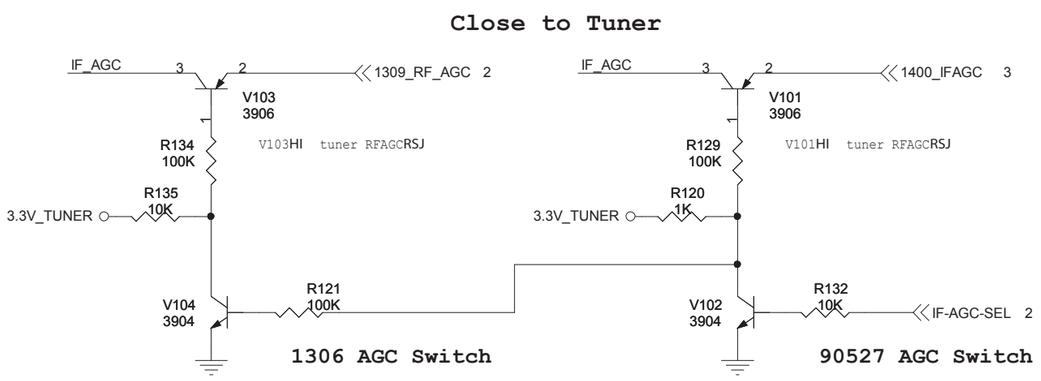
Silicon Tuner



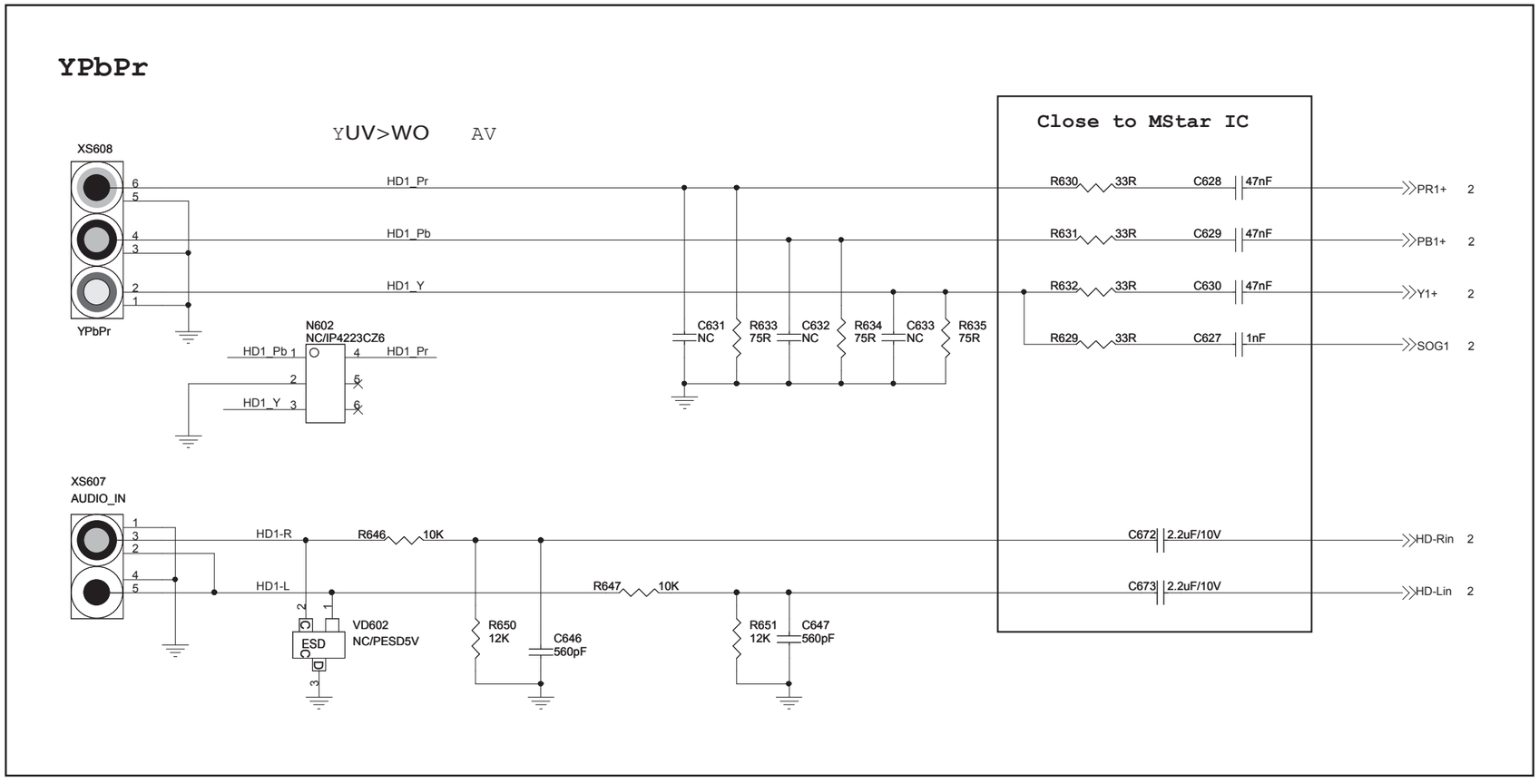
Silicon Tuner

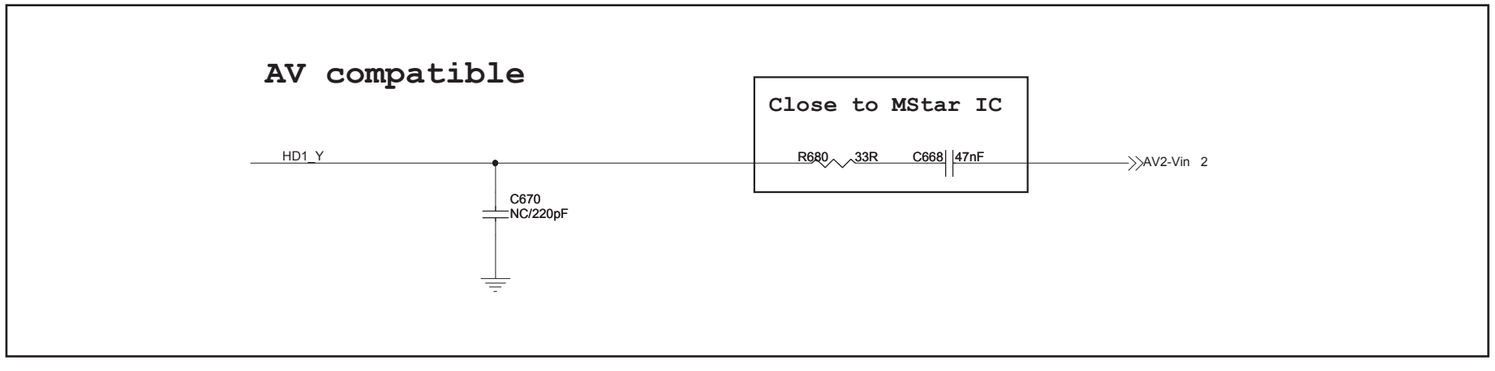


AGC SWITCH

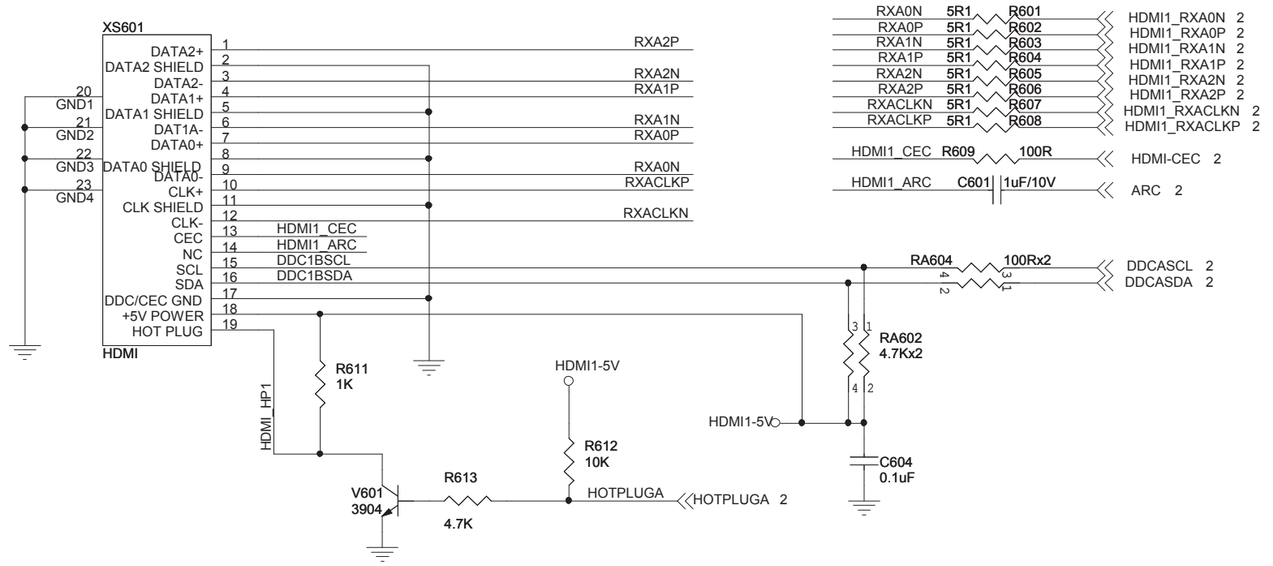


PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)

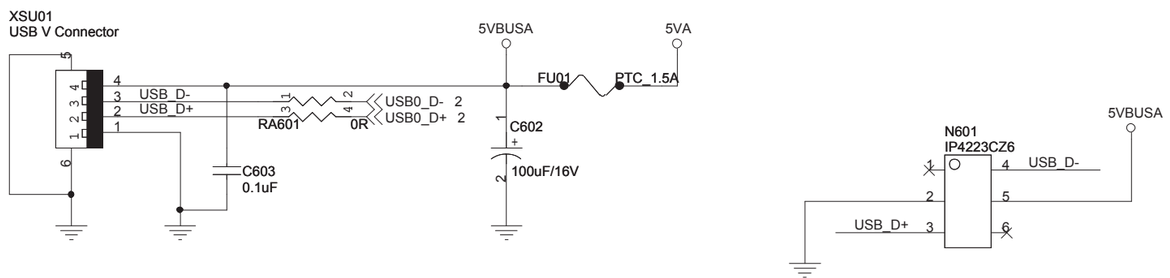




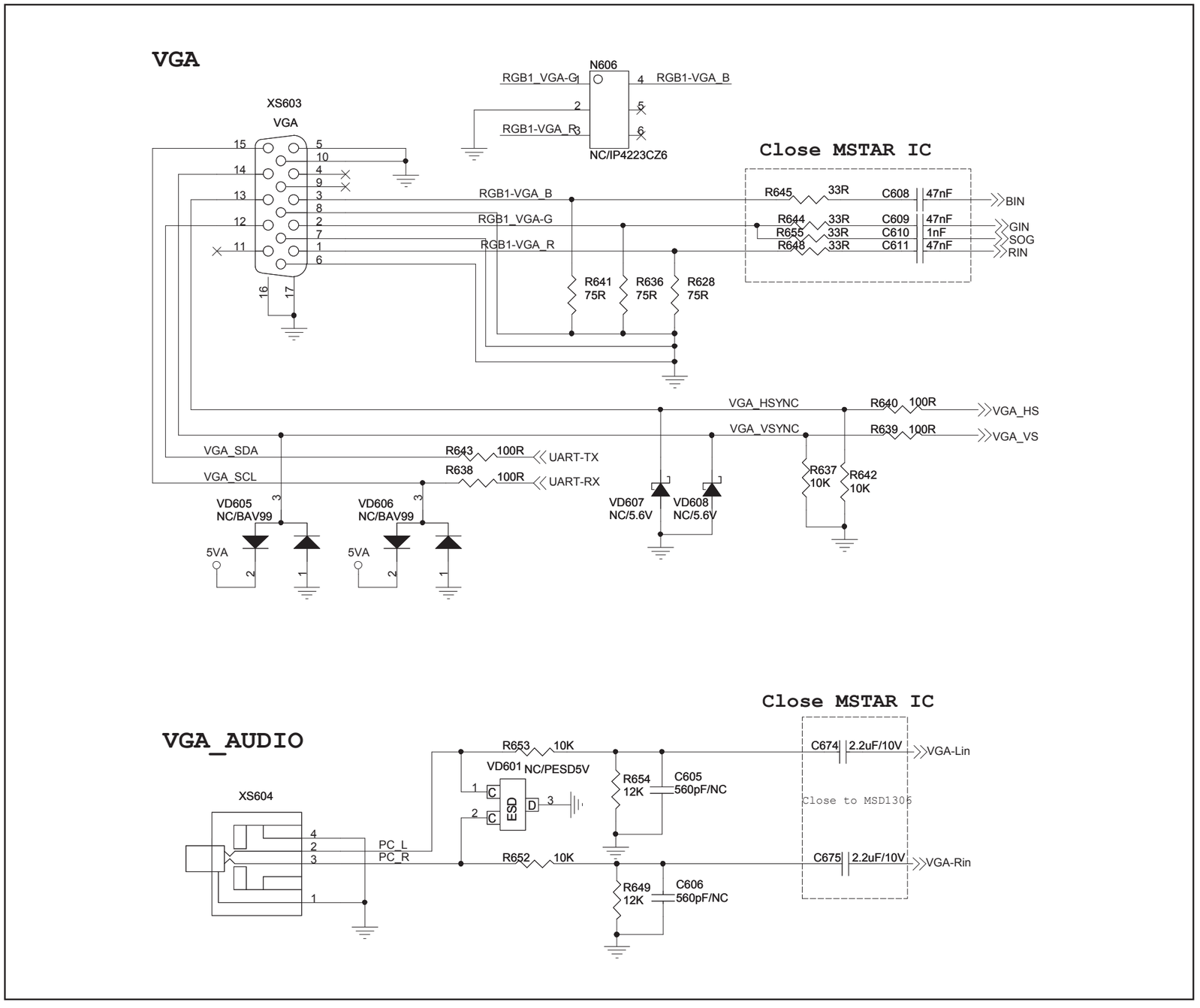
HDMI

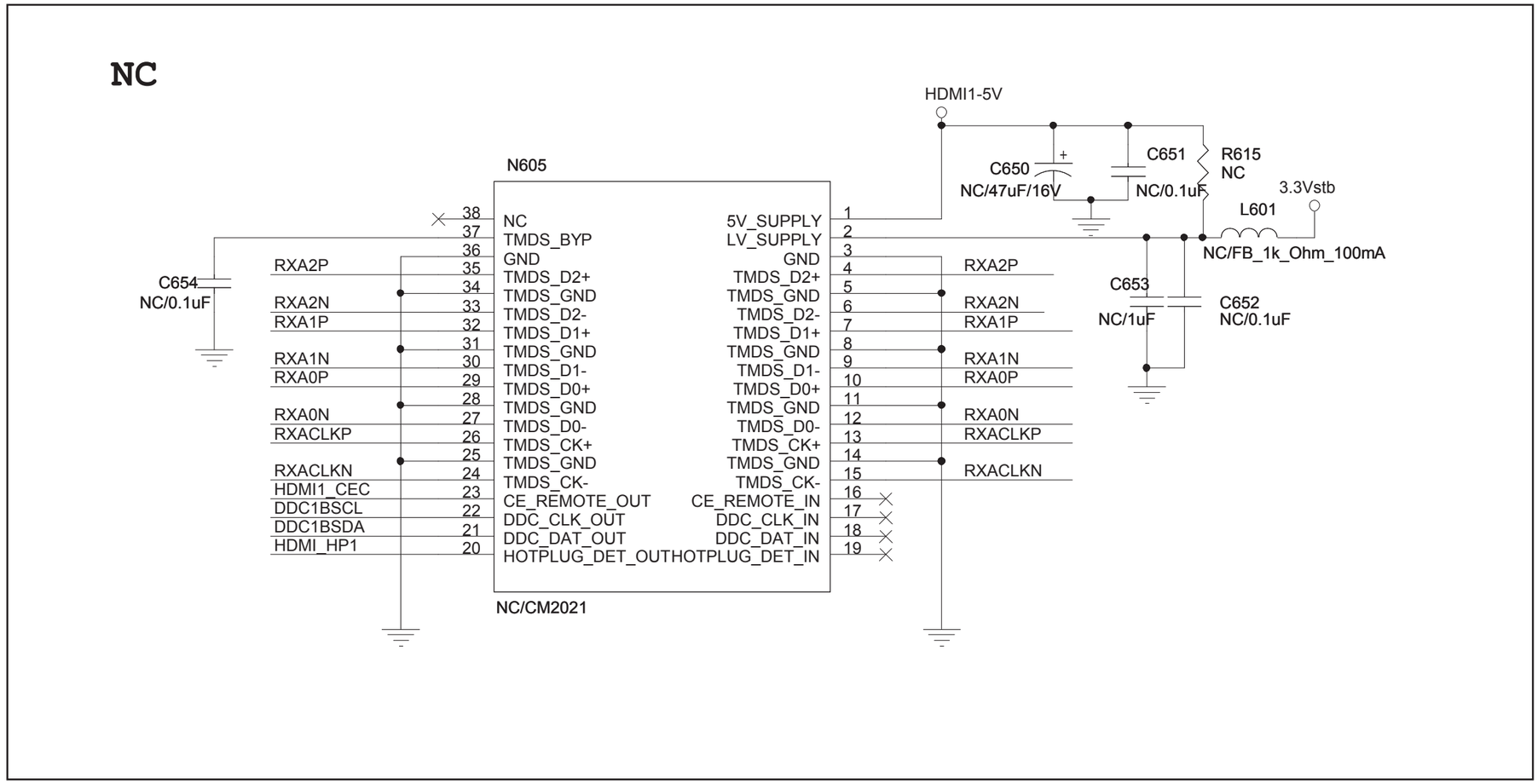

XS601
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
HDMI
GND1
GND2
GND3
GND4
RXA2P
RXA2N
RXA1P
RXA1N
RXA0P
RXA0N
RXACLKP
RXACLKN
HDMI1_CEC
HDMI1_ARC
DDC1BSCL
DDC1BSDA
R611
1K
HDMI_HP1
HDMI1-5V
R612
10K
R613
4.7K
V601
3904
HOTPLUGA
HOTPLUGA 2
RA604
100Rx2
RA602
4.7Kx2
C604
0.1uF
RXA0N 5R1 R601
RXA0P 5R1 R602
RXA1N 5R1 R603
RXA1P 5R1 R604
RXA2N 5R1 R605
RXA2P 5R1 R606
RXACLKN 5R1 R607
RXACLKP 5R1 R608
HDMI1_RXA0N 2
HDMI1_RXA0P 2
HDMI1_RXA1N 2
HDMI1_RXA1P 2
HDMI1_RXA2N 2
HDMI1_RXA2P 2
HDMI1_RXACLKN 2
HDMI1_RXACLKP 2
HDMI1_CEC R609 100R
HDMI-CEC 2
HDMI1_ARC C601 1uF/10V
ARC 2
DDCASCL 2
DDCASDA 2

USB

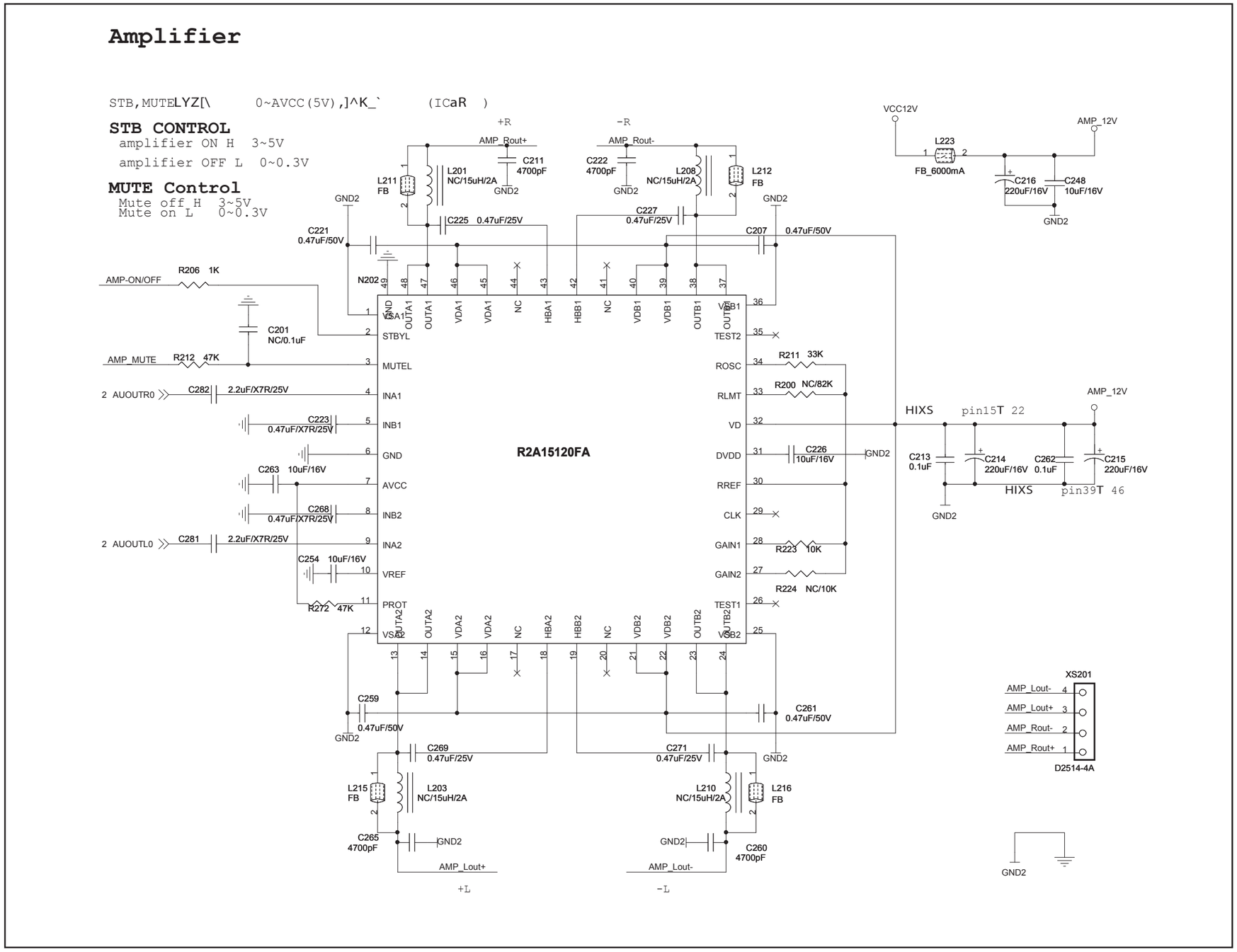

XSU01
USB V Connector
USB_D-
USB_D+
RA601
0R
USB0_D- 2
USB0_D+ 2
5VBUSA
5VA
FU01
PTC_1.5A
C602
100uF/16V
C603
0.1uF
N601
IP4223CZ6
USB_D-
USB_D+

PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



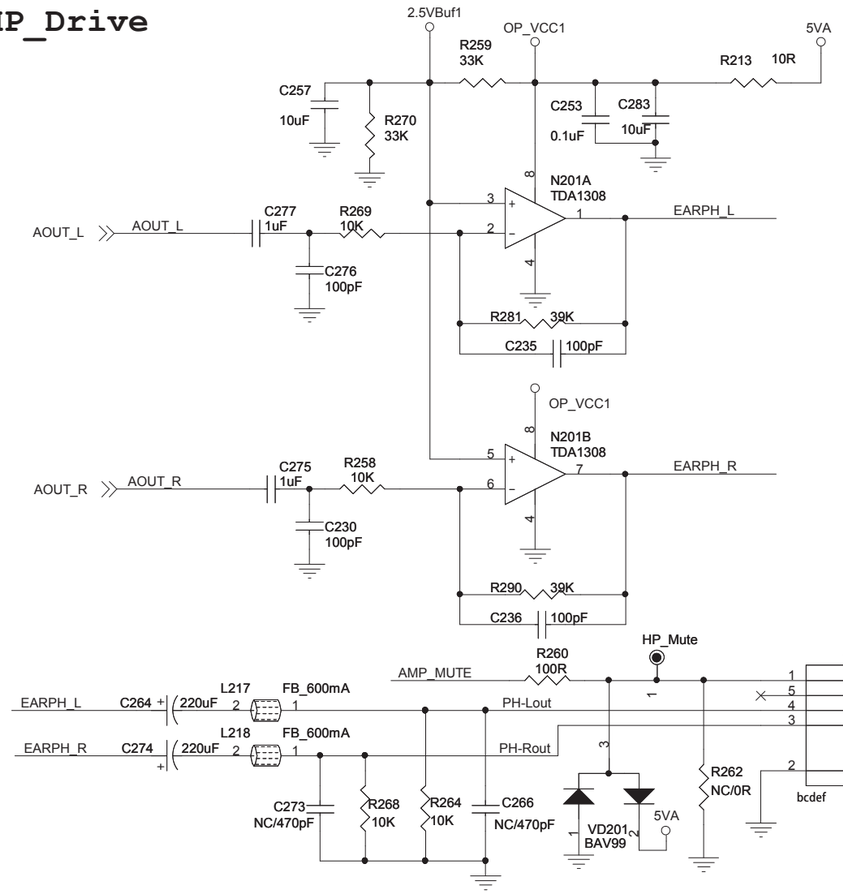

NC
HDMI1-5V
N605
C650
NC/47uF/16V
C651
NC/0.1uF
R615
NC
3.3Vstb
L601
NC/FB_1k_Ohm_100mA
C653
NC/1uF
C652
NC/0.1uF
C654
NC/0.1uF
38 NC
37 TMDS_BYP
36 GND
35 TMDS_D2+
34 TMDS_GND
33 TMDS_D2-
32 TMDS_D1+
31 TMDS_GND
30 TMDS_D1-
29 TMDS_D0+
28 TMDS_GND
27 TMDS_D0-
26 TMDS_CK+
25 TMDS_GND
24 TMDS_CK-
23 CE_REMOTE_OUT
22 DDC_CLK_OUT
21 DDC_DAT_OUT
20 HOTPLUG_DET_OUT
1 5V_SUPPLY
2 LV_SUPPLY
3 GND
4 TMDS_D2+
5 TMDS_GND
6 TMDS_D2-
7 TMDS_D1+
8 TMDS_GND
9 TMDS_D1-
10 TMDS_D0+
11 TMDS_GND
12 TMDS_D0-
13 TMDS_CK+
14 TMDS_GND
15 TMDS_CK-
16 CE_REMOTE_IN
17 DDC_CLK_IN
18 DDC_DAT_IN
19 HOTPLUG_DET_IN
RXA2P
RXA2N
RXA1P
RXA1N
RXA0P
RXA0N
RXACLKP
RXACLKN
HDMI1_CEC
DDC1BSCL
DDC1BSDA
HDMI_HP1
NC/CM2021

PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)

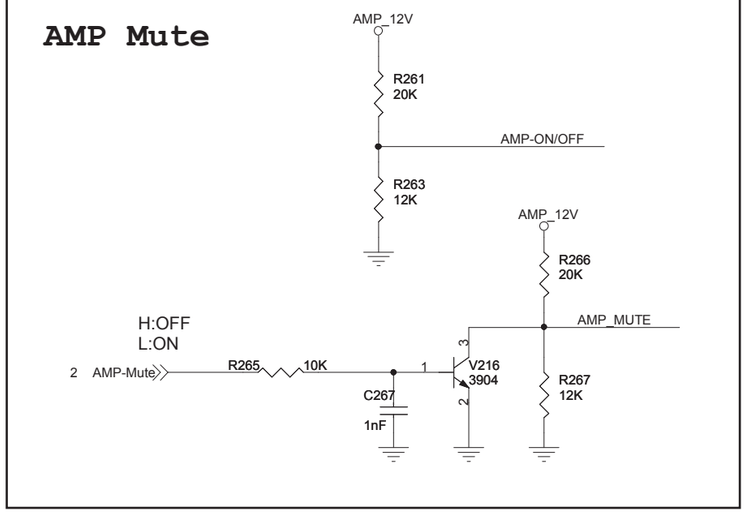


PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)

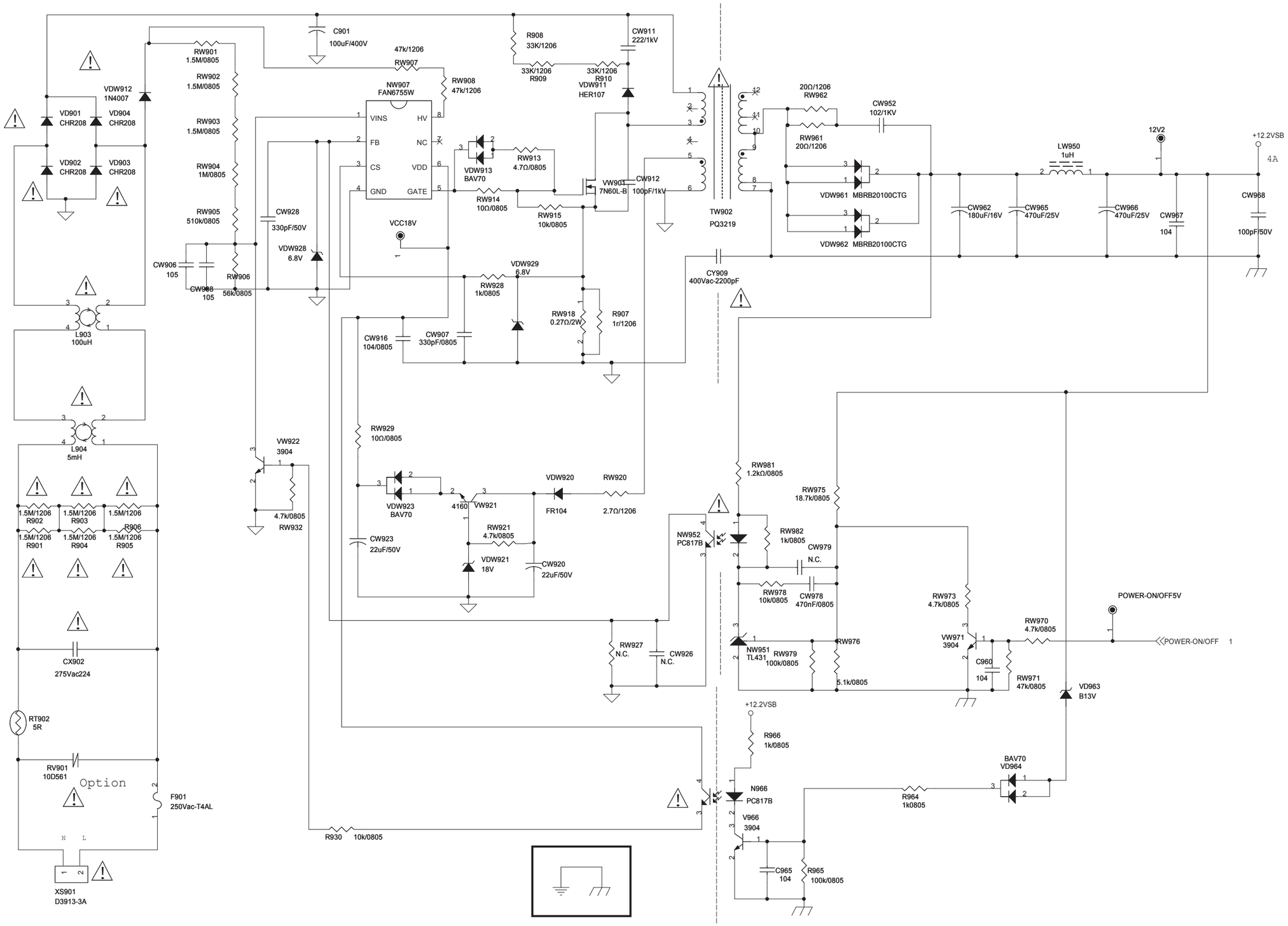
HP_Drive



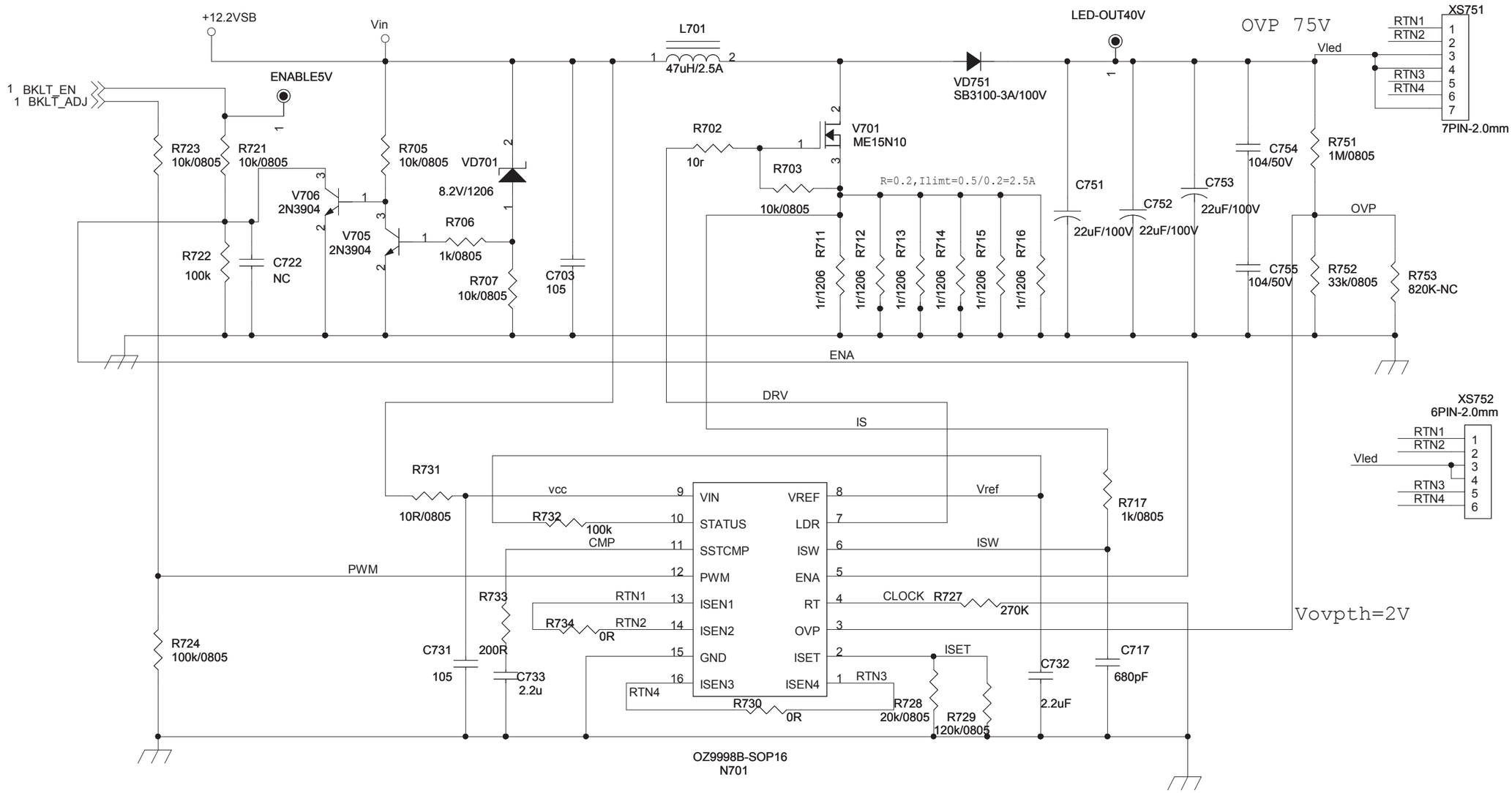
AMP Mute



PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



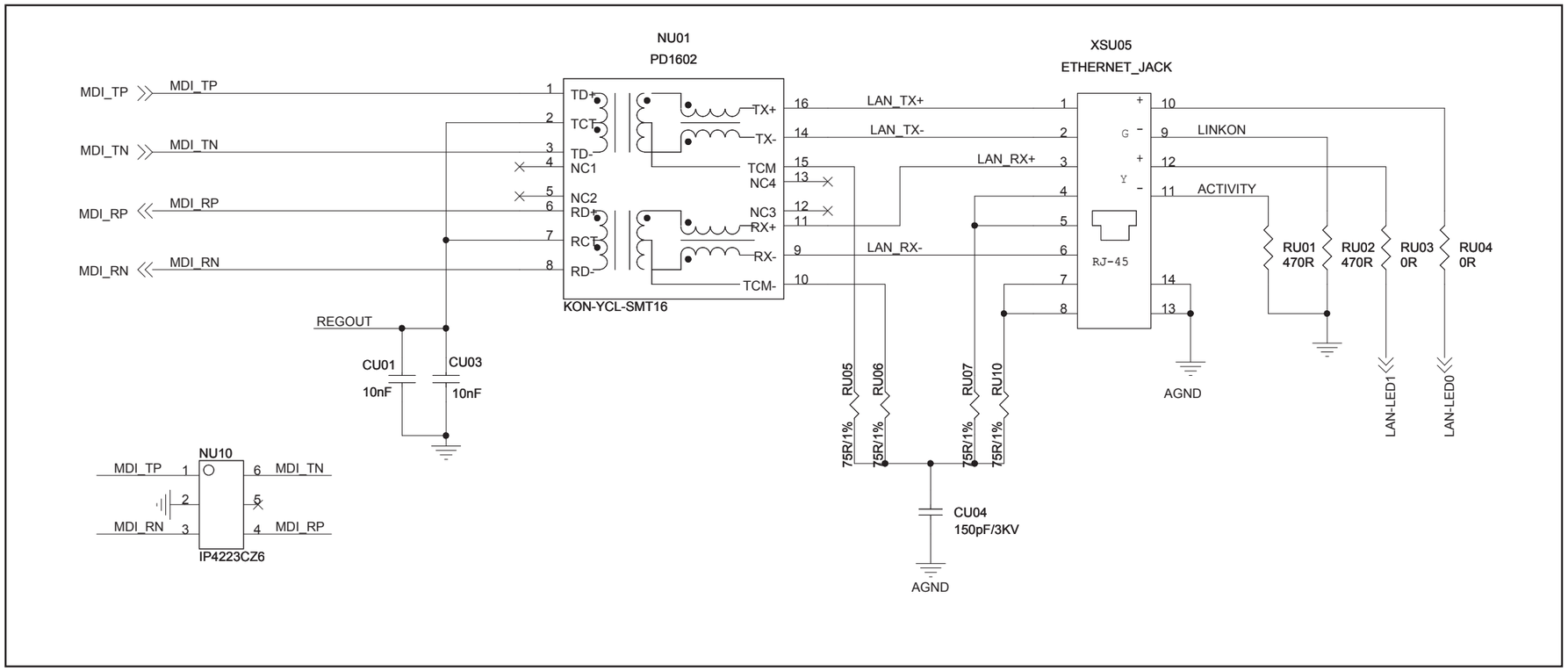
PCI Principal (LE1956(A)W / LE2456(A)F / LE1958(A)W / LE2458(A)F)



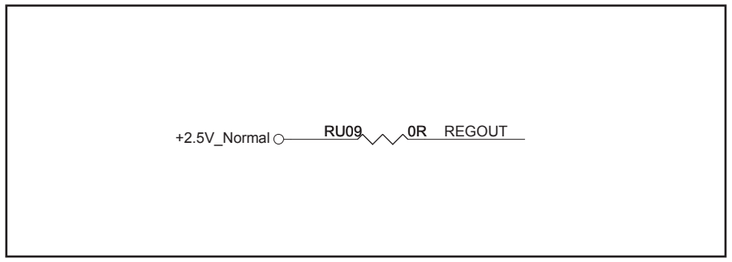
F=50/270K=185K

I=1200/17.143k=70mA

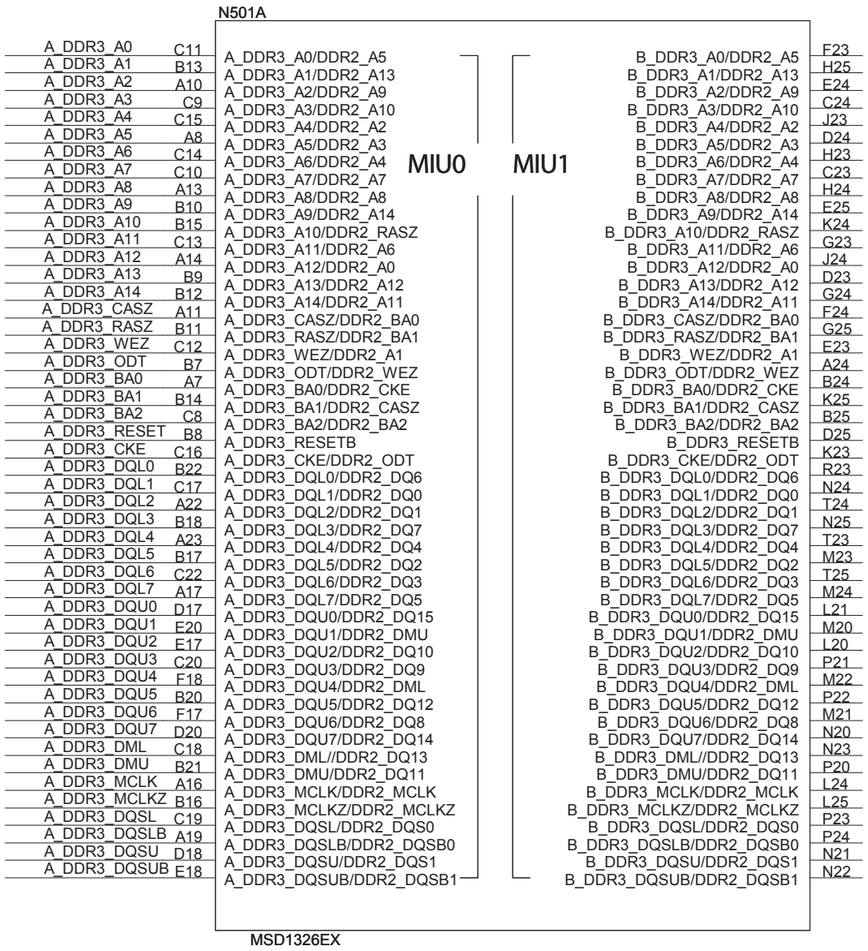
Connector

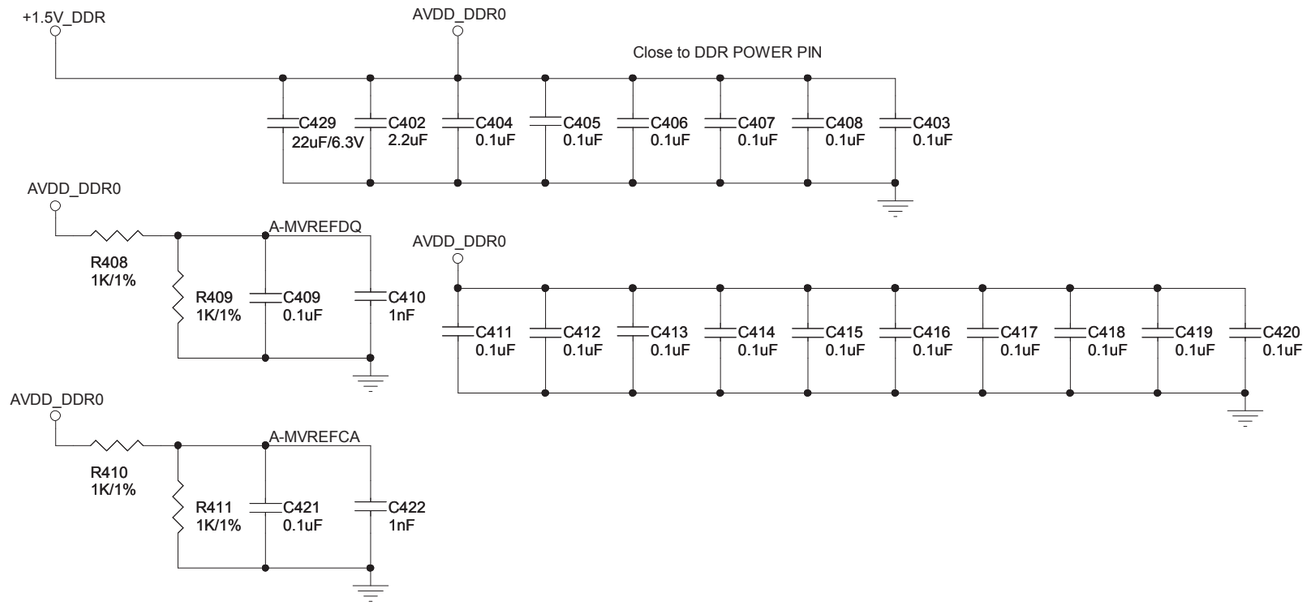


Internal PHY



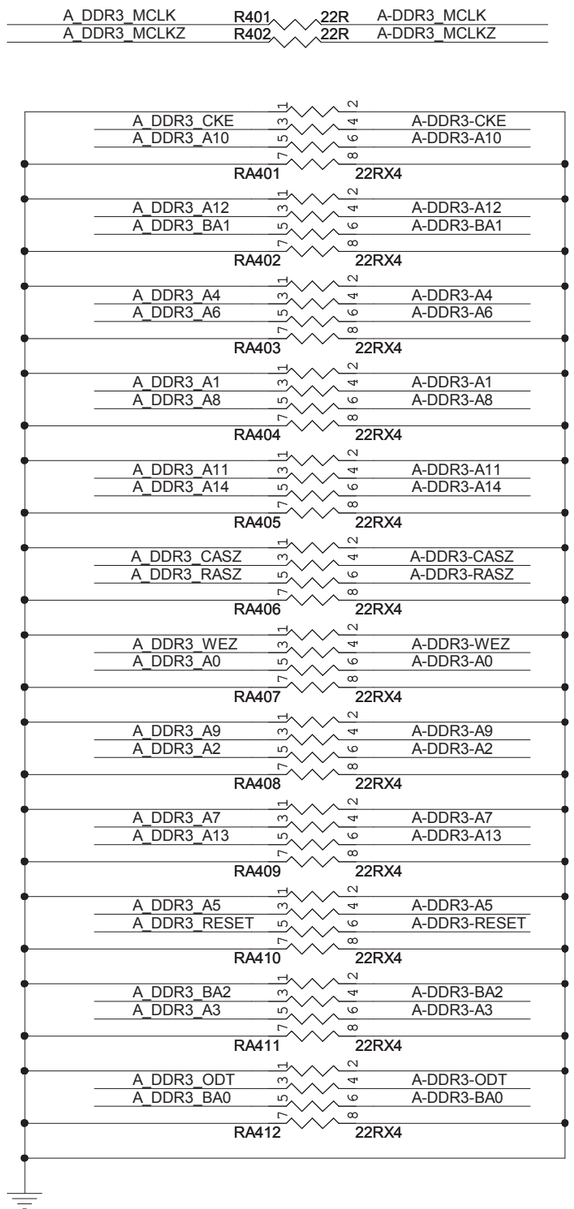
PCI Principal (DL2944(A)W)



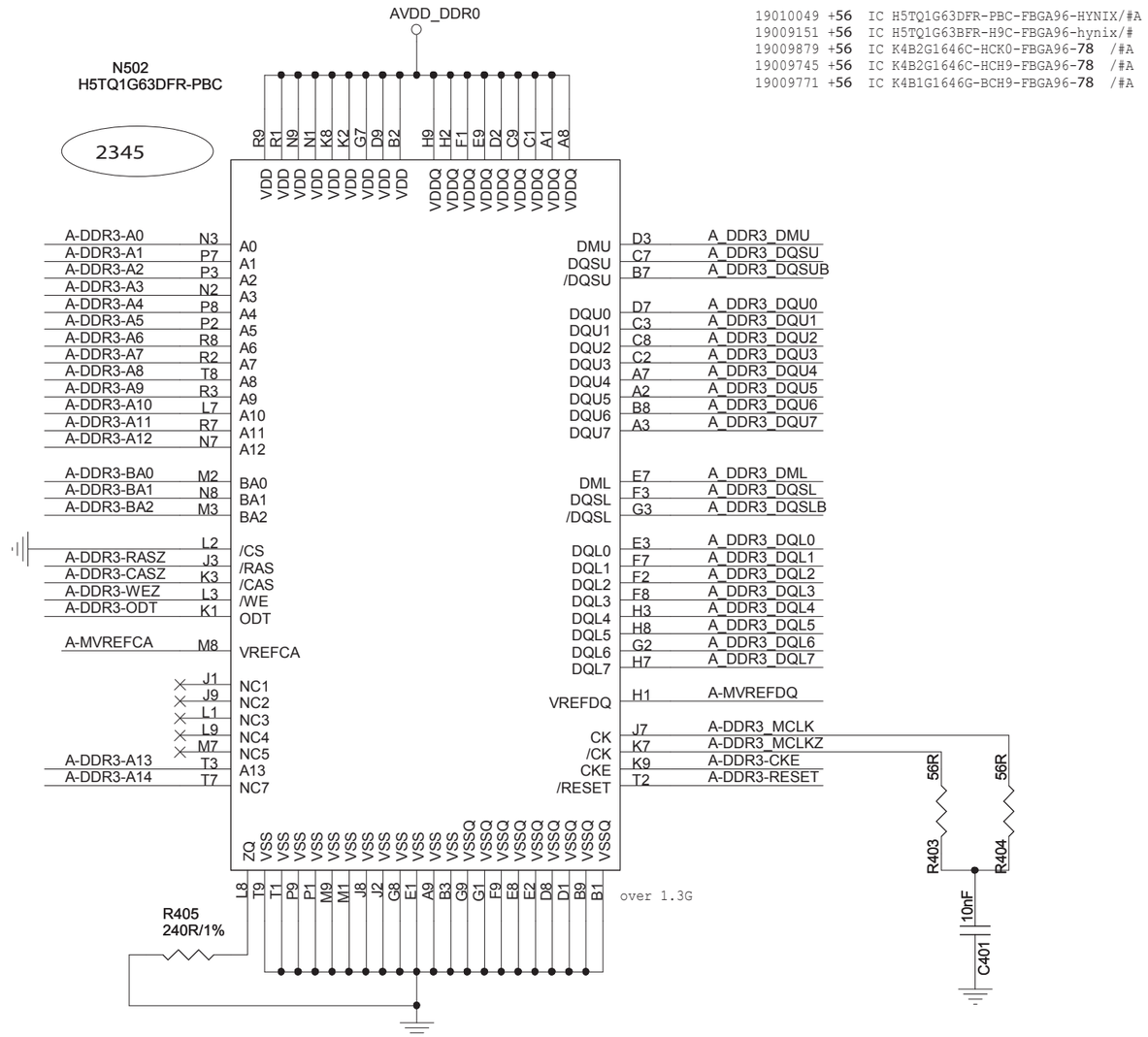


PCI Principal (DL2944(A)W)

DDR3 1G bit 1600MHz



2G bit




```
19010049 +56  IC H5TQ1G63DFR-PBC-FBGA96-HYNIX/#A
19009151 +56  IC H5TQ1G63BFR-H9C-FBGA96-hynix/#
19009879 +56  IC K4B2G1646C-HCK0-FBGA96-78  /#A
19009745 +56  IC K4B2G1646C-HCH9-FBGA96-78  /#A
19009771 +56  IC K4B1G1646G-BCH9-FBGA96-78  /#A
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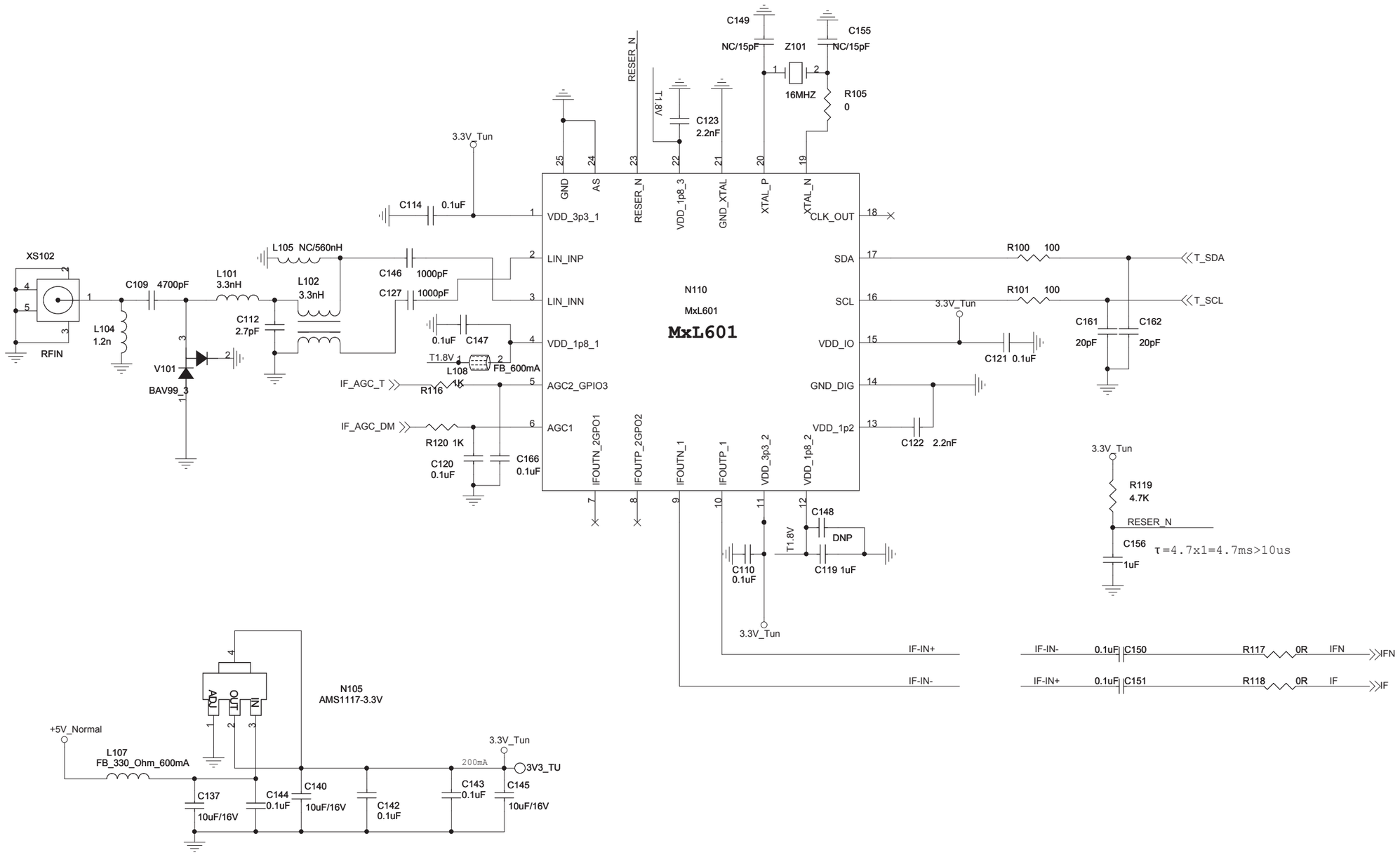
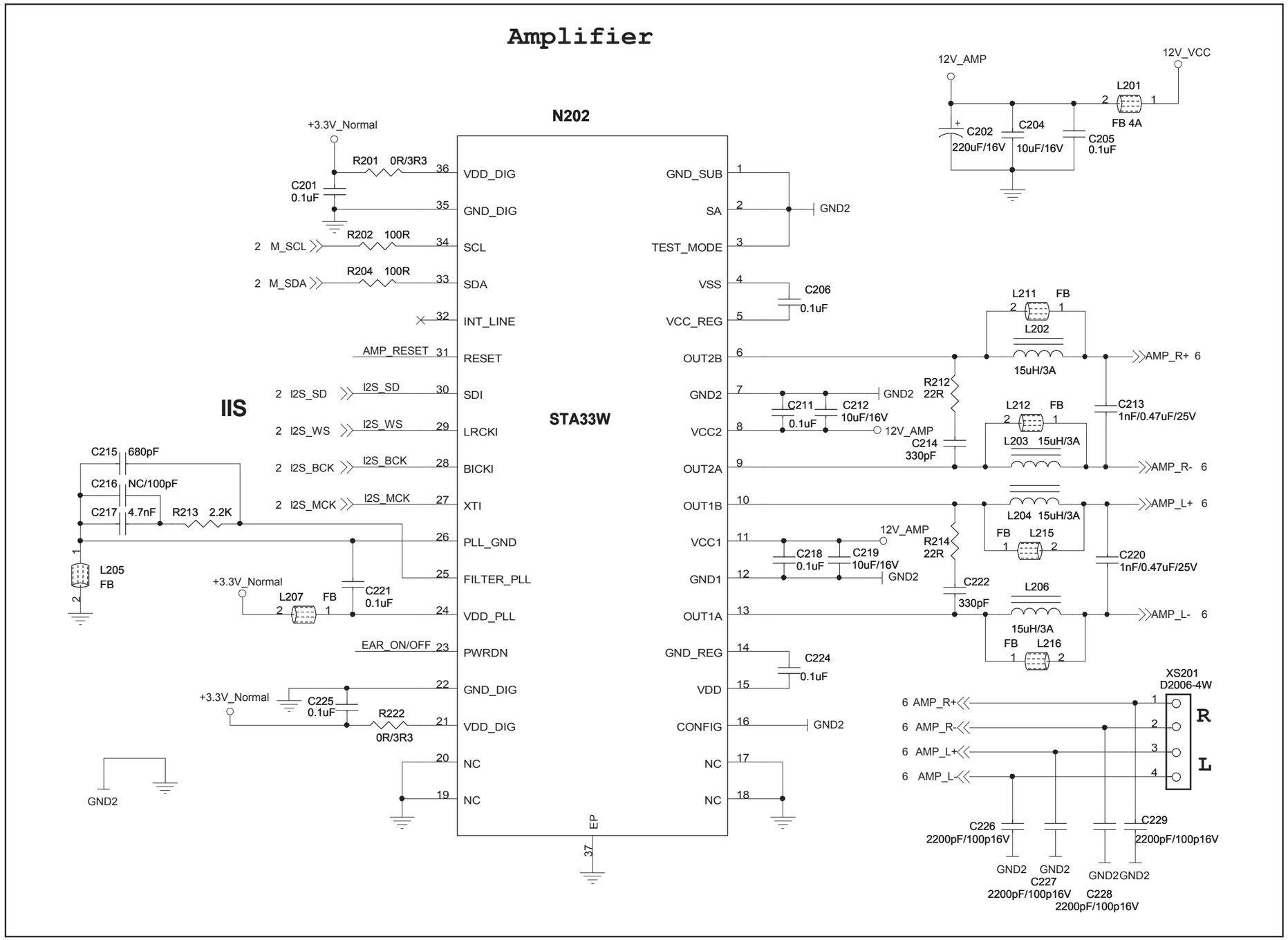
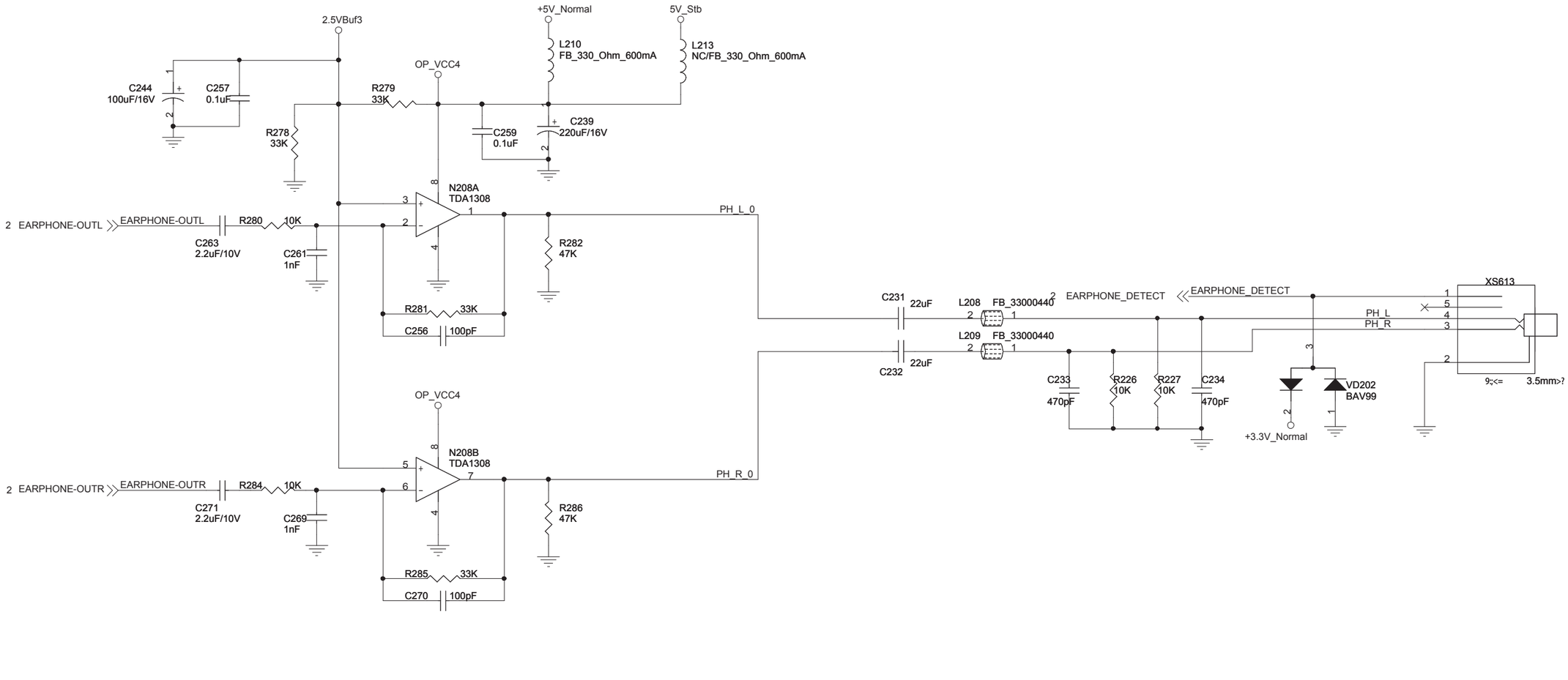
PCI Principal (DL2944(A)W)



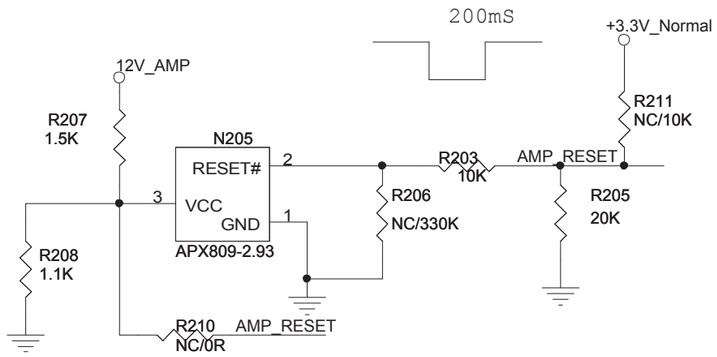
PCI Principal (DL2944(A)W)

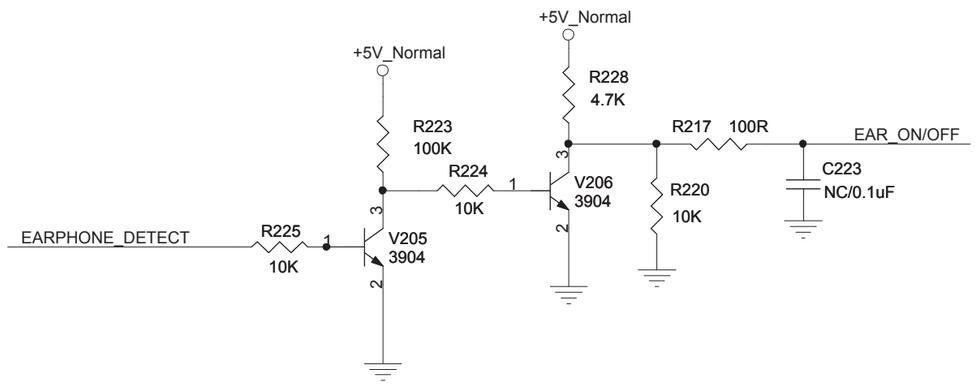


HEADPHONE

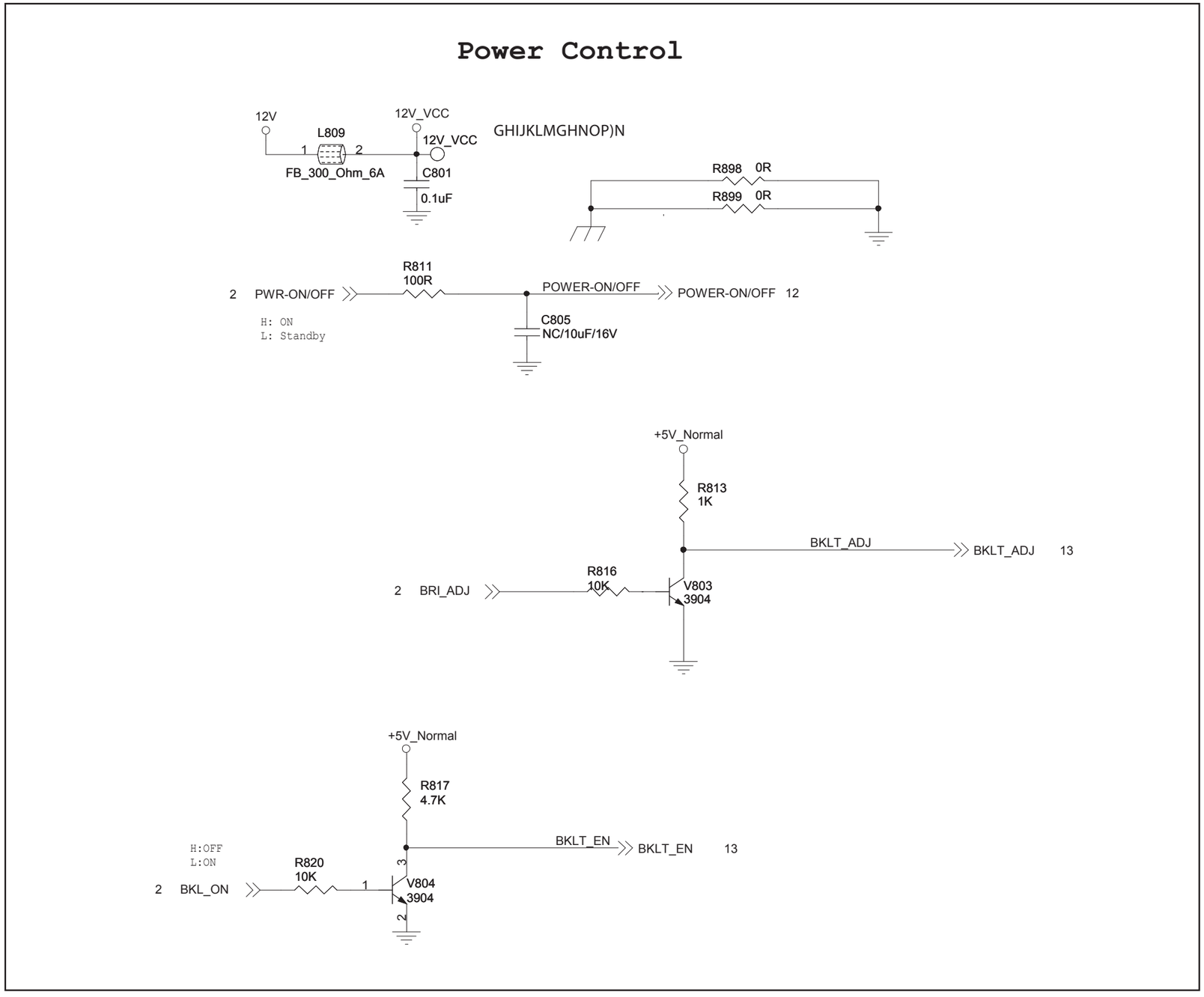

2.5VBuf3
+5V_Normal
5V_Stb
L210
FB_330_Ohm_600mA
L213
NC/FB_330_Ohm_600mA
OP_VCC4
C244
100uF/16V
C257
0.1uF
R279
33K
R278
33K
C259
0.1uF
C239
220uF/16V
N208A
TDA1308
2 EARPHONE-OUTL
EARPHONE-OUTL
R280
10K
C263
2.2uF/10V
C261
1nF
PH_L_0
R282
47K
R281
33K
C256
100pF
C231
22uF
L208
FB_33000440
2 EARPHONE_DETECT
EARPHONE_DETECT
XS613
PH_L
PH_R
L209
FB_33000440
C232
22uF
C233
470pF
R226
10K
R227
10K
C234
470pF
VD202
BAV99
+3.3V_Normal
9;<=
3.5mm>?
OP_VCC4
N208B
TDA1308
2 EARPHONE-OUTR
EARPHONE-OUTR
R284
10K
C271
2.2uF/10V
C269
1nF
PH_R_0
R286
47K
R285
33K
C270
100pF

Mute Control



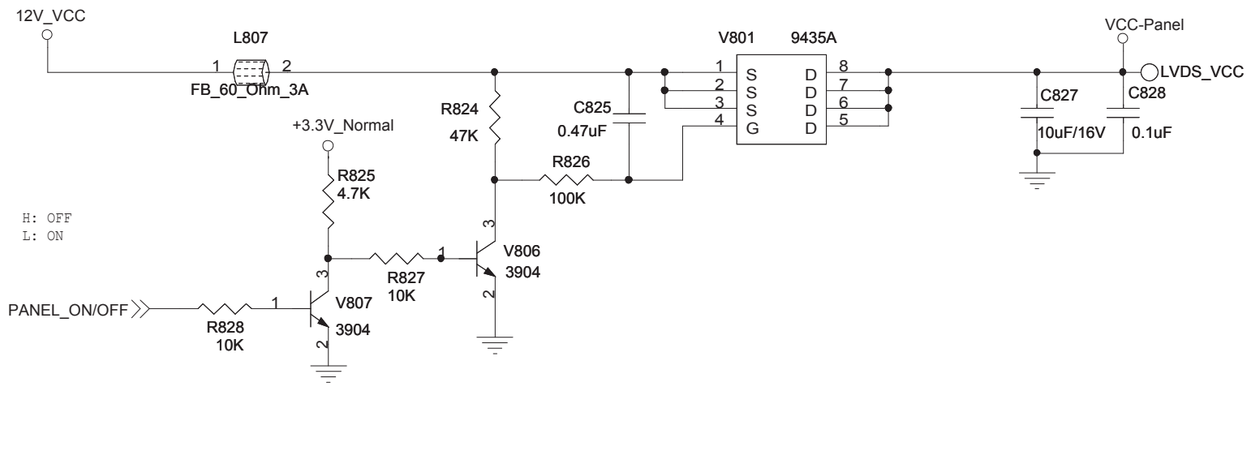


PCI Principal (DL2944(A)W)

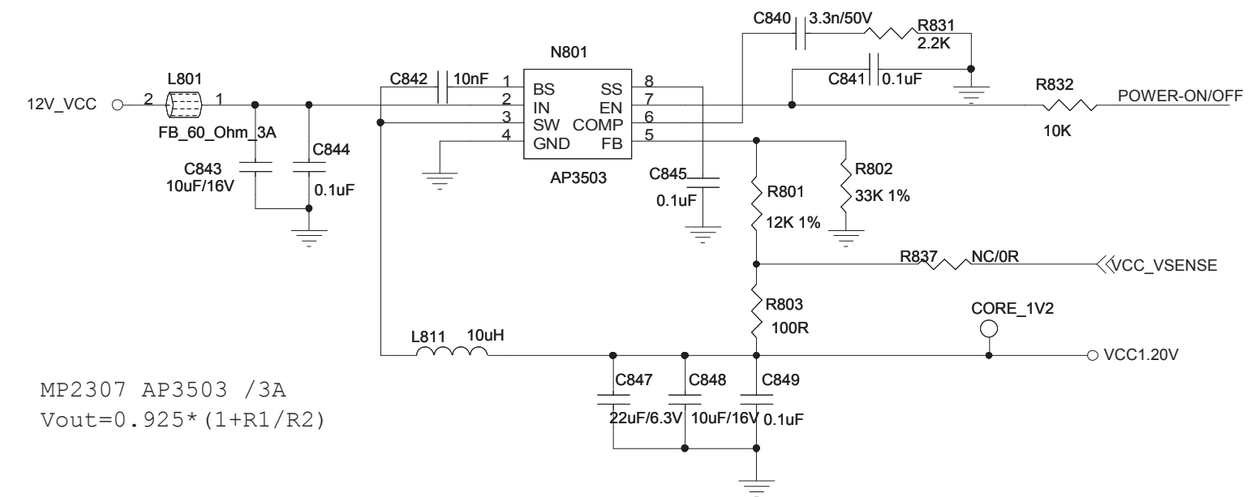


PCI Principal (DL2944(A)W)

VCC-Panel

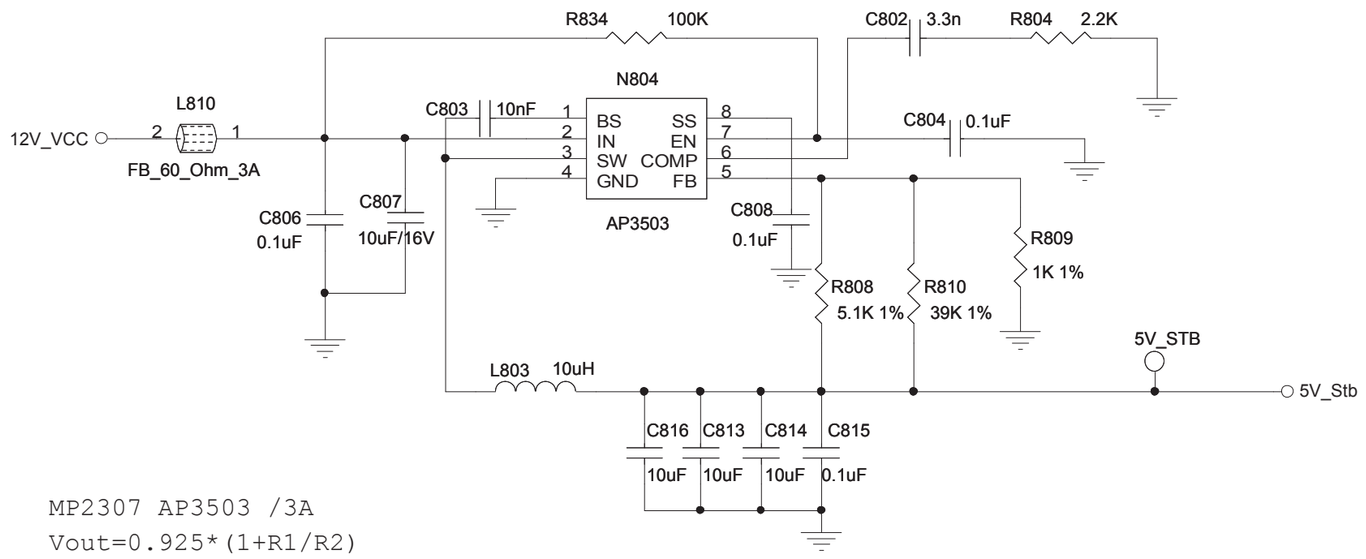


1.2V_VDDC 2.2A

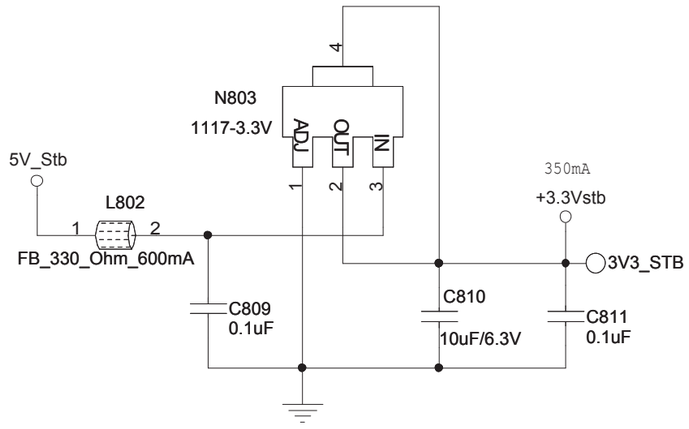


PCI Principal (DL2944(A)W)

5V_Stb

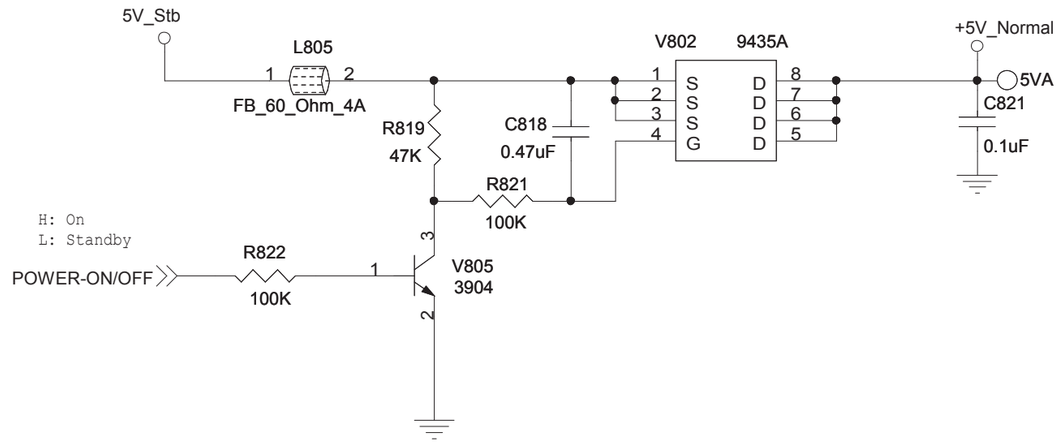


3.3Vstb

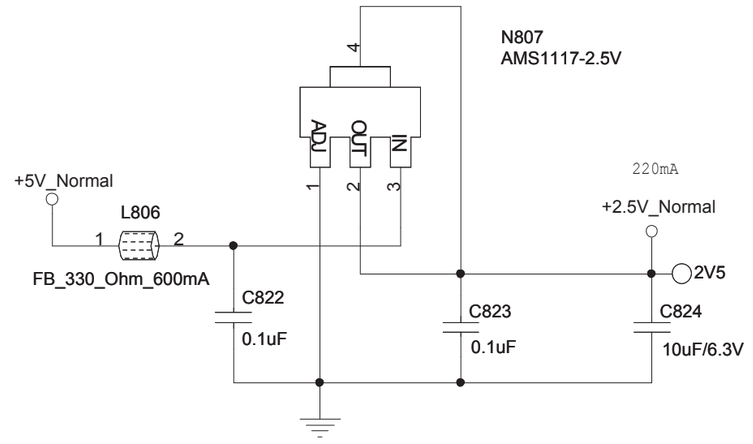


PCI Principal (DL2944(A)W)

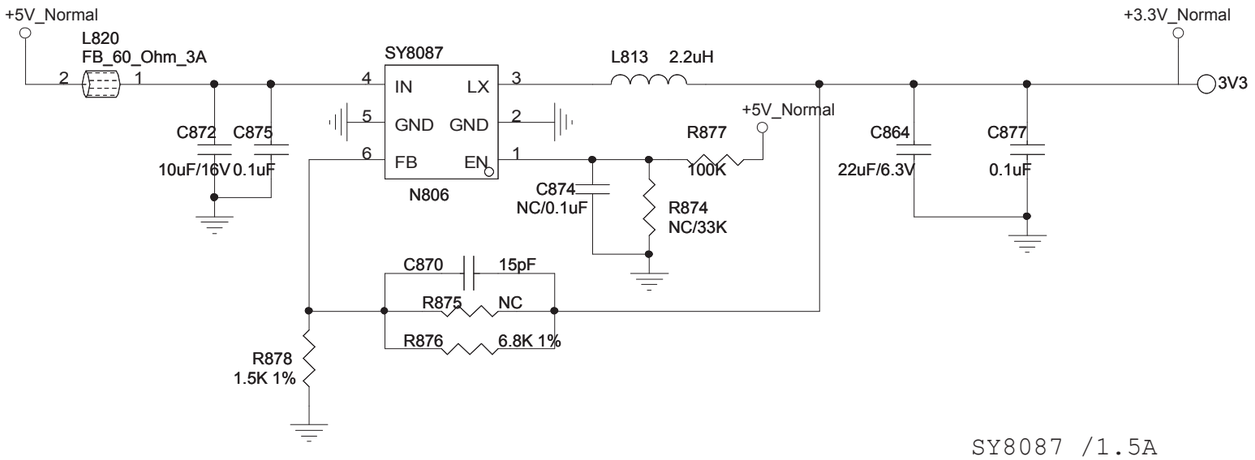
5V_Norma l



2.5V_Normal

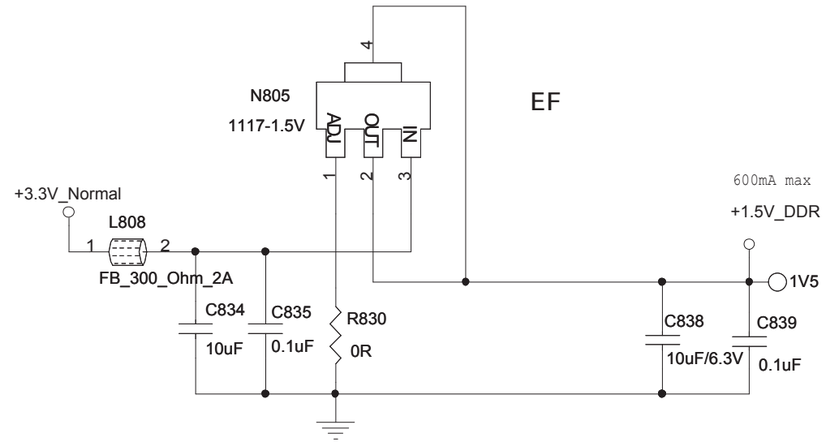


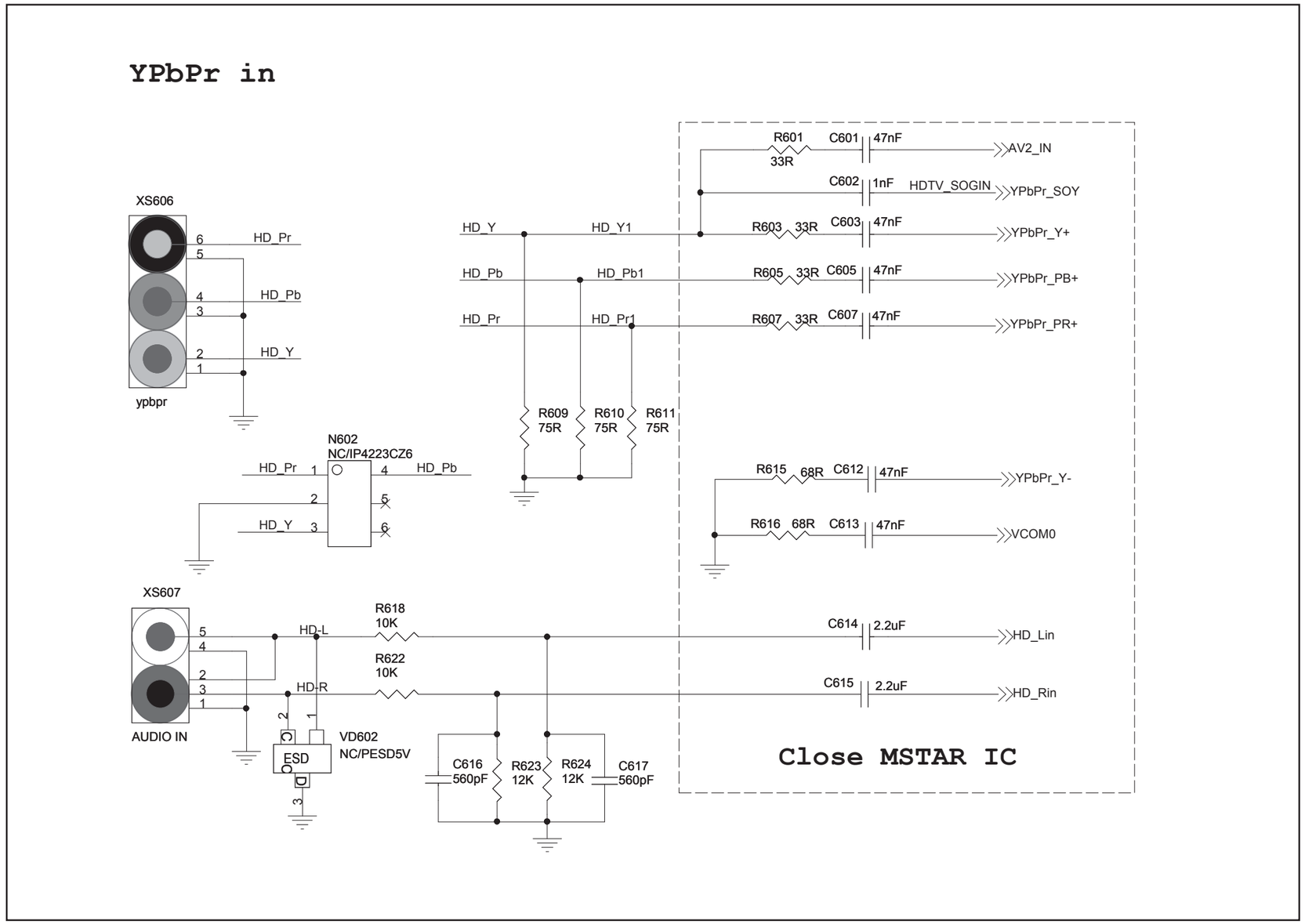
3.3V_Normal



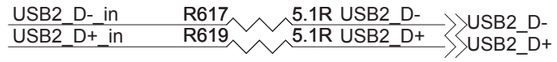
SY8087 /1.5A
Vout=0.6*(1+R1/R2)
3.3V:R1/R2=4.5

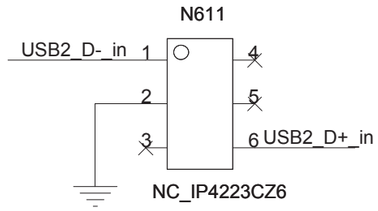
1.5V_DDR

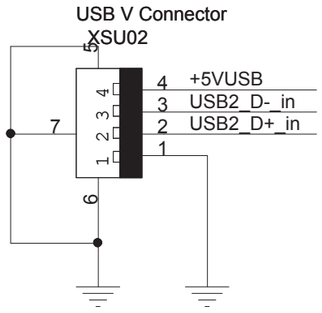


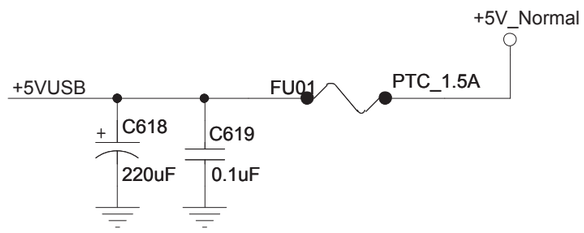

YPbPr in
XS606
6
5
4
3
2
1
HD_Pr
HD_Pb
HD_Y
ypbpr
N602
NC/IP4223CZ6
HD_Pr
HD_Pb
HD_Y
XS607
AUDIO IN
HD-L
HD-R
R618
10K
R622
10K
VD602
NC/PESD5V
ESD
C616
560pF
R623
12K
R624
12K
C617
560pF
HD_Y
HD_Pb
HD_Pr
HD_Y1
HD_Pb1
HD_Pr1
R609
75R
R610
75R
R611
75R
R601
33R
C601
47nF
AV2_IN
C602
1nF
HDTV_SOGIN
YPbPr_SOY
R603 33R
C603
47nF
YPbPr_Y+
R605 33R
C605
47nF
YPbPr_PB+
R607 33R
C607
47nF
YPbPr_PR+
R615 68R
C612
47nF
YPbPr_Y-
R616 68R
C613
47nF
VCOM0
C614
2.2uF
HD_Lin
C615
2.2uF
HD_Rin
Close MSTAR IC

USB



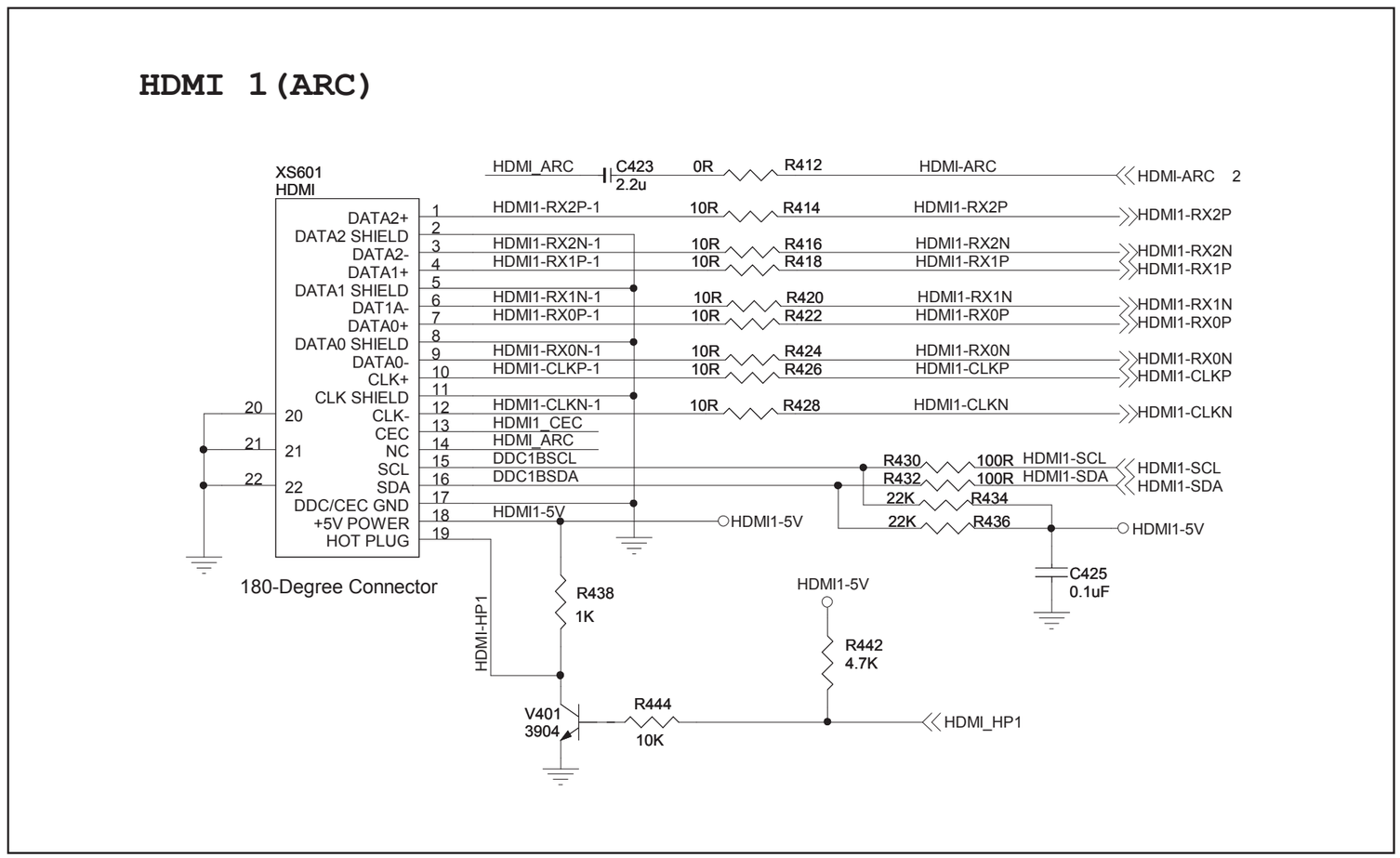


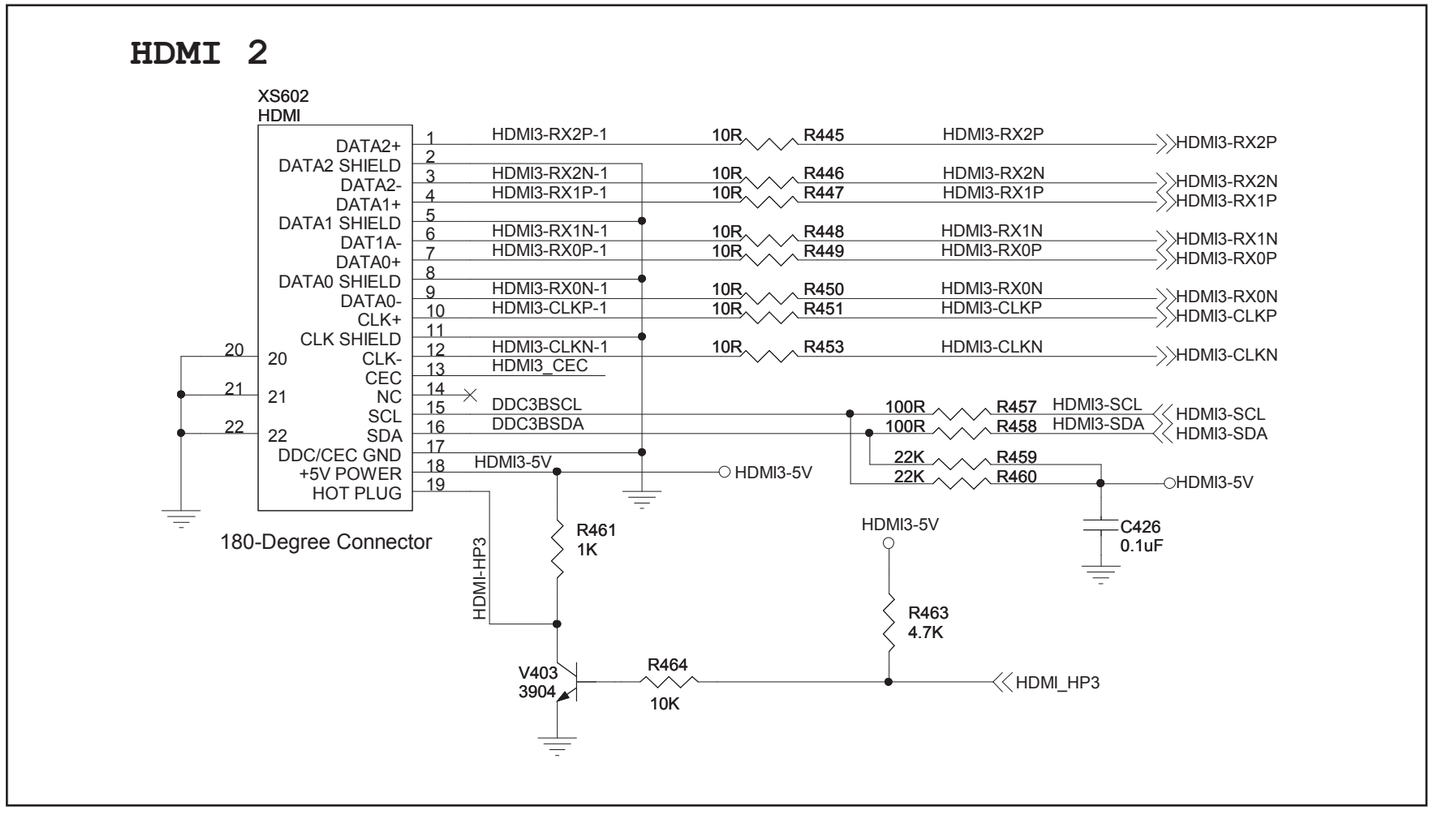


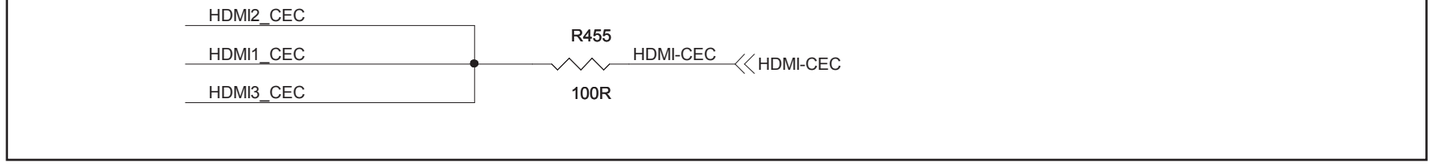


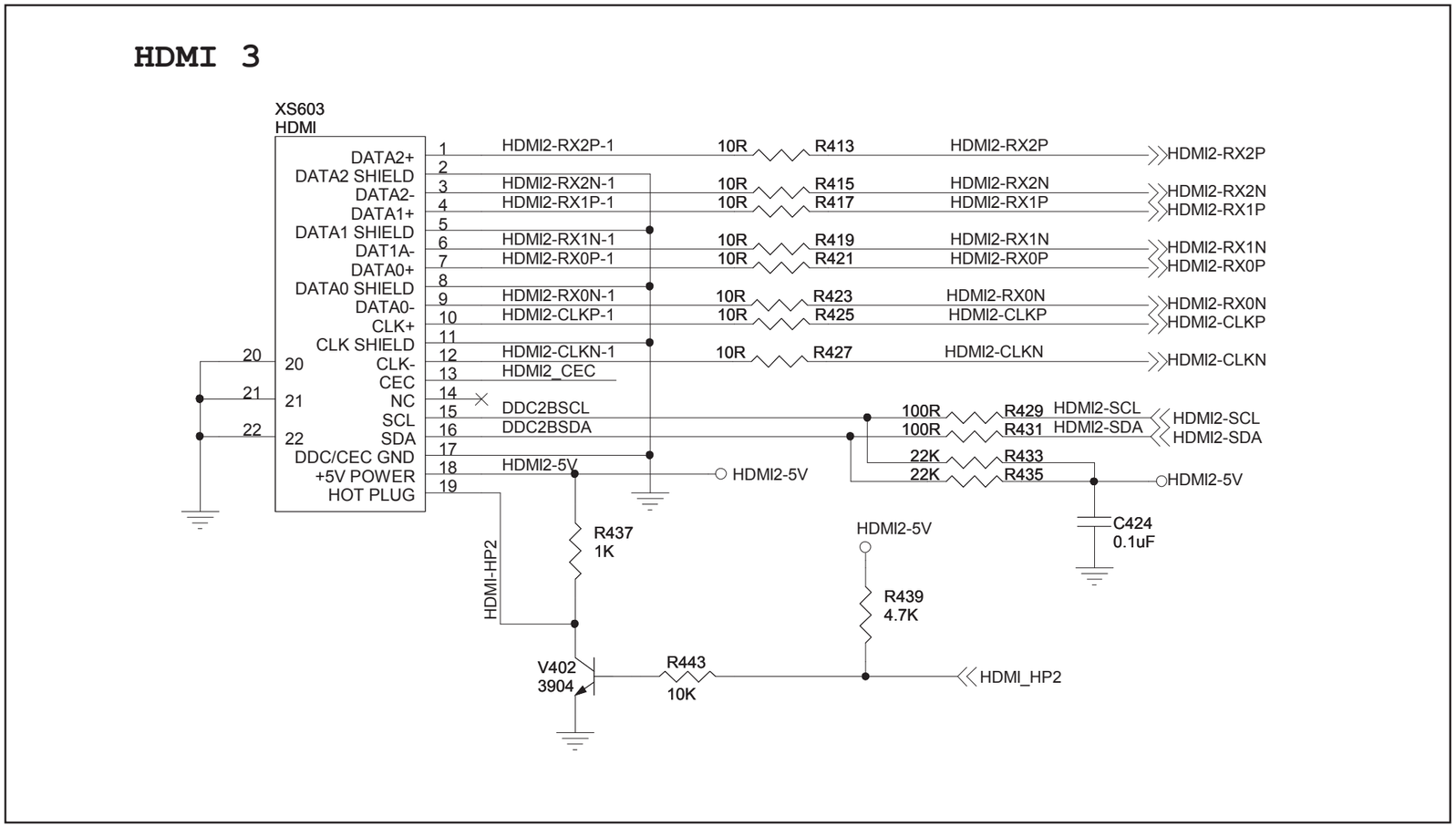
Side USB 1,2(dual USB)

HDMI 1(ARC)

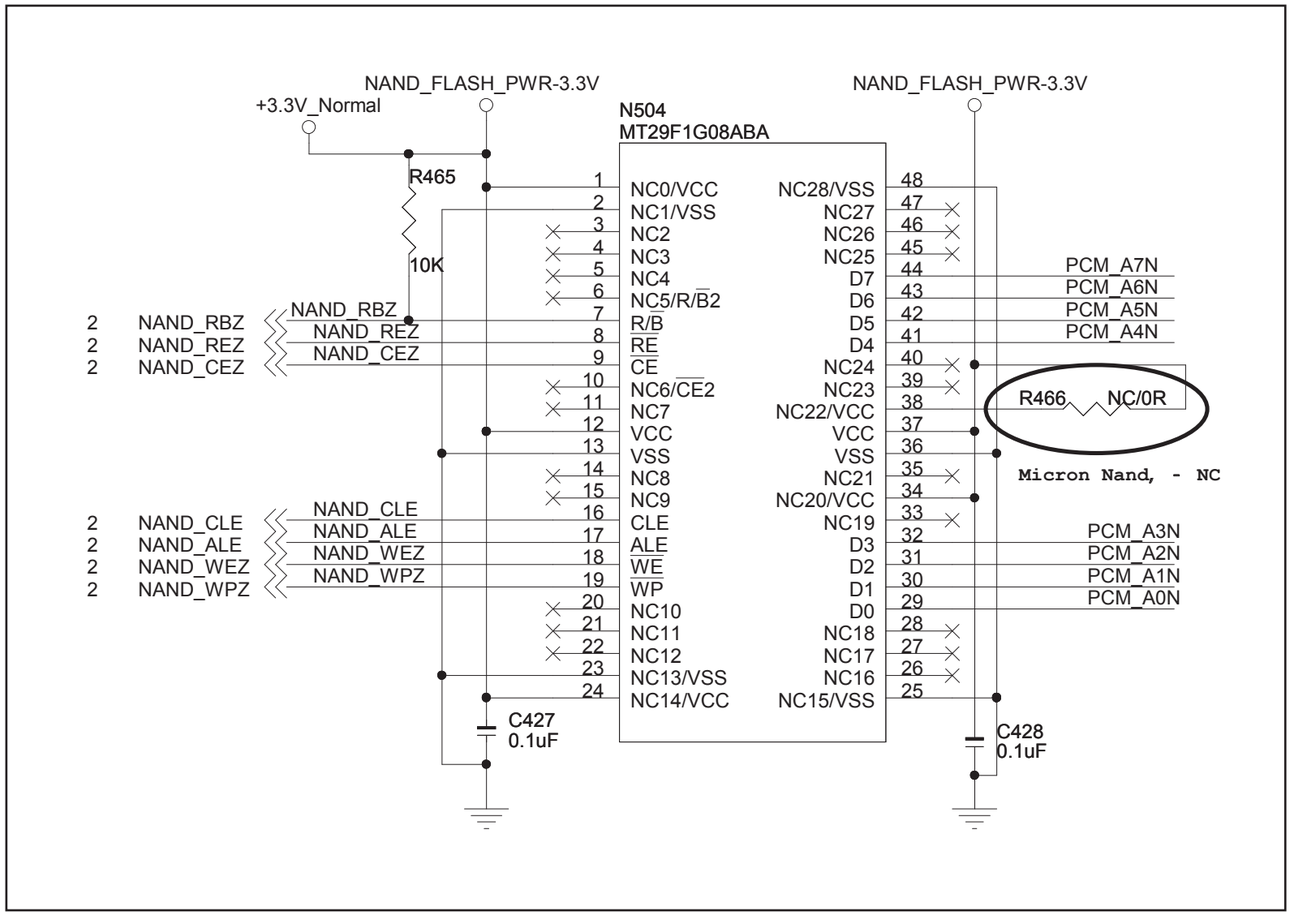

XS601
HDMI
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
180-Degree Connector
HDMI_ARC
C423
2.2u
0R
R412
HDMI-ARC
HDMI-ARC 2
HDMI1-RX2P-1
10R
R414
HDMI1-RX2P
HDMI1-RX2P
HDMI1-RX2N-1
10R
R416
HDMI1-RX2N
HDMI1-RX2N
HDMI1-RX1P-1
10R
R418
HDMI1-RX1P
HDMI1-RX1P
HDMI1-RX1N-1
10R
R420
HDMI1-RX1N
HDMI1-RX1N
HDMI1-RX0P-1
10R
R422
HDMI1-RX0P
HDMI1-RX0P
HDMI1-RX0N-1
10R
R424
HDMI1-RX0N
HDMI1-RX0N
HDMI1-CLKP-1
10R
R426
HDMI1-CLKP
HDMI1-CLKP
HDMI1-CLKN-1
10R
R428
HDMI1-CLKN
HDMI1-CLKN
HDMI1_CEC
HDMI_ARC
DDC1BSCL
DDC1BSDA
R430
100R
HDMI1-SCL
HDMI1-SCL
R432
100R
HDMI1-SDA
HDMI1-SDA
22K
R434
22K
R436
HDMI1-5V
HDMI1-5V
HDMI1-5V
C425
0.1uF
HDMI-HP1
R438
1K
HDMI1-5V
R442
4.7K
V401
3904
R444
10K
HDMI_HP1


HDMI 2
XS602
HDMI
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
180-Degree Connector
HDMI3-RX2P-1
HDMI3-RX2N-1
HDMI3-RX1P-1
HDMI3-RX1N-1
HDMI3-RX0P-1
HDMI3-RX0N-1
HDMI3-CLKP-1
HDMI3-CLKN-1
HDMI3_CEC
DDC3BSCL
DDC3BSDA
HDMI3-5V
10R
R445
R446
R447
R448
R449
R450
R451
R453
HDMI3-RX2P
HDMI3-RX2N
HDMI3-RX1P
HDMI3-RX1N
HDMI3-RX0P
HDMI3-RX0N
HDMI3-CLKP
HDMI3-CLKN
100R
R457
R458
HDMI3-SCL
HDMI3-SDA
22K
R459
R460
C426
0.1uF
R461
1K
HDMI-HP3
R463
4.7K
R464
10K
V403
3904
HDMI_HP3


For CEC Leakage Protect
HDMI2_CEC
HDMI1_CEC
HDMI3_CEC
R455
100R
HDMI-CEC
HDMI-CEC


HDMI 3
XS603
HDMI
DATA2+
DATA2 SHIELD
DATA2-
DATA1+
DATA1 SHIELD
DAT1A-
DATA0+
DATA0 SHIELD
DATA0-
CLK+
CLK SHIELD
CLK-
CEC
NC
SCL
SDA
DDC/CEC GND
+5V POWER
HOT PLUG
1 HDMI2-RX2P-1
2
3 HDMI2-RX2N-1
4 HDMI2-RX1P-1
5
6 HDMI2-RX1N-1
7 HDMI2-RX0P-1
8
9 HDMI2-RX0N-1
10 HDMI2-CLKP-1
11
12 HDMI2-CLKN-1
13 HDMI2_CEC
14
15 DDC2BSCL
16 DDC2BSDA
17
18 HDMI2-5V
19
20
21
22
10R R413 HDMI2-RX2P
HDMI2-RX2P
10R R415 HDMI2-RX2N
10R R417 HDMI2-RX1P
HDMI2-RX2N
HDMI2-RX1P
10R R419 HDMI2-RX1N
10R R421 HDMI2-RX0P
HDMI2-RX1N
HDMI2-RX0P
10R R423 HDMI2-RX0N
10R R425 HDMI2-CLKP
HDMI2-RX0N
HDMI2-CLKP
10R R427 HDMI2-CLKN
HDMI2-CLKN
100R R429 HDMI2-SCL
100R R431 HDMI2-SDA
HDMI2-SCL
HDMI2-SDA
22K R433
22K R435
HDMI2-5V
HDMI2-5V
C424
0.1uF
HDMI2-5V
R437
1K
HDMI-HP2
R439
4.7K
V402
3904
R443
10K
HDMI_HP2

NAND FLASH 1Gb



PCM_A7N PCM_A7

PCM_A6N PCM_A6

PCM_A5N PCM_A5

PCM_A4N PCM_A4

PCM_A3N PCM_A3

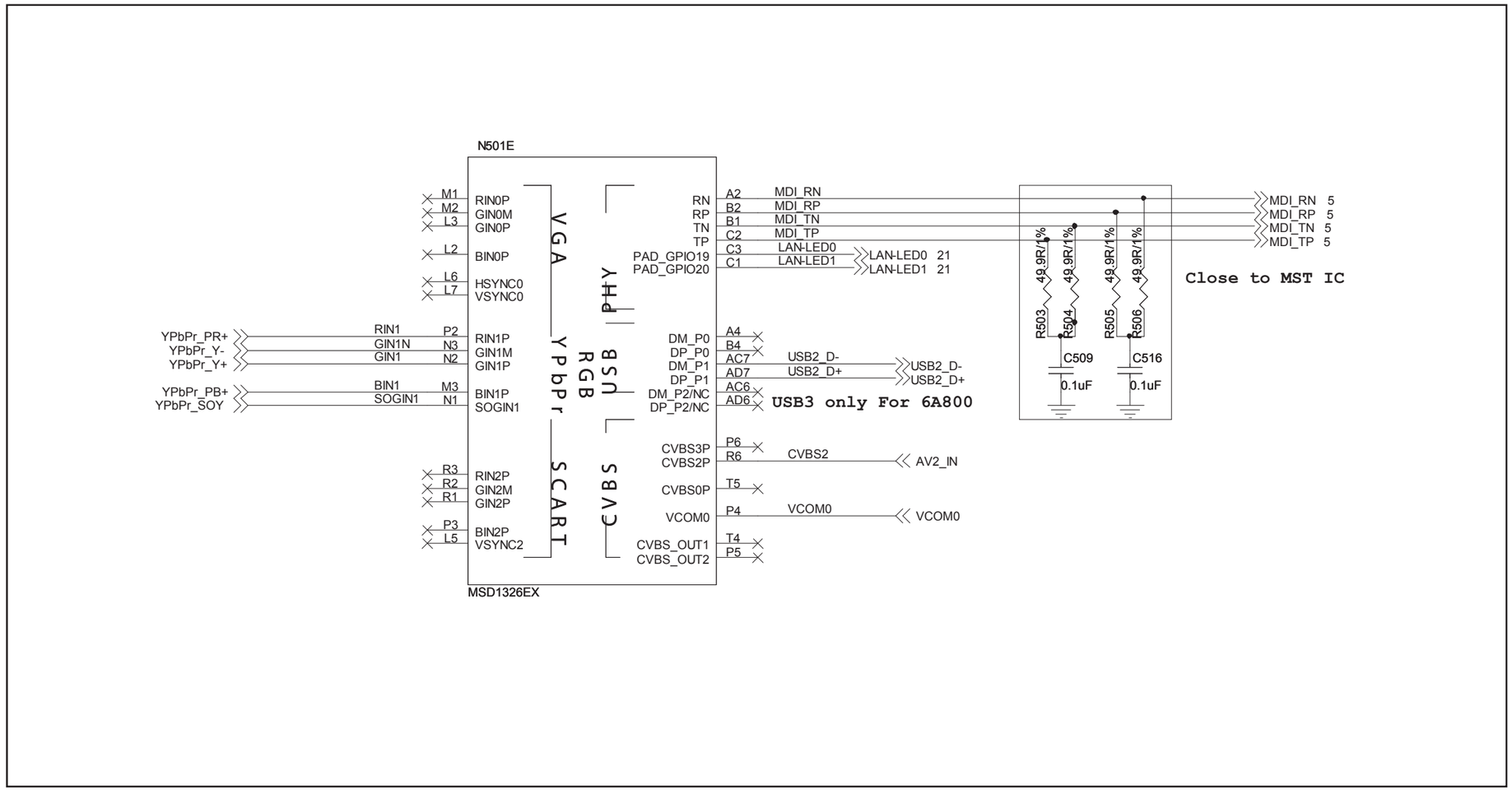
PCM_A2N PCM_A2

PCM_A1N PCM_A1

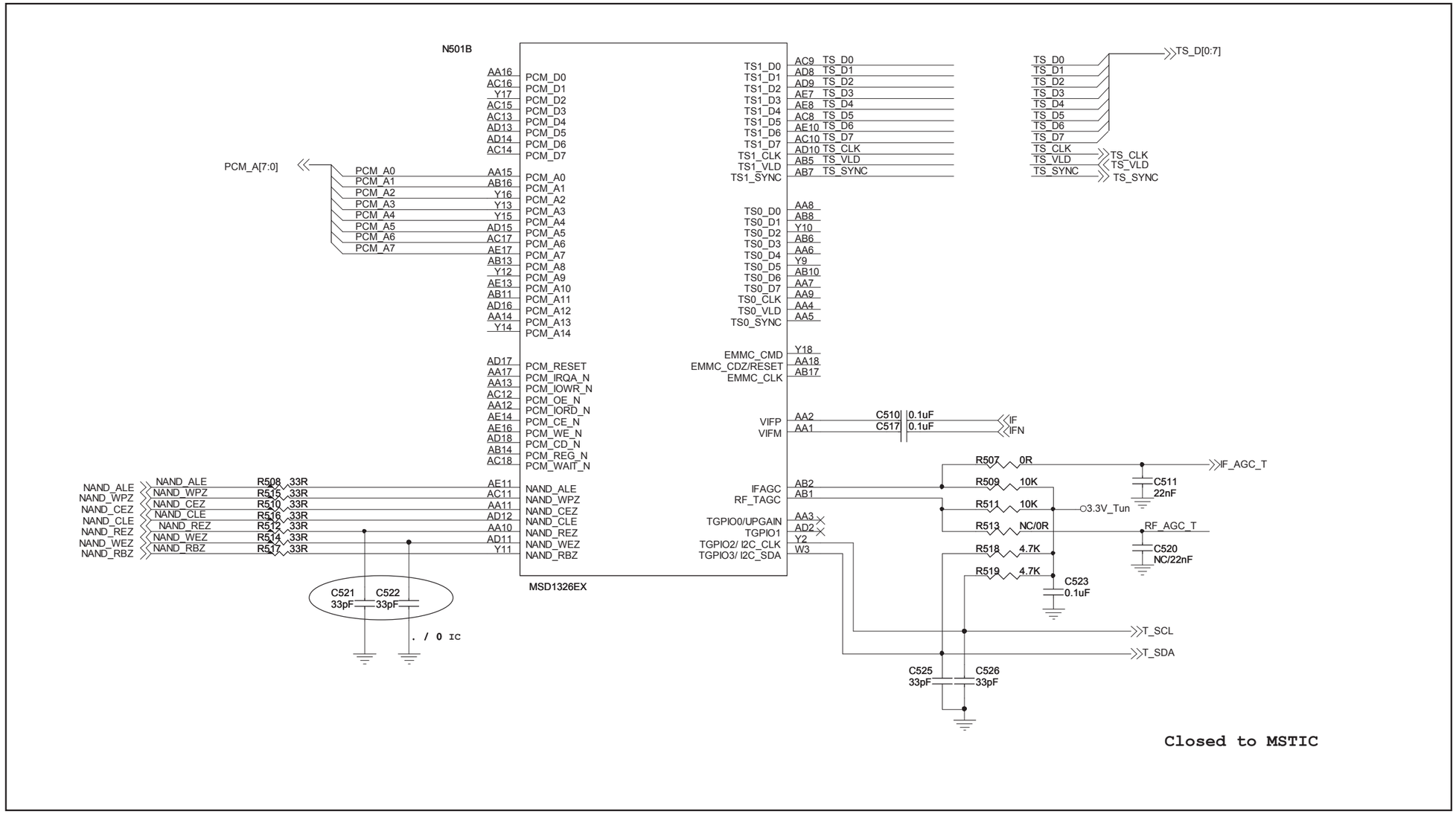
PCM_A0N PCM_A0

PCM_A[7:0] PCM_A[7:0] 2

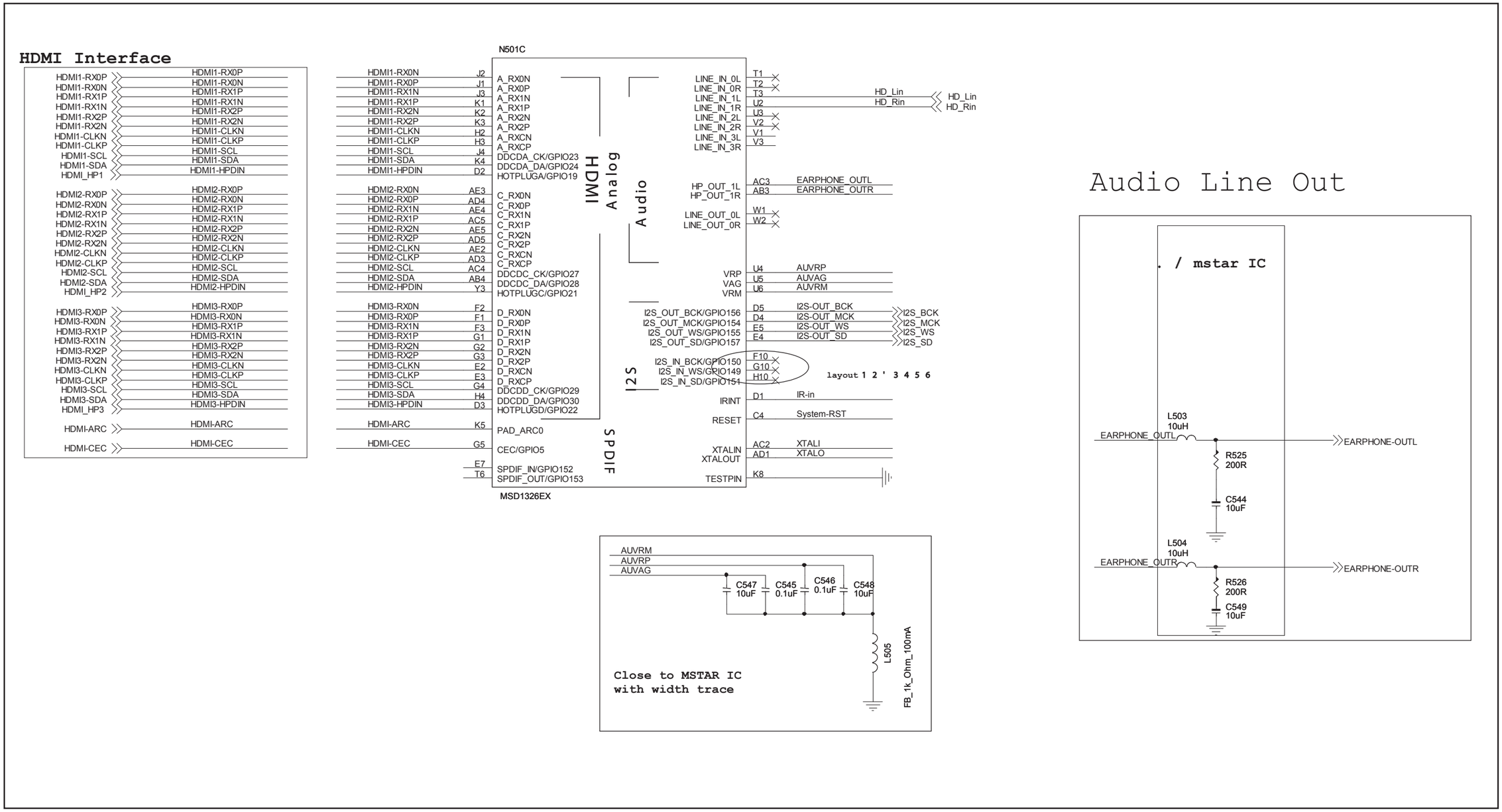
video


N501E
M1 RIN0P
M2 GIN0M
L3 GIN0P
L2 BIN0P
L6 HSYNC0
L7 VSYNC0
YPbPr_PR+ RIN1 P2 RIN1P
YPbPr_Y- GIN1N N3 GIN1M
YPbPr_Y+ GIN1 N2 GIN1P
YPbPr_PB+ BIN1 M3 BIN1P
YPbPr_SOY SOGIN1 N1 SOGIN1
R3 RIN2P
R2 GIN2M
R1 GIN2P
P3 BIN2P
L5 VSYNC2
MSD1326EX
VGA
YPbPr
SCART
USB PHY
RGB
CVBS
RN A2 MDI_RN
RP B2 MDI_RP
TN B1 MDI_TN
TP C2 MDI_TP
PAD_GPIO19 C3 LAN-LED0
PAD_GPIO20 C1 LAN-LED1
LAN-LED0 21
LAN-LED1 21
DM_P0 A4
DP_P0 B4
DM_P1 AC7 USB2_D-
DP_P1 AD7 USB2_D+
DM_P2/NC AC6
DP_P2/NC AD6
USB2_D-
USB2_D+
USB3 only For 6A800
CVBS3P P6
CVBS2P R6 CVBS2
AV2_IN
CVBS0P T5
VCOM0 P4 VCOM0
VCOM0
CVBS_OUT1 T4
CVBS_OUT2 P5
R503 49.9R/1%
R504 49.9R/1%
R505 49.9R/1%
R506 49.9R/1%
C509 0.1uF
C516 0.1uF
MDI_RN 5
MDI_RP 5
MDI_TN 5
MDI_TP 5
Close to MST IC

NAND & TS & Front End



HDMI & Audio

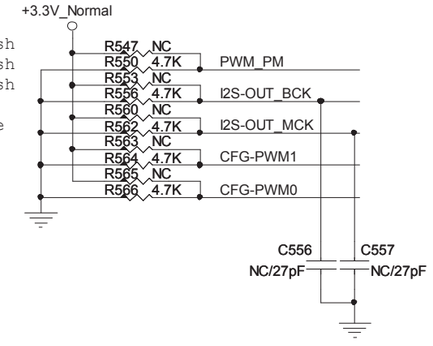

HDMI Interface
HDMI1-RX0P
HDMI1-RX0N
HDMI1-RX1P
HDMI1-RX1N
HDMI1-RX2P
HDMI1-RX2N
HDMI1-CLKN
HDMI1-CLKP
HDMI1-SCL
HDMI1-SDA
HDMI_HP1
HDMI2-RX0P
HDMI2-RX0N
HDMI2-RX1P
HDMI2-RX1N
HDMI2-RX2P
HDMI2-RX2N
HDMI2-CLKN
HDMI2-CLKP
HDMI2-SCL
HDMI2-SDA
HDMI_HP2
HDMI3-RX0P
HDMI3-RX0N
HDMI3-RX1P
HDMI3-RX1N
HDMI3-RX2P
HDMI3-RX2N
HDMI3-CLKN
HDMI3-CLKP
HDMI3-SCL
HDMI3-SDA
HDMI_HP3
HDMI-ARC
HDMI-CEC
HDMI1-HPDIN
HDMI2-HPDIN
HDMI3-HPDIN
N501C
A_RX0N
A_RX0P
A_RX1N
A_RX1P
A_RX2N
A_RX2P
A_RXCN
A_RXCP
DDCDA_CK/GPIO23
DDCDA_DA/GPIO24
HOTPLUGA/GPIO19
C_RX0N
C_RX0P
C_RX1N
C_RX1P
C_RX2N
C_RX2P
C_RXCN
C_RXCP
DDCDC_CK/GPIO27
DDCDC_DA/GPIO28
HOTPLUGC/GPIO21
D_RX0N
D_RX0P
D_RX1N
D_RX1P
D_RX2N
D_RX2P
D_RXCN
D_RXCP
DDCDD_CK/GPIO29
DDCDD_DA/GPIO30
HOTPLUGD/GPIO22
PAD_ARC0
CEC/GPIO5
SPDIF_IN/GPIO152
SPDIF_OUT/GPIO153
HDMI Analog
Audio
I2S
SPDIF
LINE_IN_0L
LINE_IN_0R
LINE_IN_1L
LINE_IN_1R
LINE_IN_2L
LINE_IN_2R
LINE_IN_3L
LINE_IN_3R
HD_Lin
HD_Rin
HP_OUT_1L
HP_OUT_1R
EARPHONE_OUTL
EARPHONE_OUTR
LINE_OUT_0L
LINE_OUT_0R
VRP
VAG
VRM
AUVRP
AUVAG
AUVRM
I2S_OUT_BCK/GPIO156
I2S_OUT_MCK/GPIO154
I2S_OUT_WS/GPIO155
I2S_OUT_SD/GPIO157
I2S-OUT_BCK
I2S-OUT_MCK
I2S-OUT_WS
I2S-OUT_SD
I2S_BCK
I2S_MCK
I2S_WS
I2S_SD
I2S_IN_BCK/GPIO150
I2S_IN_WS/GPIO149
I2S_IN_SD/GPIO151
layout 1 2 ' 3 4 5 6
IRINT
IR-in
RESET
System-RST
XTALIN
XTALOUT
XTALI
XTALO
TESTPIN
MSD1326EX
Audio Line Out
. / mstar IC
L503
10uH
EARPHONE_OUTL
R525
200R
C544
10uF
L504
10uH
EARPHONE_OUTR
R526
200R
C549
10uF
AUVRM
AUVRP
AUVAG
C547
10uF
C545
0.1uF
C546
0.1uF
C548
10uF
L505
FB_1k_Ohm_100mA
Close to MSTAR IC
with width trace

Mode Selection

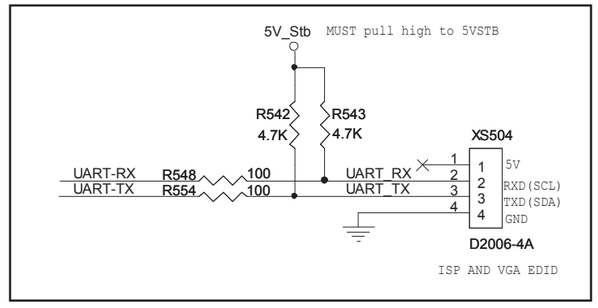
```
// CHIP Config  {I2S_OUT_BCK, I2S_OUT_MCK, PAD_PWM1, PAD_PWM0}
B51_NO_EJ      4'b0000  Boot from 8051 with SPI flash
SB51_WOS       4'b0001  Secure B51 without scramble
SB51_WS        4'b0010  Secure B51 with scramble

MIPS_SPI_NO_EJ 4'b0100  Boot from MIPS with SPI flash
MIPS_SPI_EJ_1  4'b0101  Boot from MIPS with SPI flash
MIPS_SPI_EJ_2  4'b0110  Boot from MIPS with SPI flash

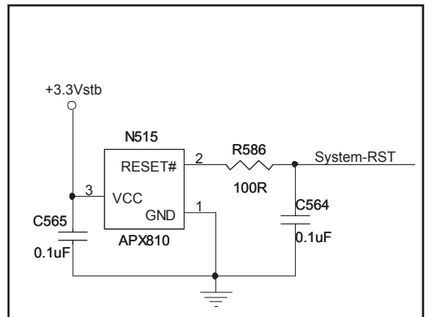
MIPS_WOS       4'b1001  Secure MIPS without scramble
MIPS_WS        4'b1010  Secure MIPS with scramble
```



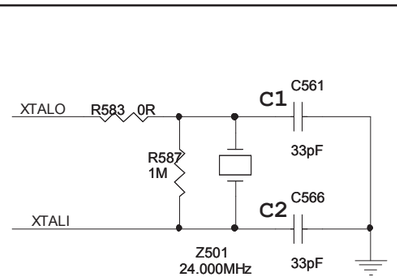
DEBUG



RESET

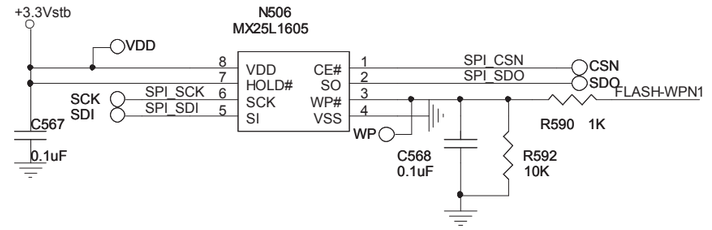


CRYSTAL



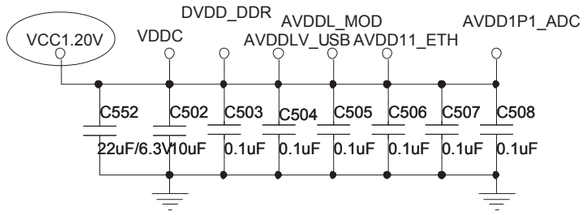
NOTE:VWXYZ[\] 30PPM
C1=C2=2*CL-5

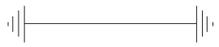
FLASH 16Mb

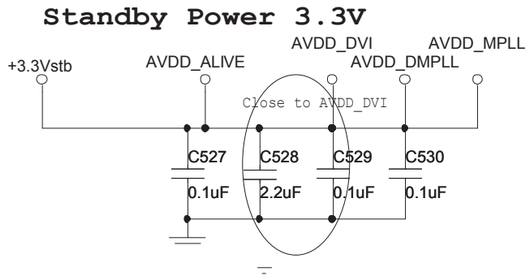


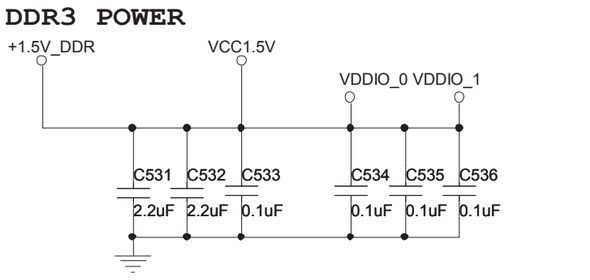
W25Q16BVSSIG
EN25F16

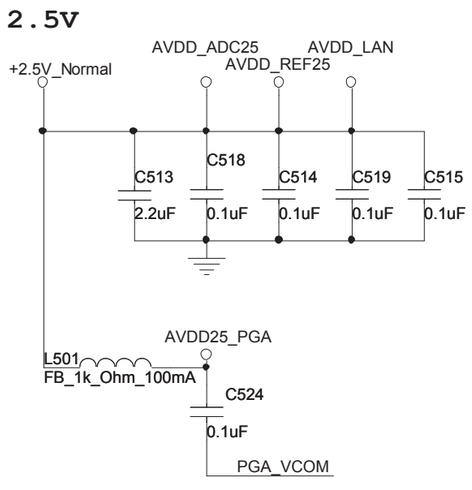
Power interface

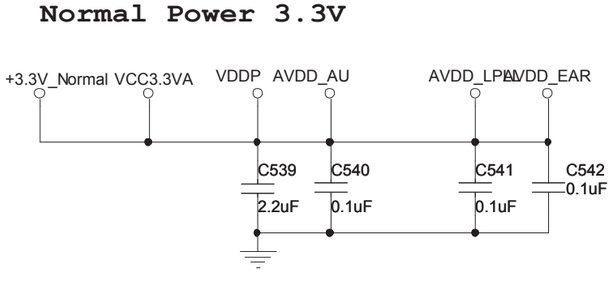


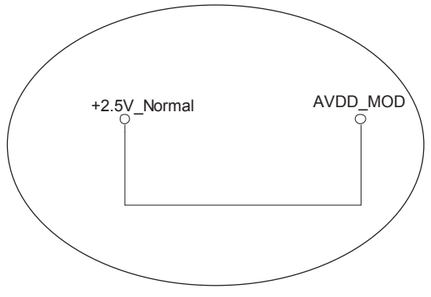




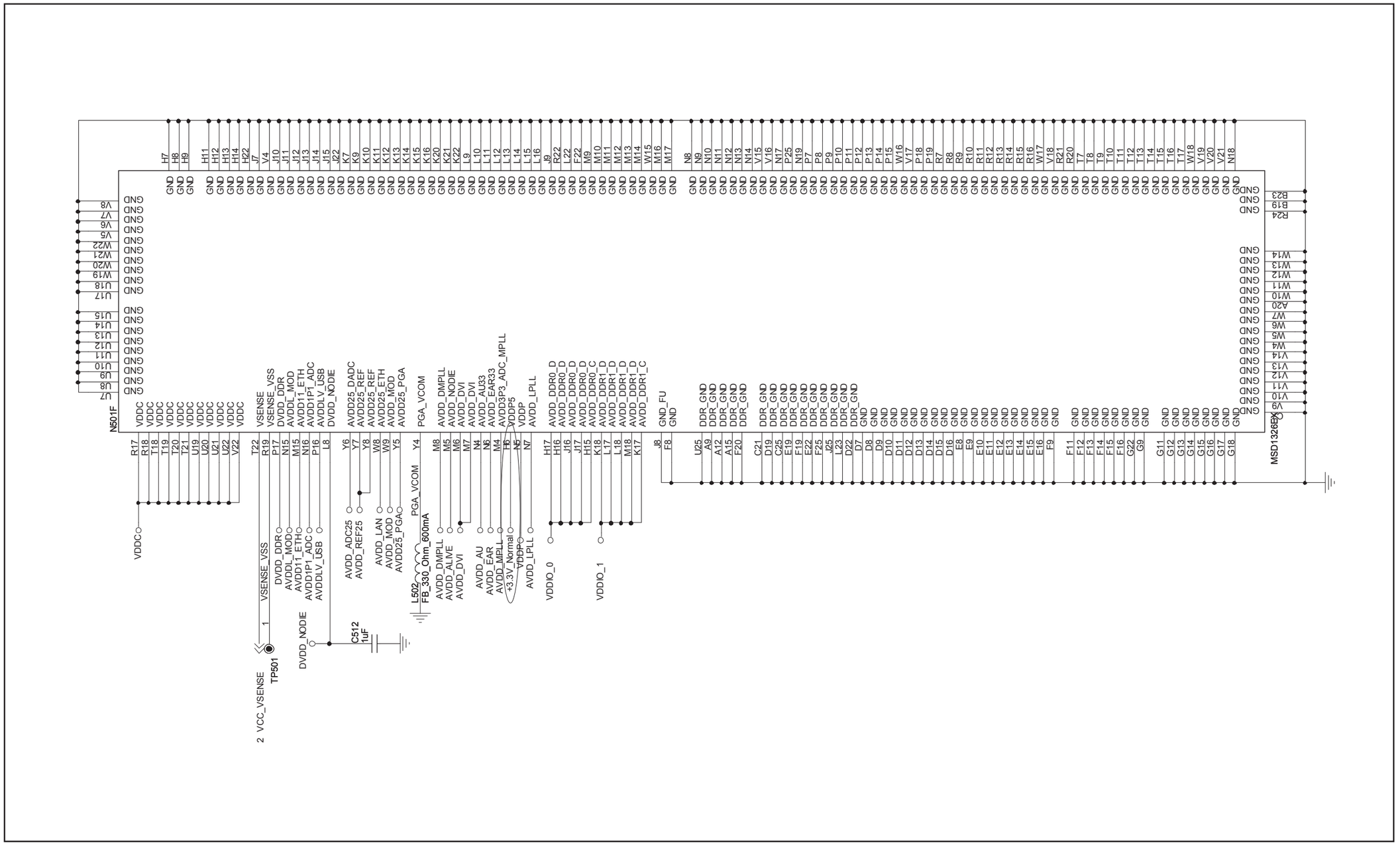




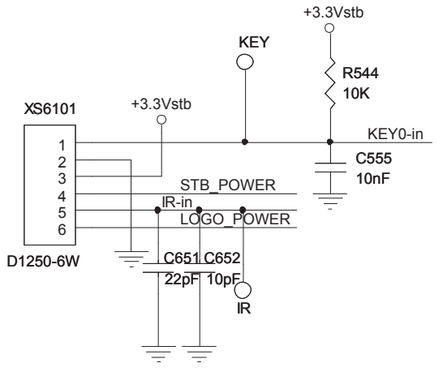


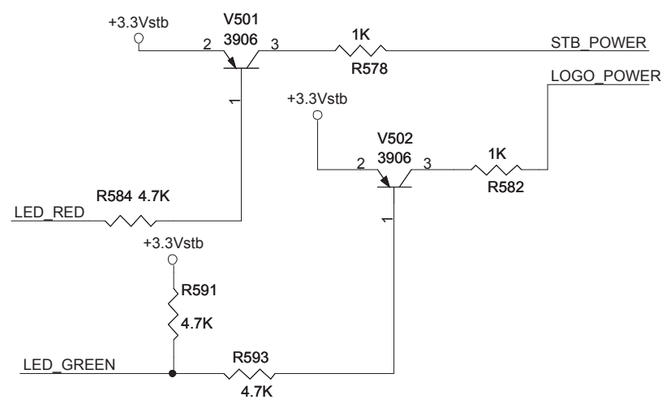


Power interface

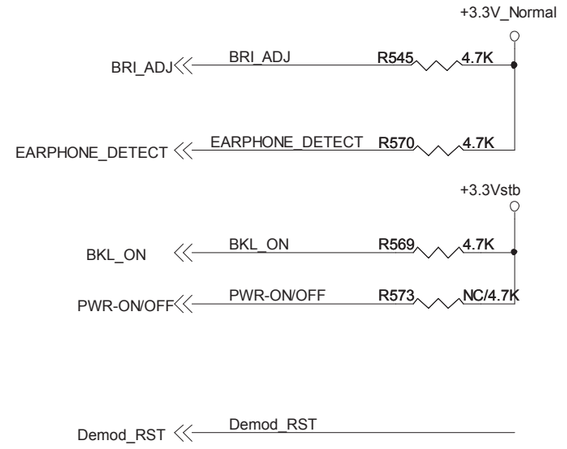


LED/IR/KEY

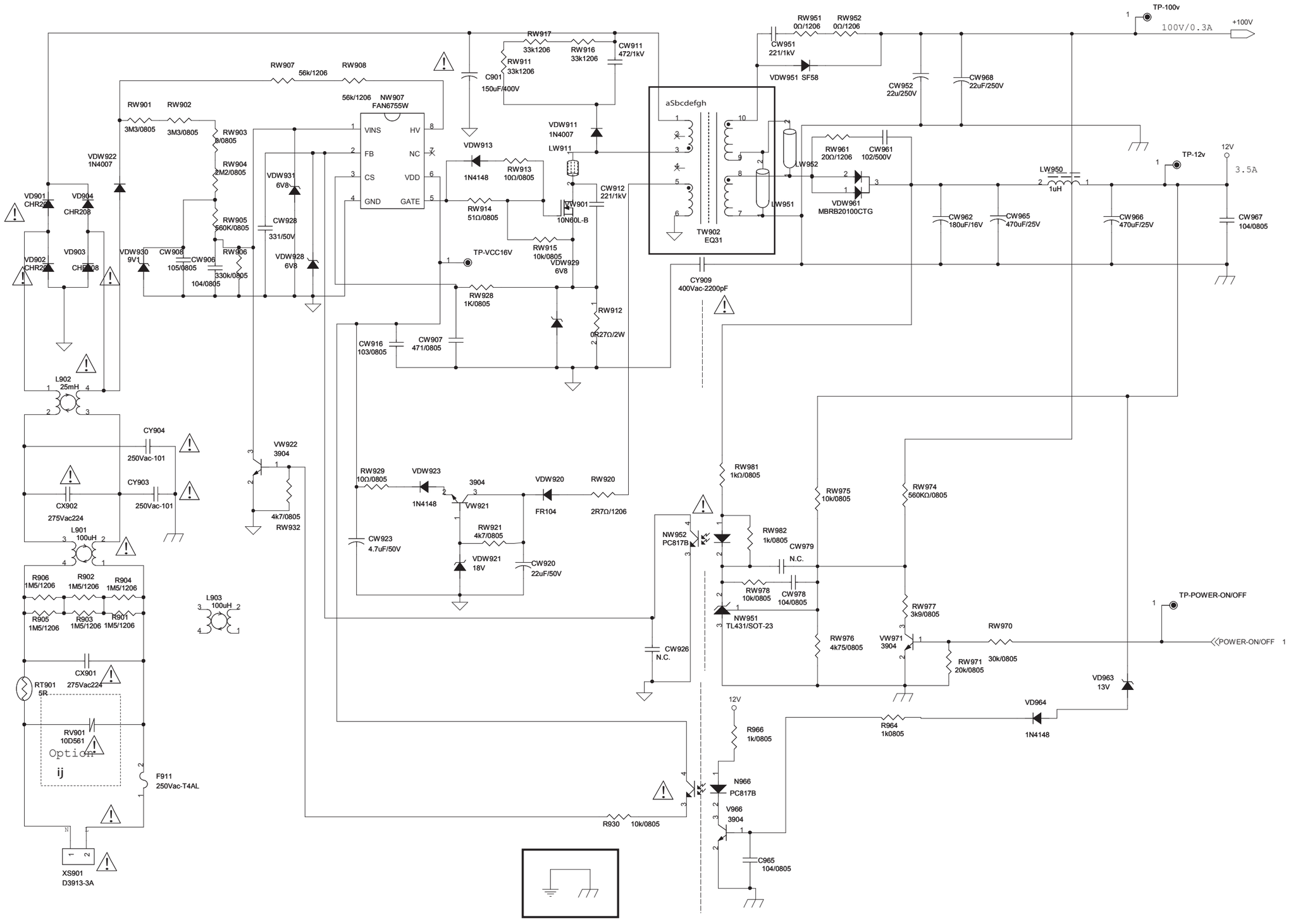




GPIO



PCI Principal (DL2944(A)W)



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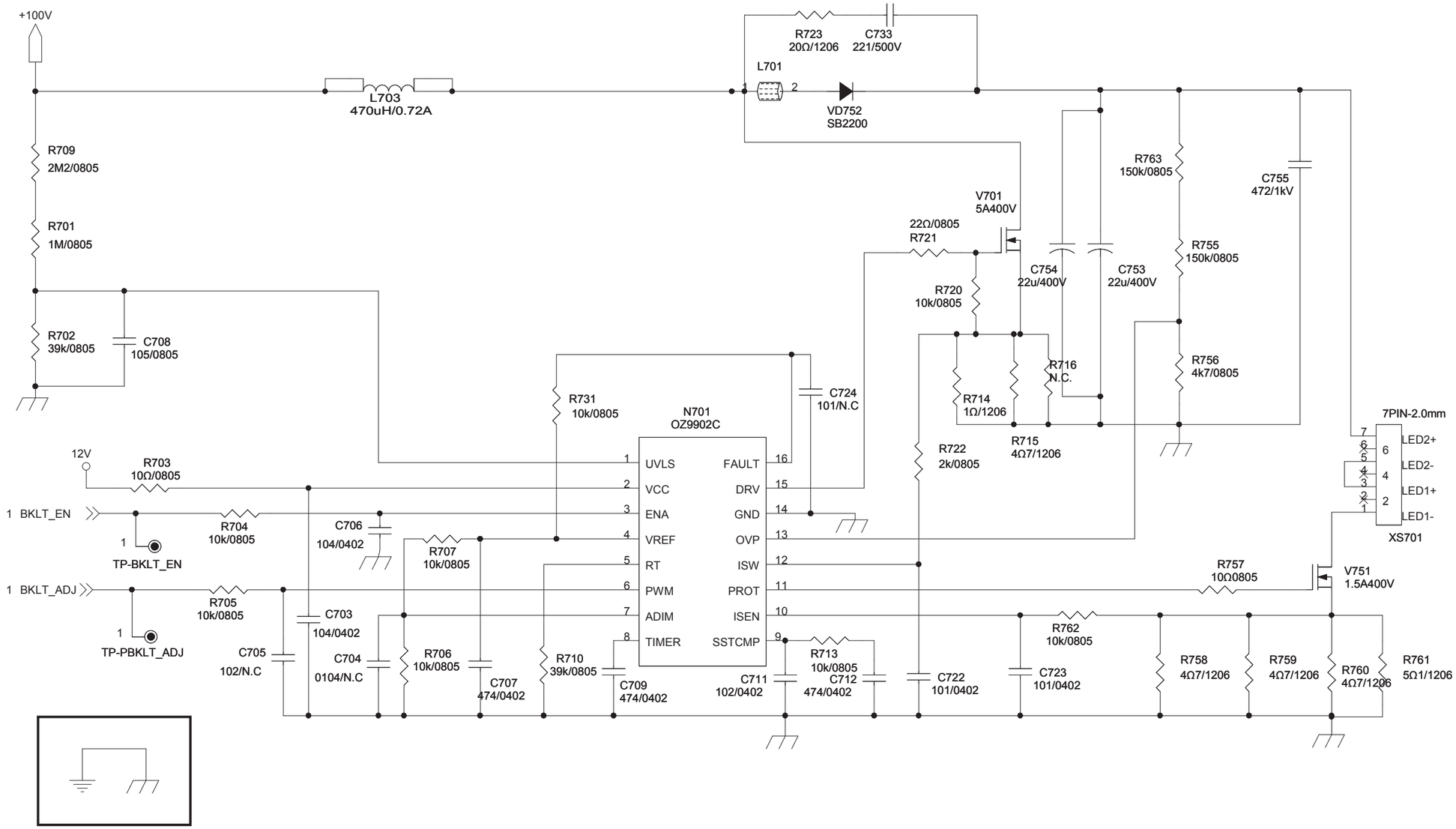

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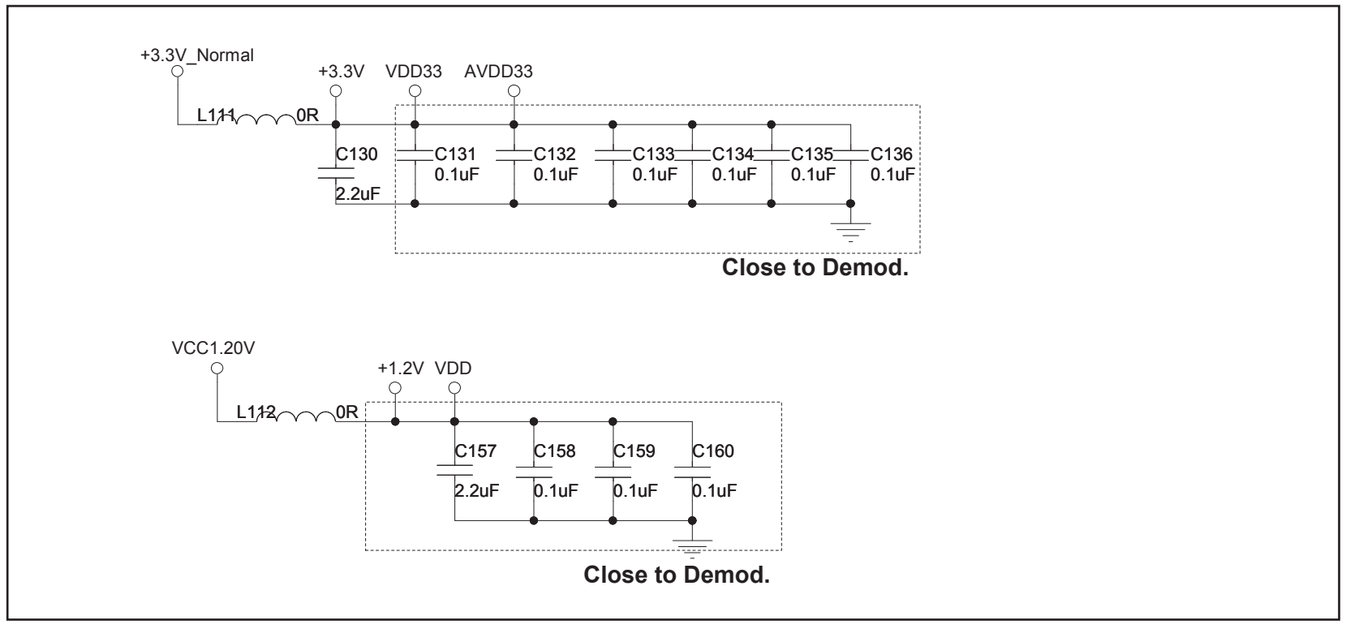

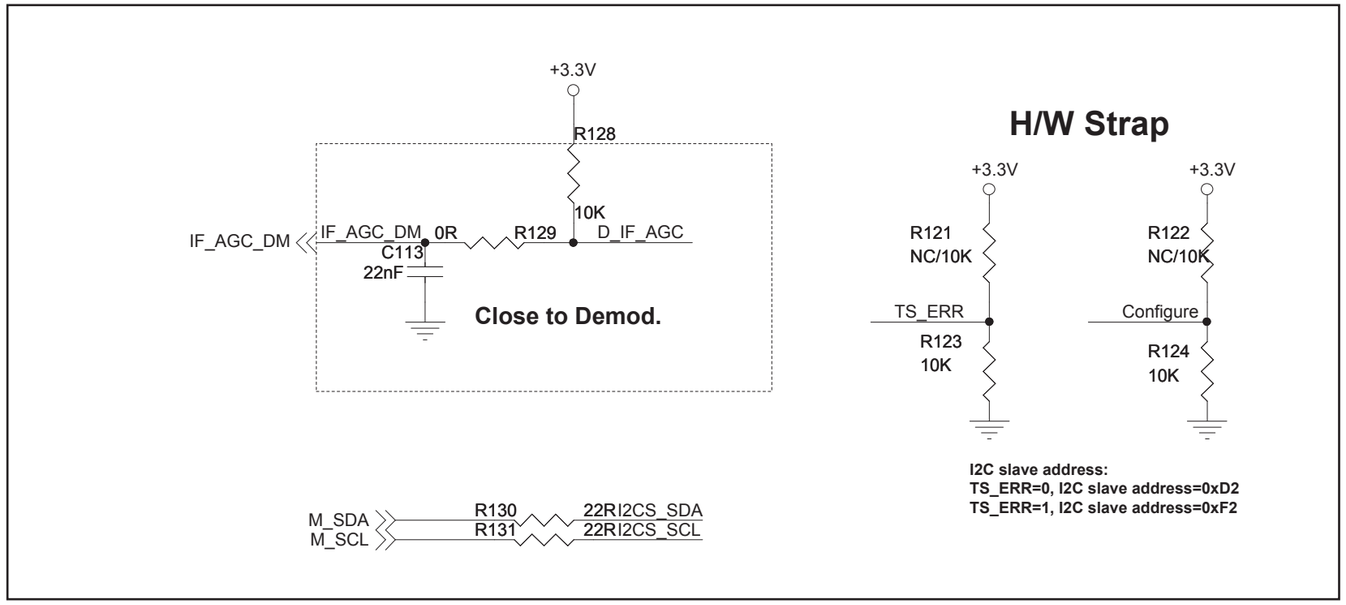

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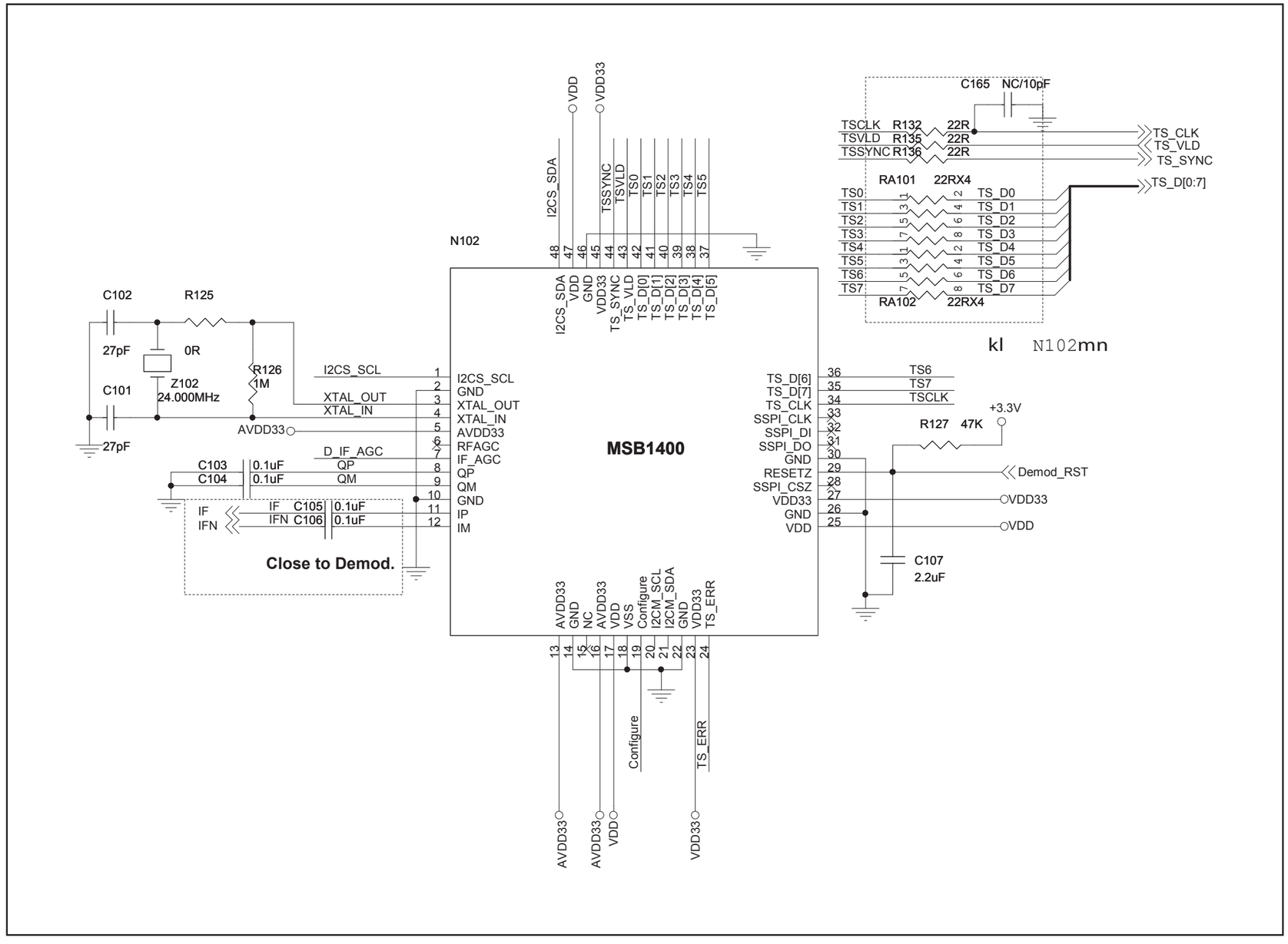
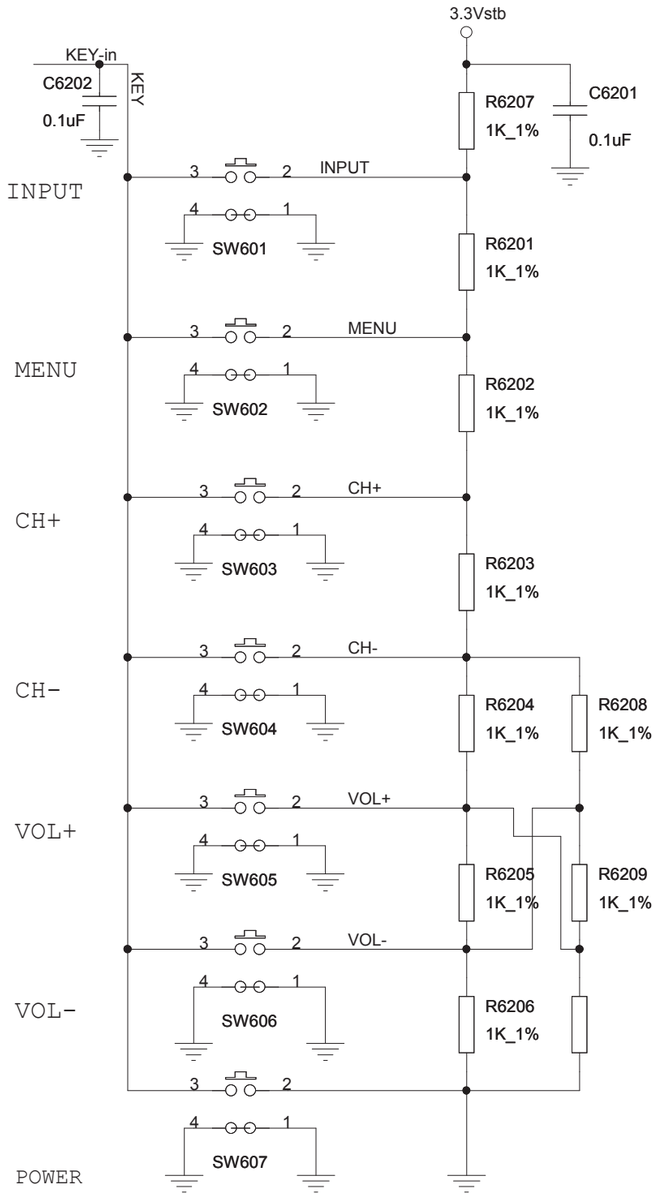
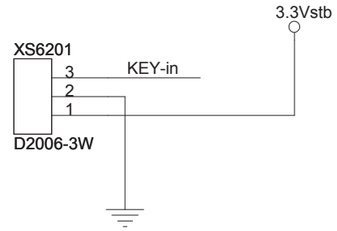
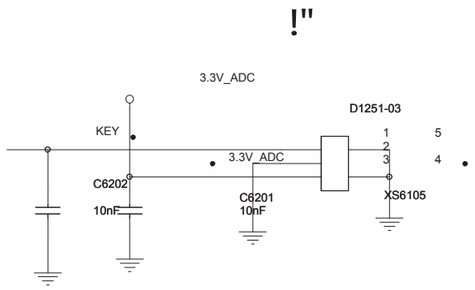


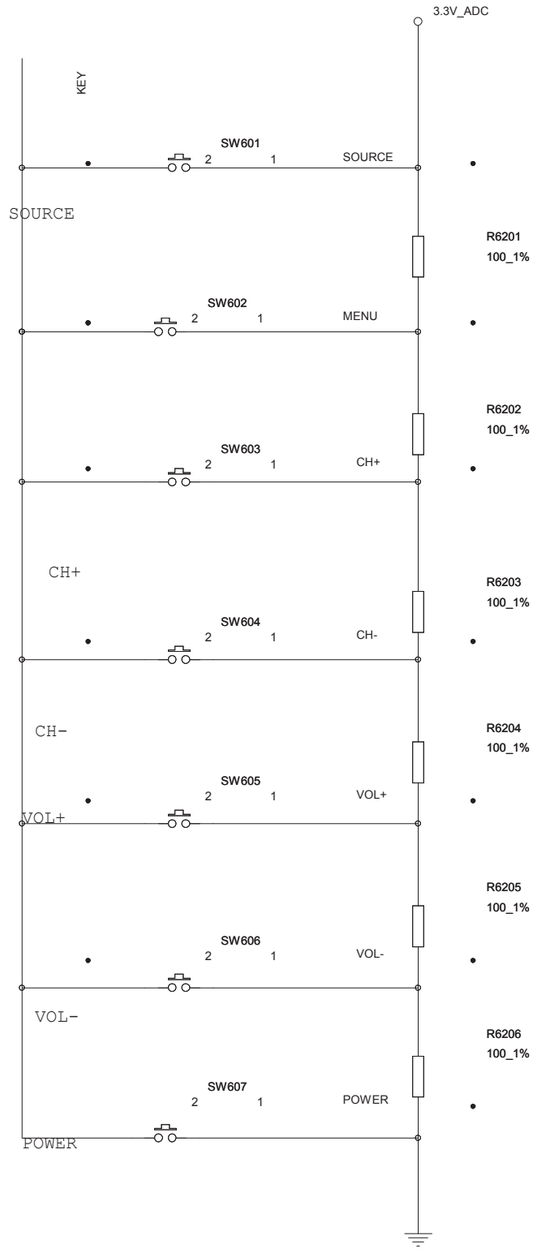
PCI Teclas (DL2944(A)W)



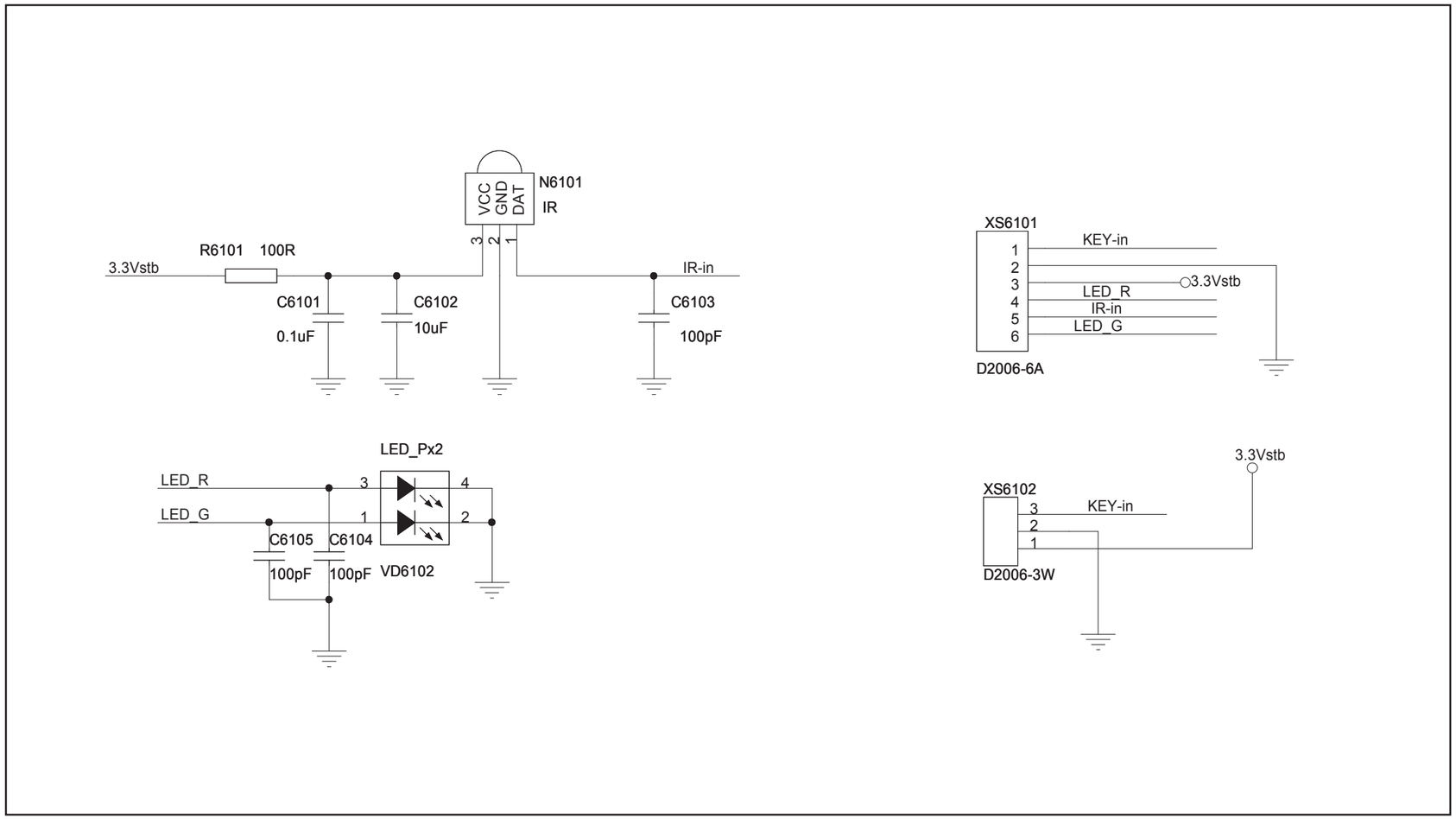


PCI Teclas (LE1956(A)W / LE1958(A)W)

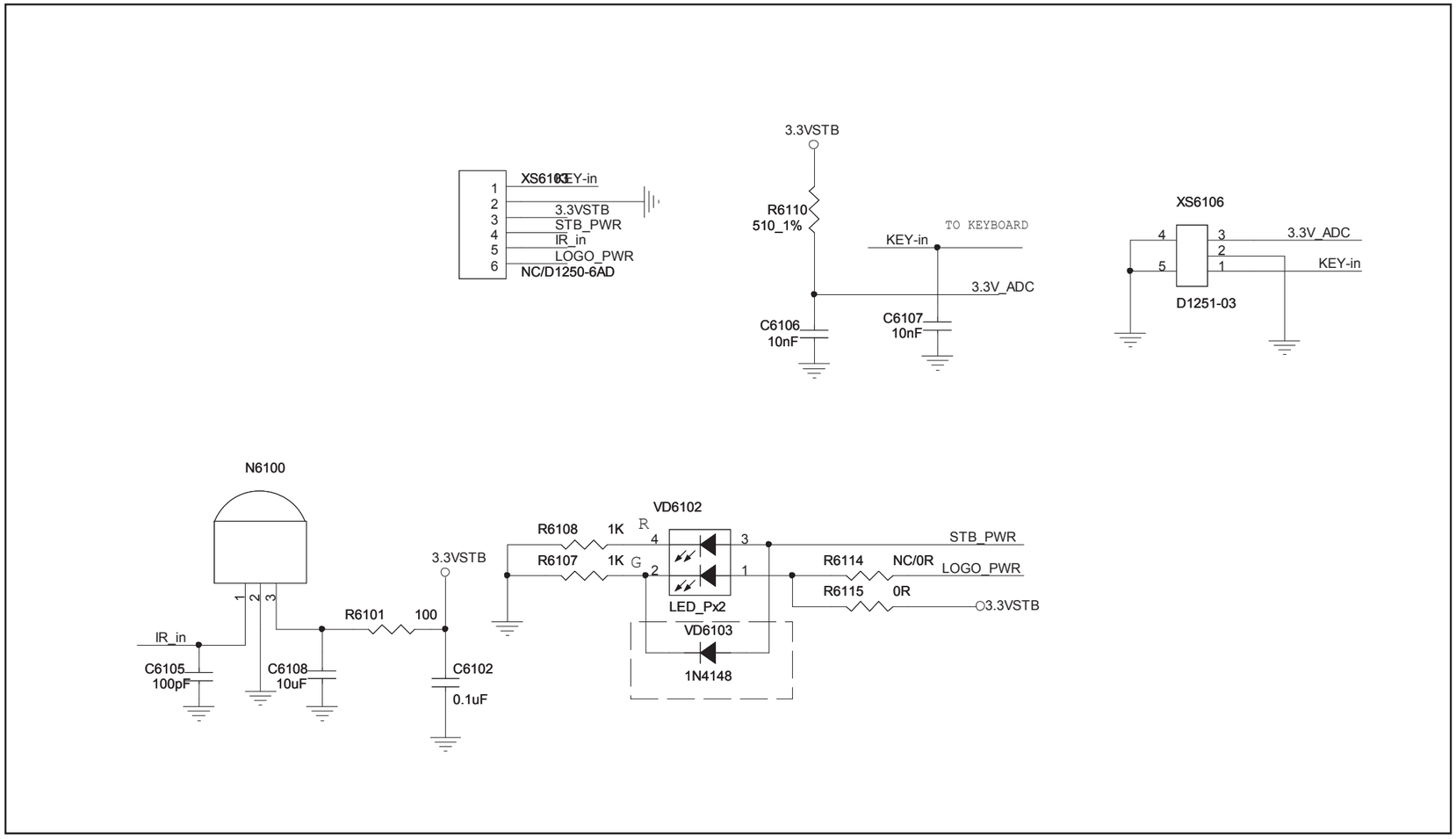




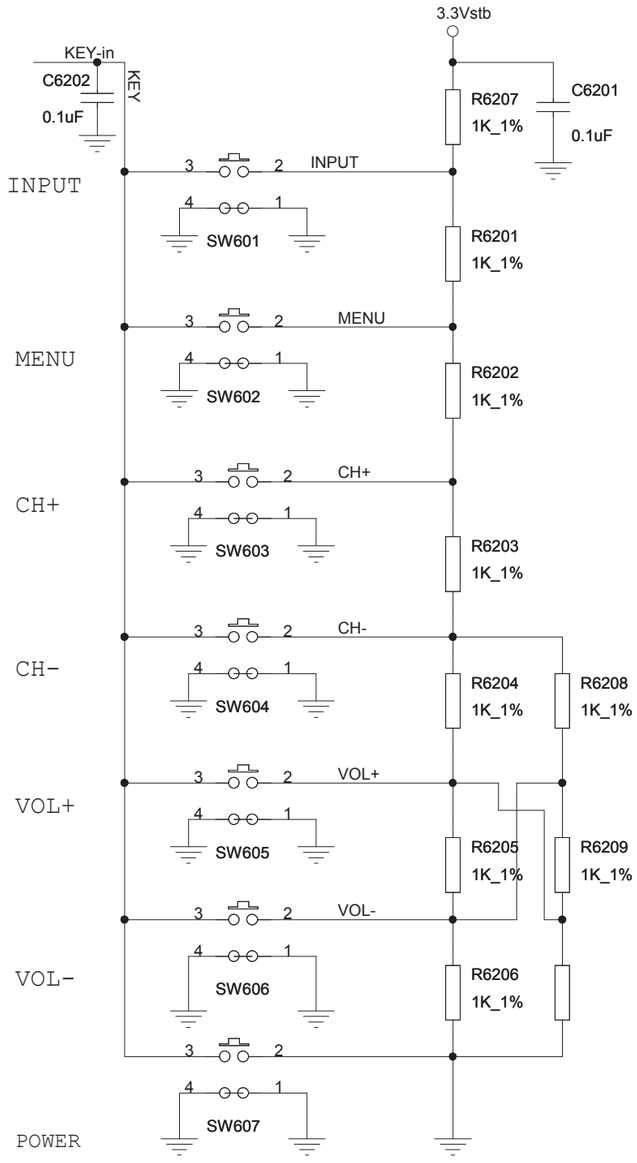
PCI Sensor (DL2944(A)W)

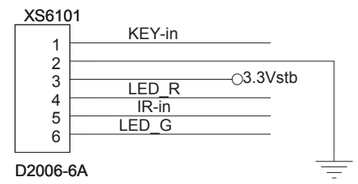


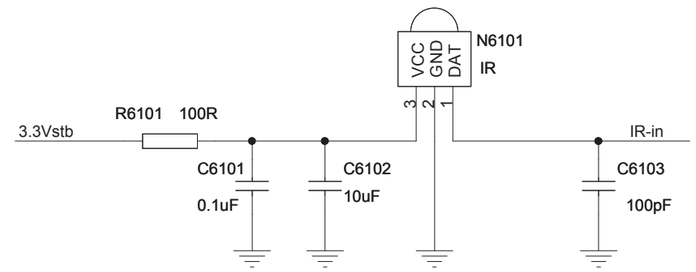
PCI Sensor (LE1956(A)W / LE1958(A)W)

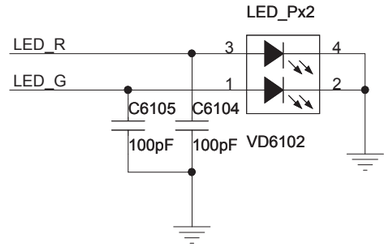


PCI Sensor/LED/TEclas (LE2456(A)F / LE2458(A)F)



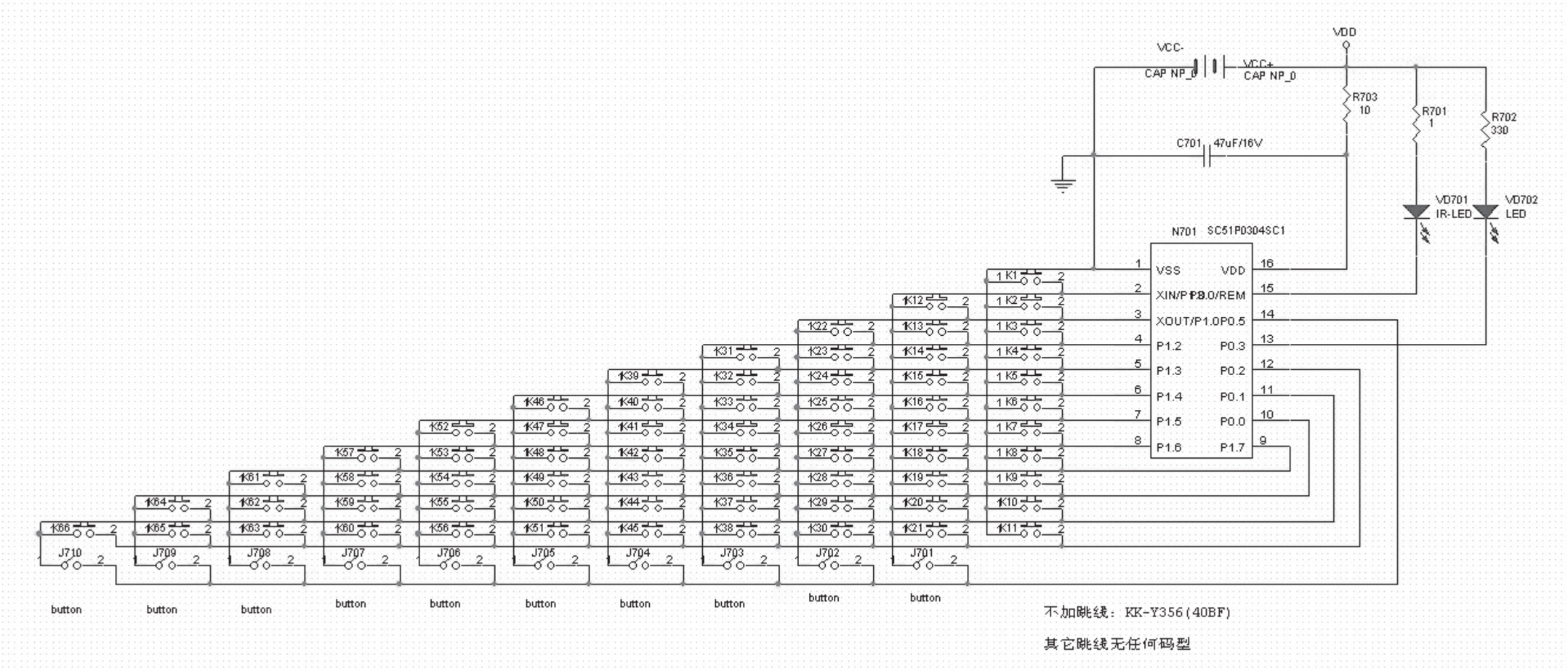






89:;

Controle Remoto (todos)



Rod. Anhanguera, Km 39,5 - Jordanésia - Cajamar - tel. pabx (11) 3232 2200

SEMP TOSHIBA