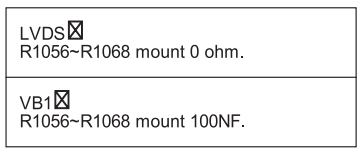


В ПАПКУ РЕМОНТНИКА

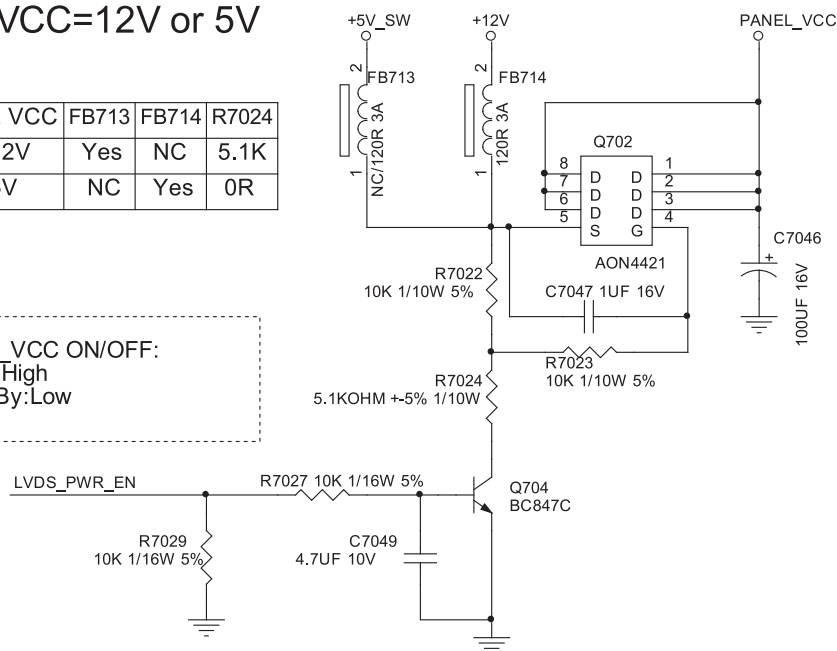


I

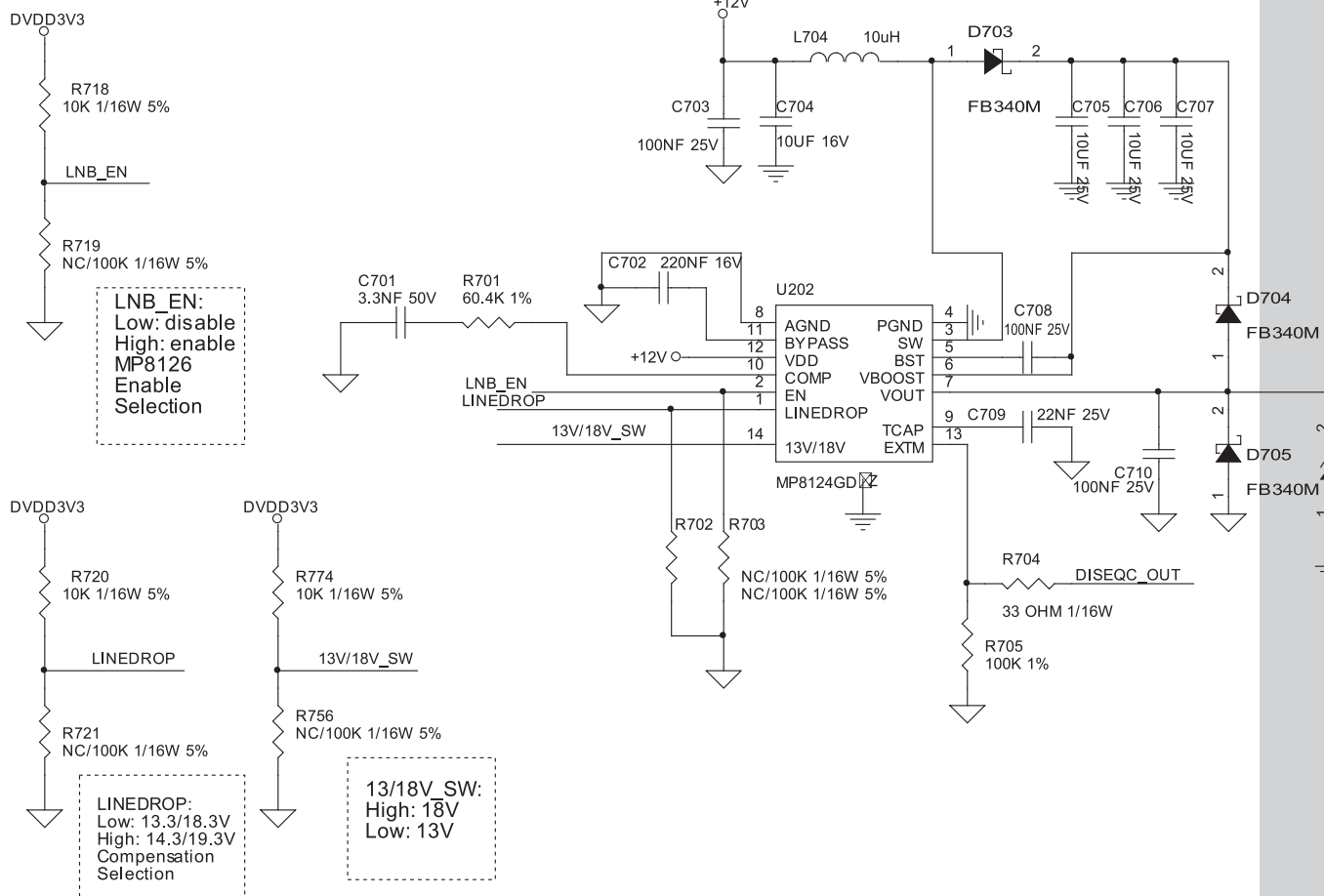
Panel VCC=12V or 5V

PANEL VCC	FB713	FB714	R7024
+12V	Yes	NC	5.1K
+5V	NC	Yes	0R

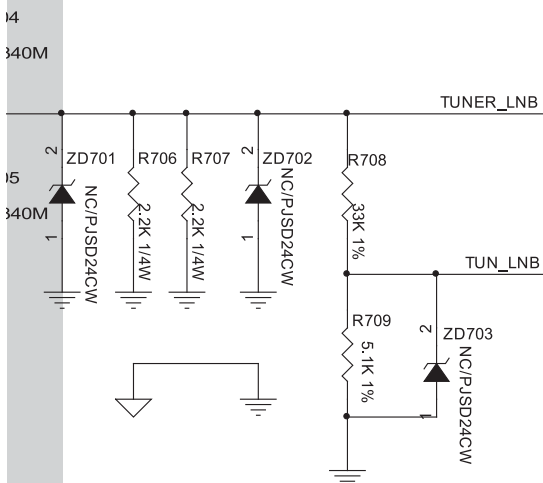
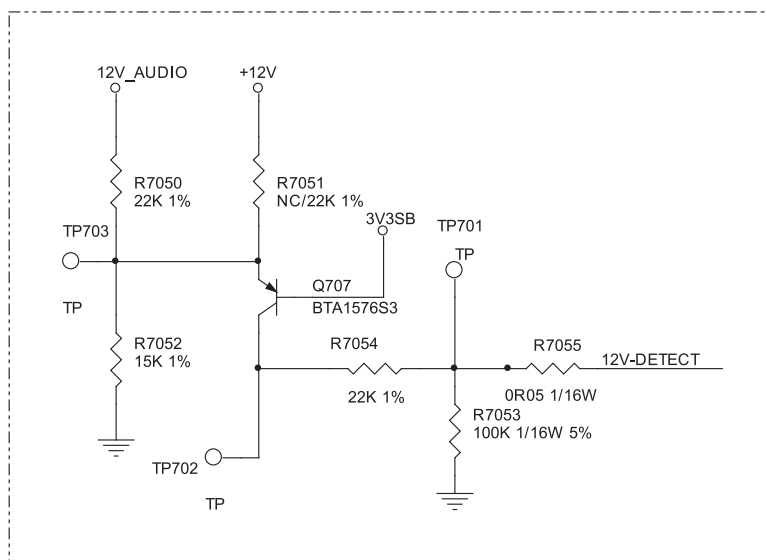
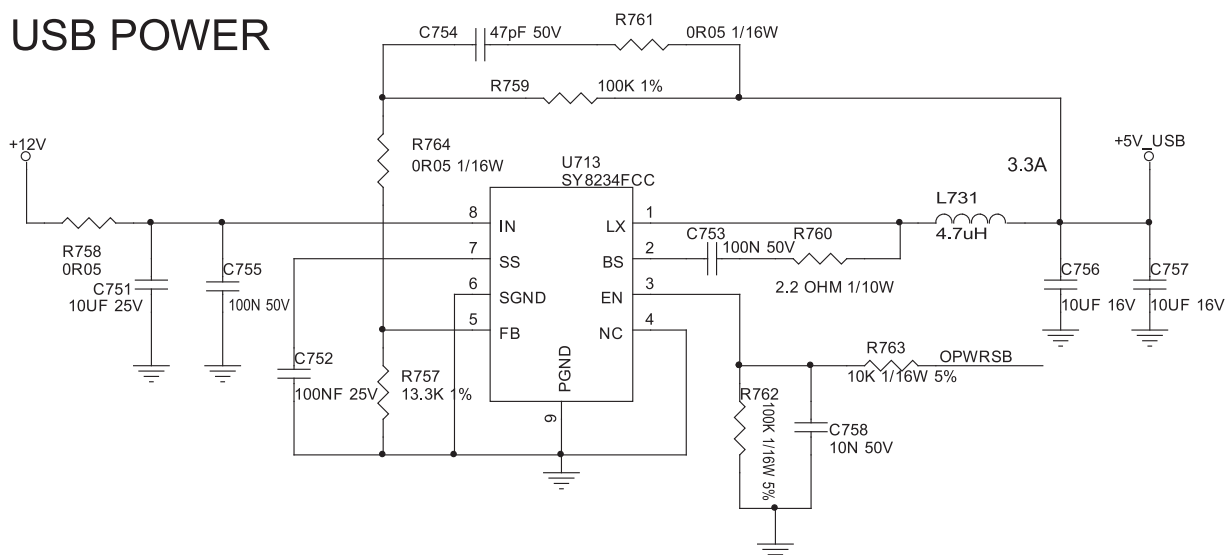
PANEL_VCC ON/OFF:
Normal:High
Stand_By:Low



LNB POWER SUPPLY



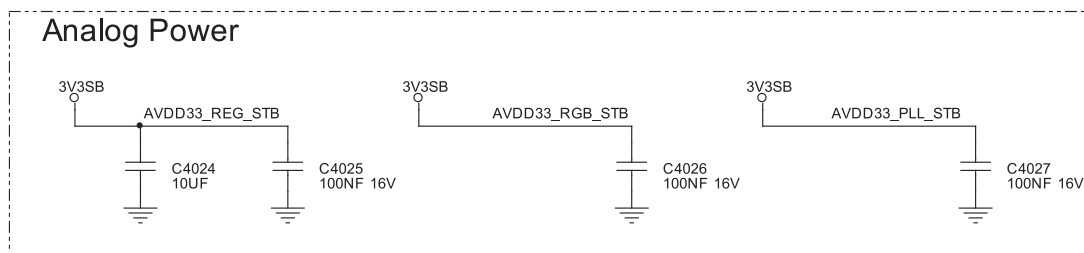
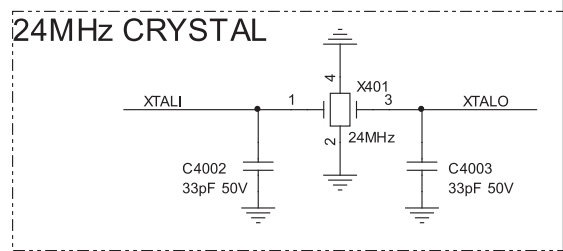
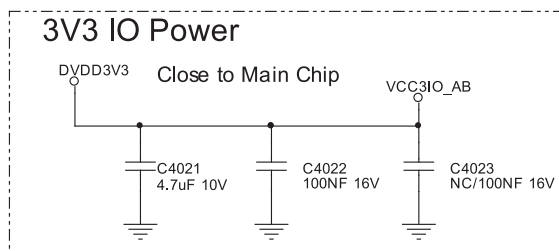
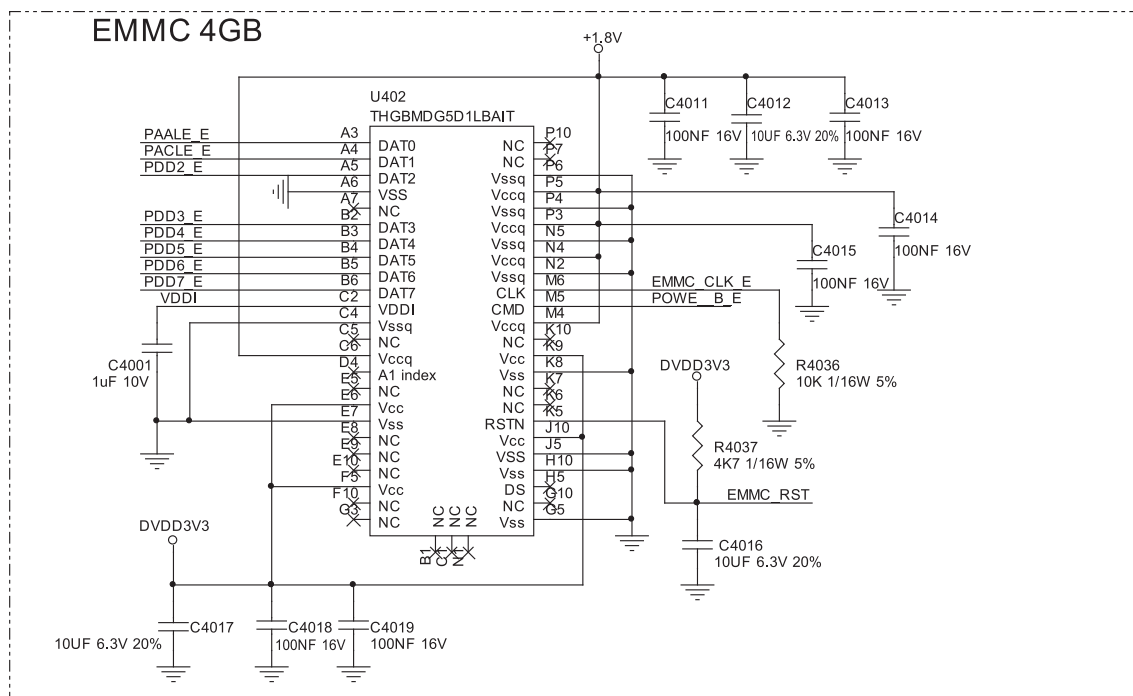
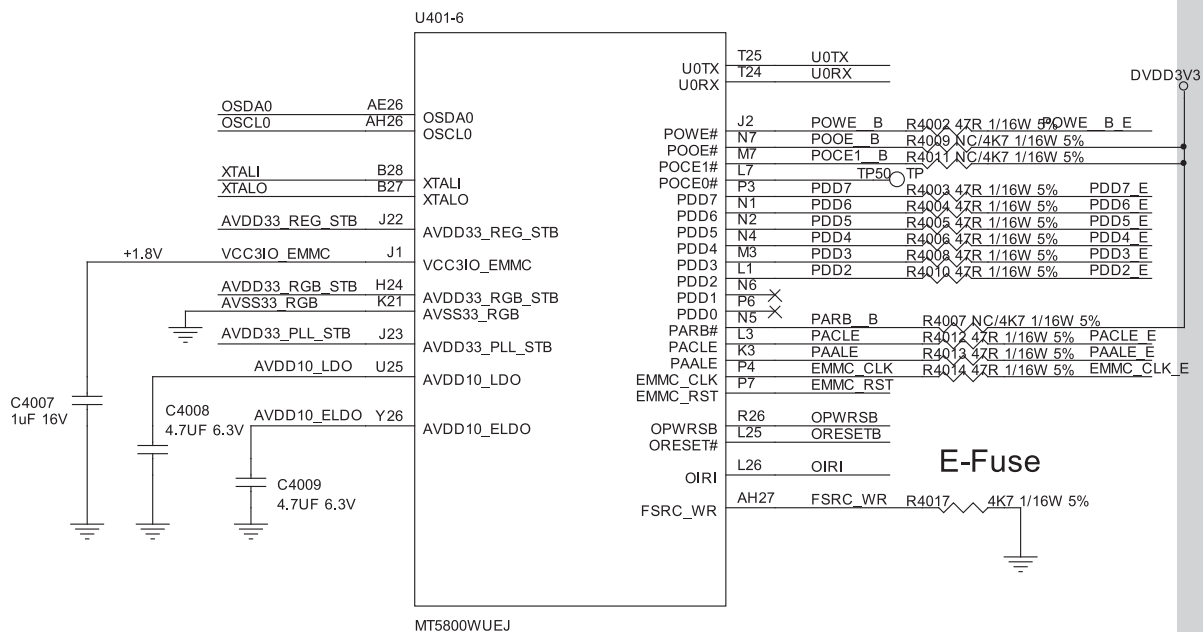
USB POWER



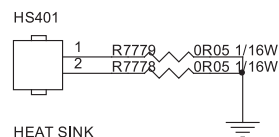
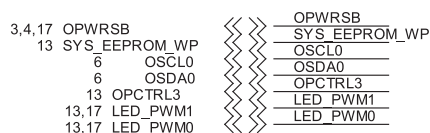
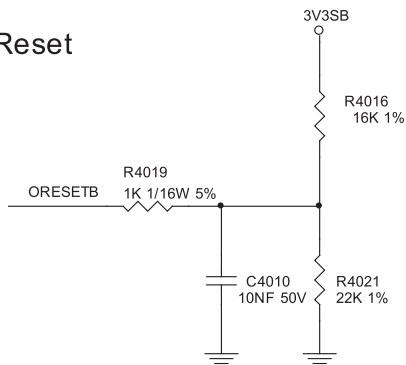
OPWRSB <<>> OPWRSB 3,5,17

10 LVDS_PWR_EN <<>> LVDS_PWR_EN
13 12V-DETECT <<>> 12V-DETECT

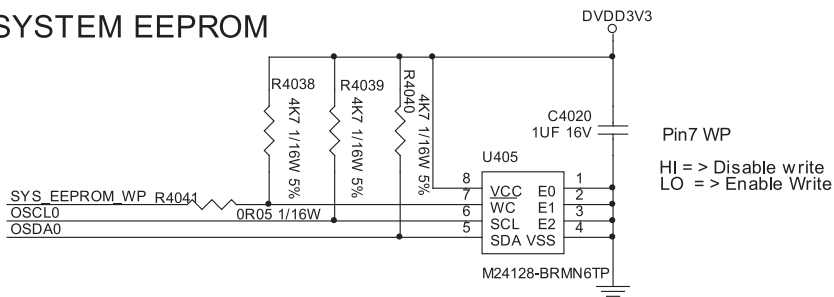
15 13V/18V_SW <<>> 13V/18V_SW
15 DISEQC_OUT <<>> DISEQC_OUT
15 LINEDROP <<>> LINEDROP
13 LNB_EN <<>> LNB_EN
15 TUNER_LNB <<>> TUNER_LNB
13 TUN_LNB <<>> TUN_LNB



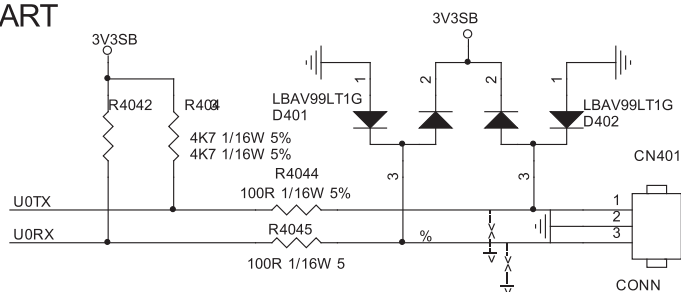
Reset



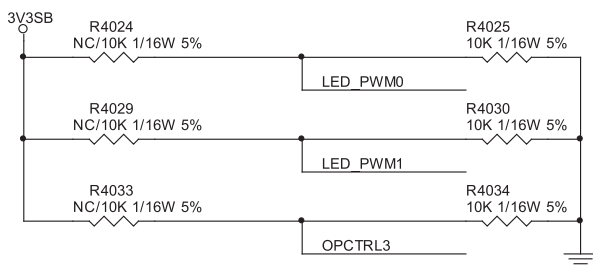
SYSTEM EEPROM



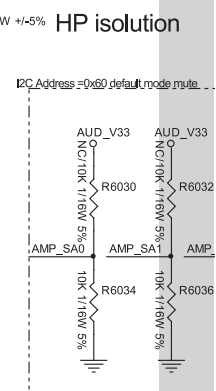
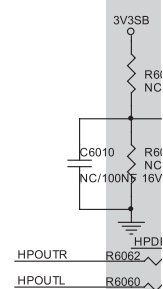
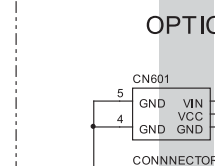
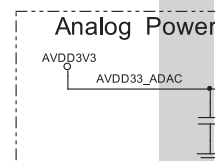
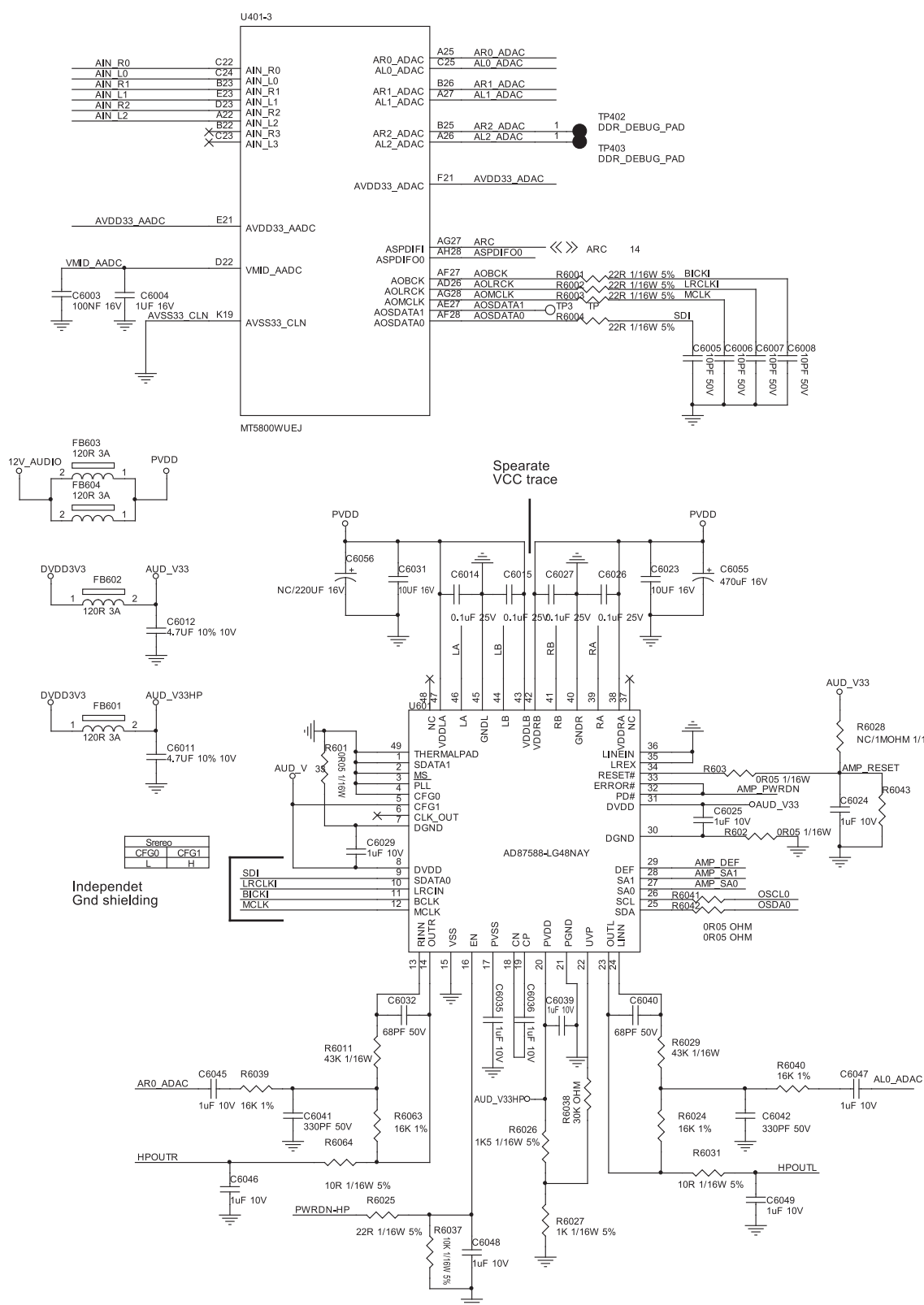
UART



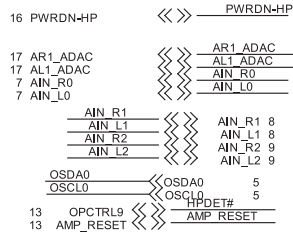
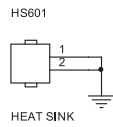
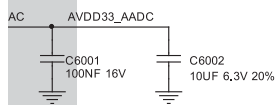
STRAPPING



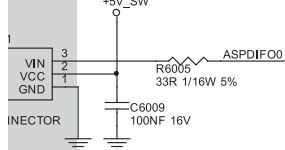
STRAPPING	LED_PWM0	LED_PWM1	OPCTRL 3
ICE mode + 24M + serial boot	0	0	1
ICE moce + 24M + ROM to 60bit ECC Nand boot	0	1	0
ICE moce + 24M + ROM to eMMC boot from eMMC pins(share pins w/s NAND)	0	0	0



Power

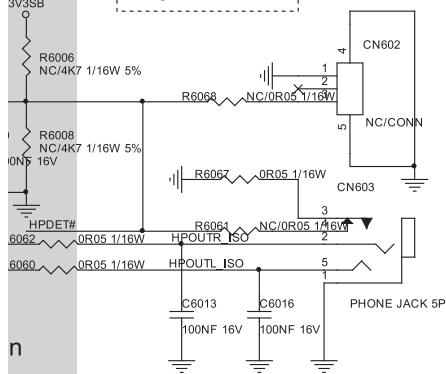


OPTICAL SPDIF OUT

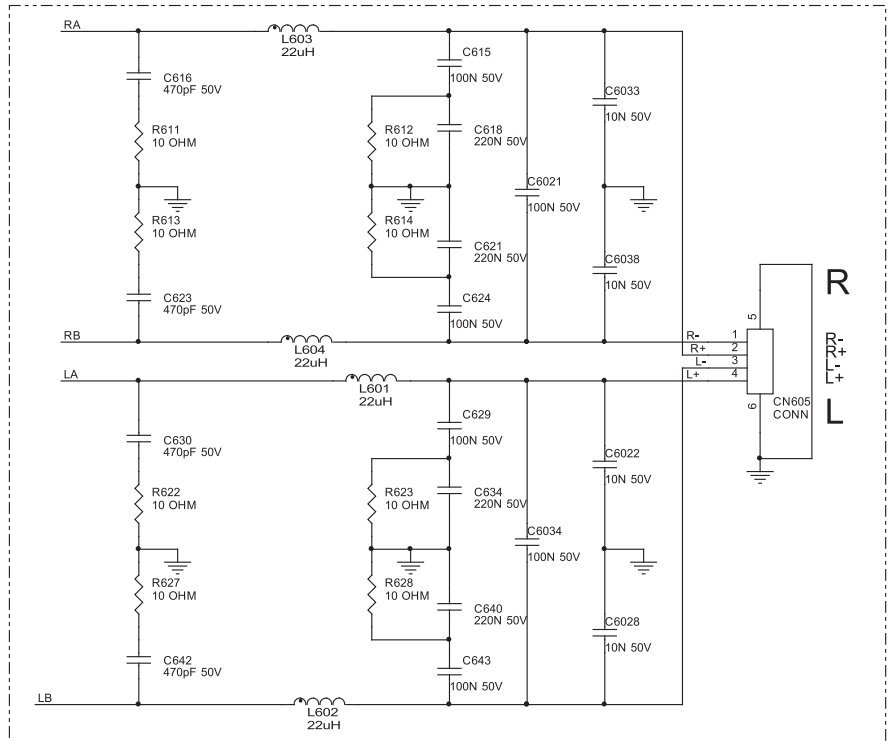
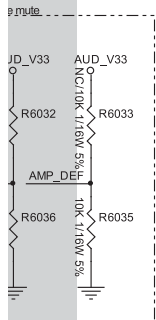


or HTV

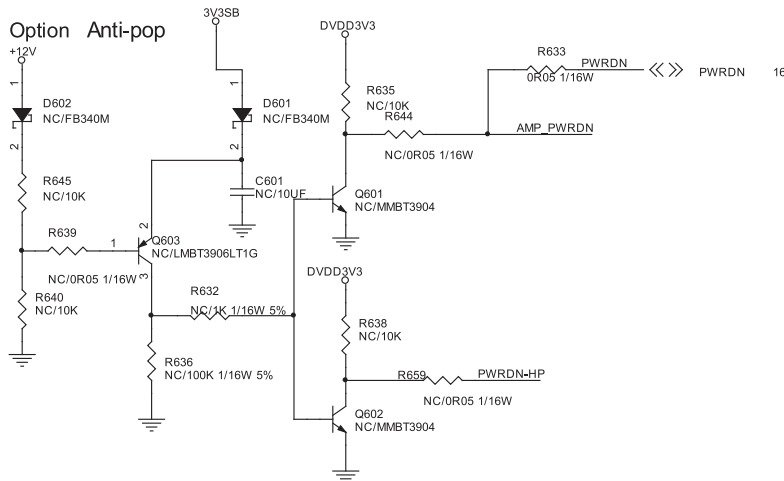
HPDET#
 Low: normal
 High: HP detect

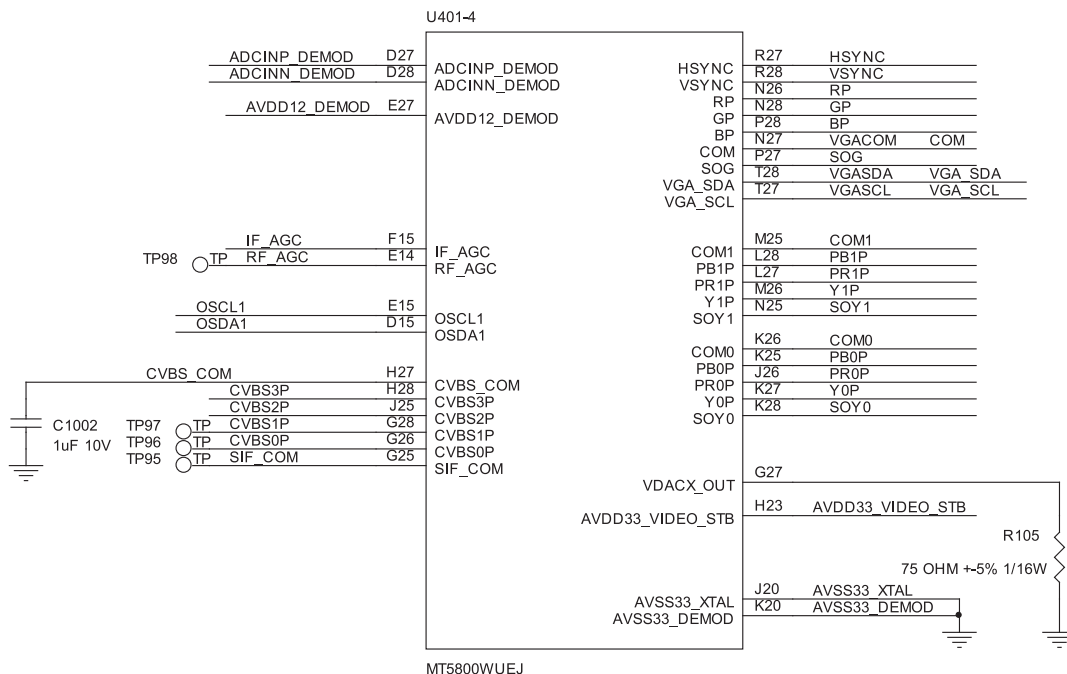


n

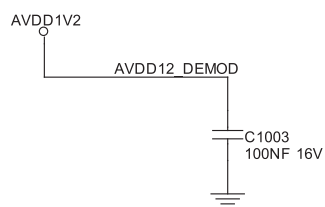


Option Anti-pop

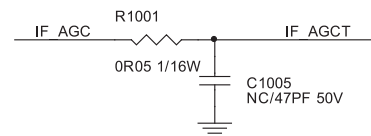
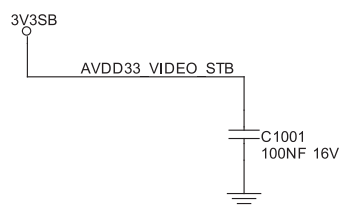




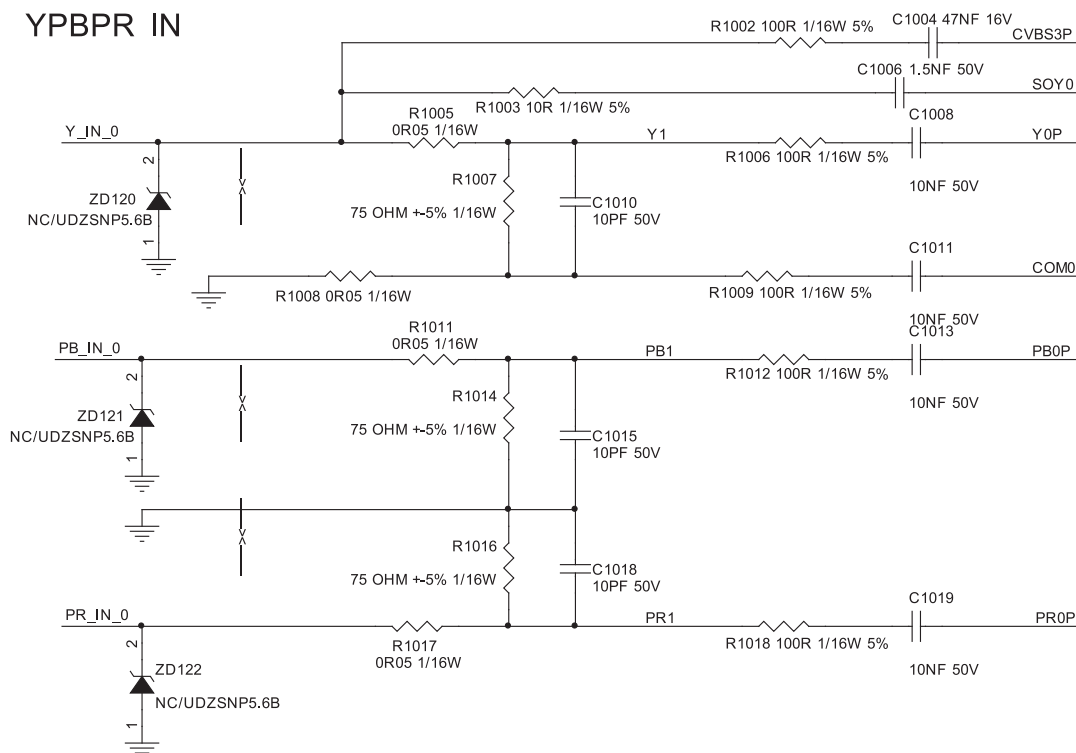
Analog Power 1V2



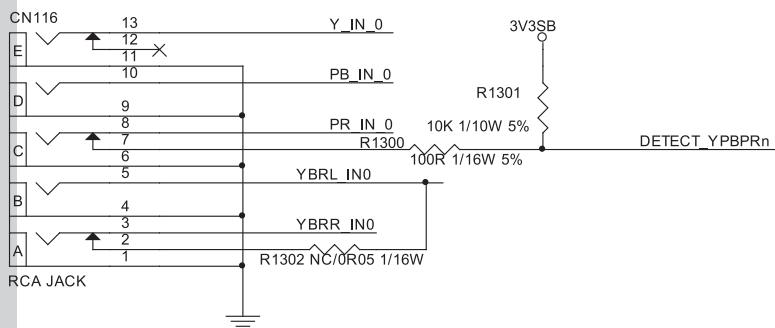
Analog Power 3V3



YPBPR IN

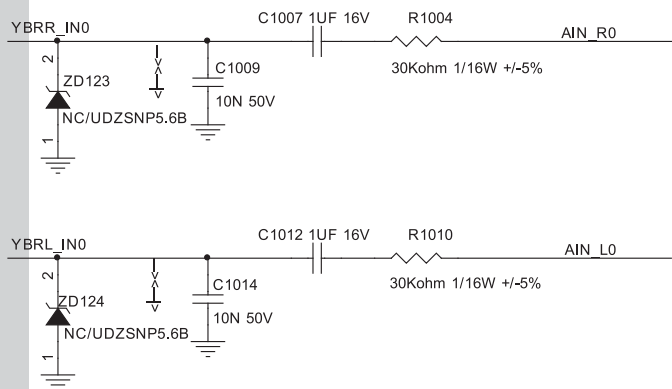
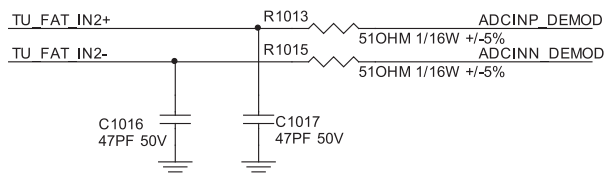


YPbPr & Audio IN



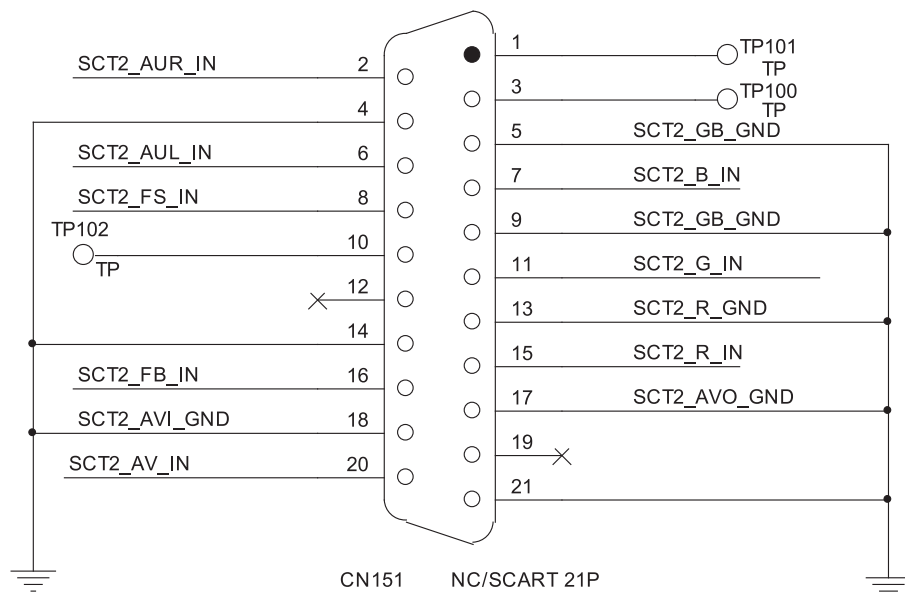
15 OSCL1	<<<>>>	OSCL1
15 OSDA1	<<<>>>	OSDA1
8 CVBS2P	<<>>	CVBS2P
9 HSYNC	<<<>>>	HSYNC
9 VSYNC	<<<>>>	VSYNC
9 RP	<<<>>>	RP
9 GP	<<<>>>	GP
9 BP	<<<>>>	BP
9 VGACOM	<<<>>>	VGACOM
9 SOG	<<<>>>	SOG
9 VGASDA	<<<>>>	VGASDA
9 VGASCL	<<<>>>	VGASCL
6 AIN_R0	<<<>>>	AIN_R0
6 AIN_L0	<<<>>>	AIN_L0
15 IF_AGCT	<<<>>>	IF_AGCT
15 TU_FAT_IN2+	<<<>>>	TU_FAT_IN2+
15 TU_FAT_IN2-	<<<>>>	TU_FAT_IN2-
8 SOY1	<<<>>>	SOY1
8 Y1P	<<<>>>	Y1P
8 COM1	<<<>>>	COM1
8 PB1P	<<<>>>	PB1P
8 PR1P	<<<>>>	PR1P
13 OPCTRL7	<<>>	OPCTRL7
	<<>>	DETECT_YPBPRn

IF BPF (Reserved , default is on demod daughter card)

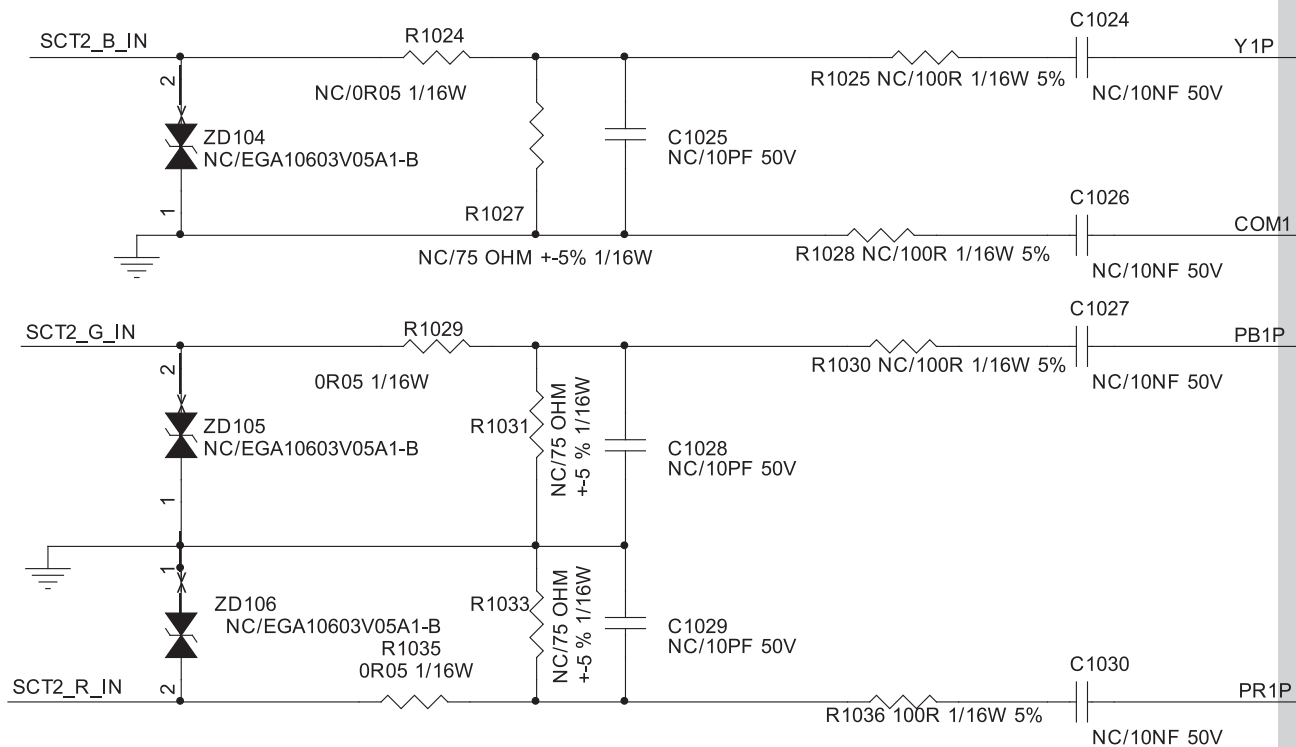


SCART (Half SCART) -- CVBS+SV+RGB

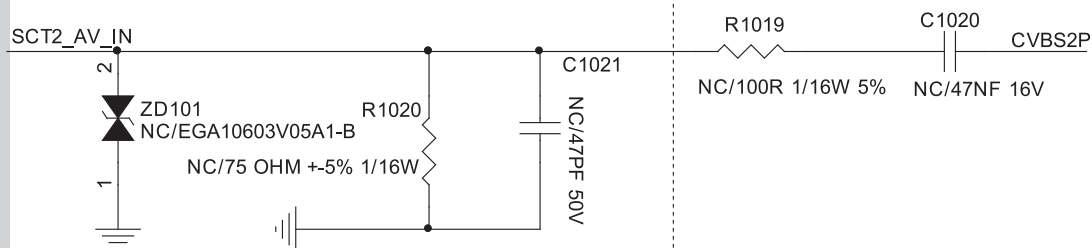
SCART NC_2016-0305



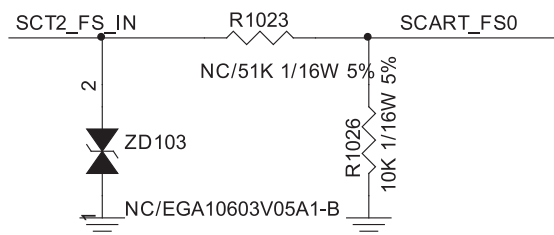
SCART IN



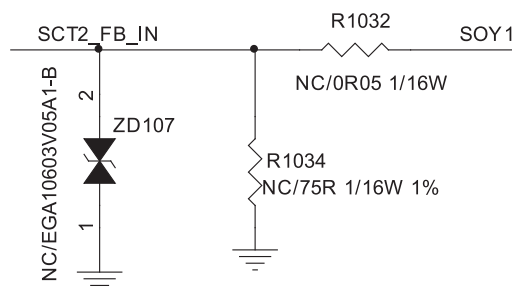
CVBS IN



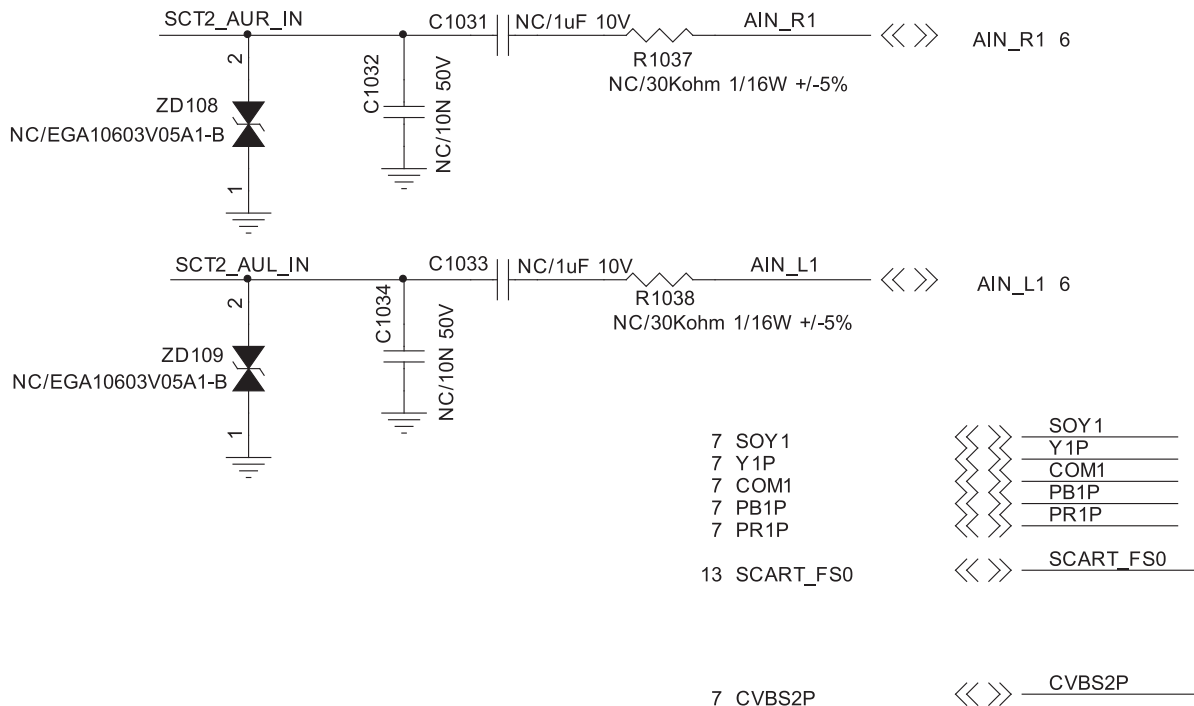
Function Select



FAST BLANKING/SOY

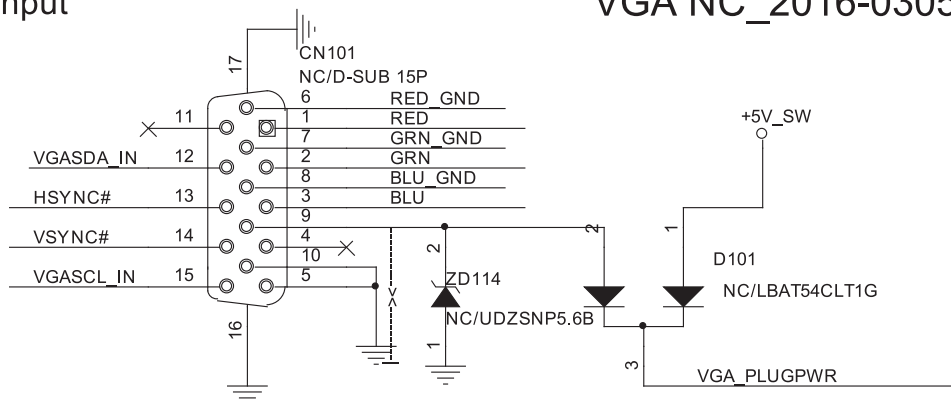


Audio Input

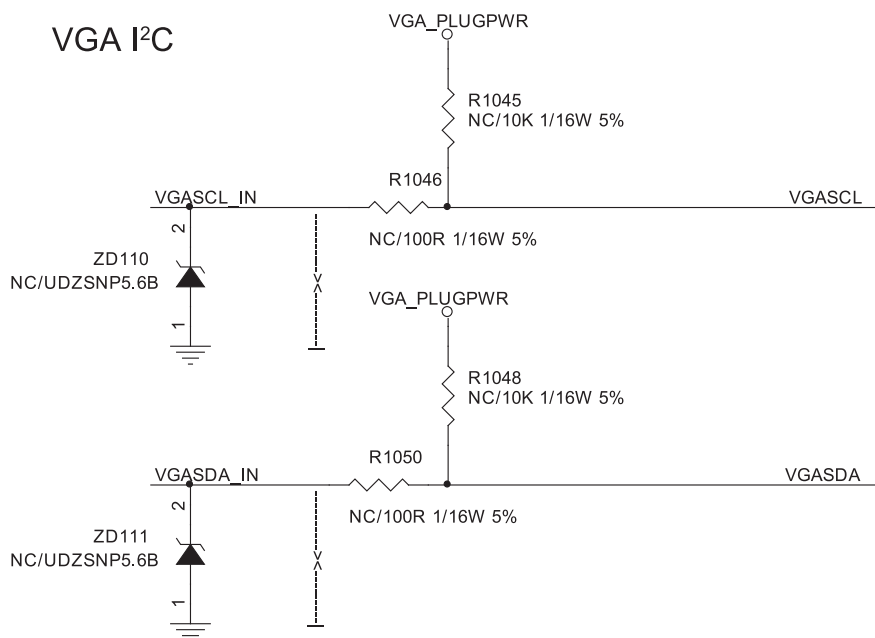


VGA Input

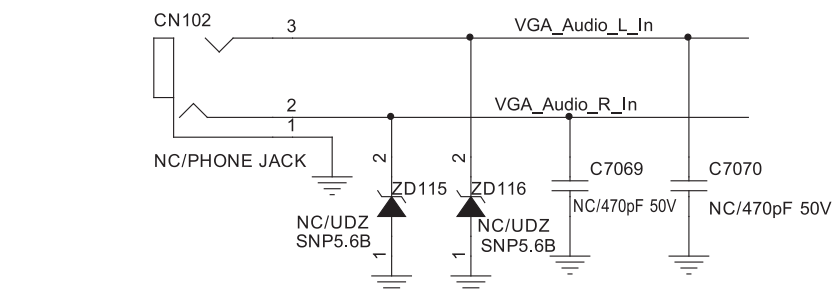
VGA NC_2016-0305



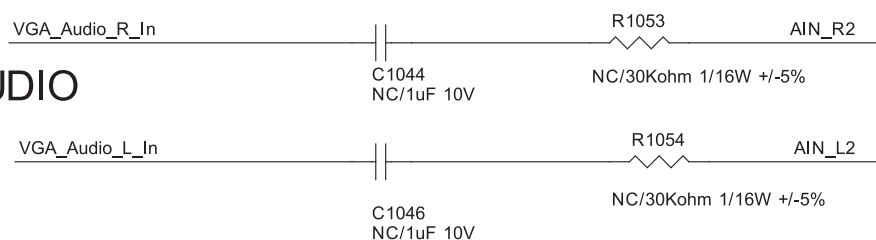
VGA I²C



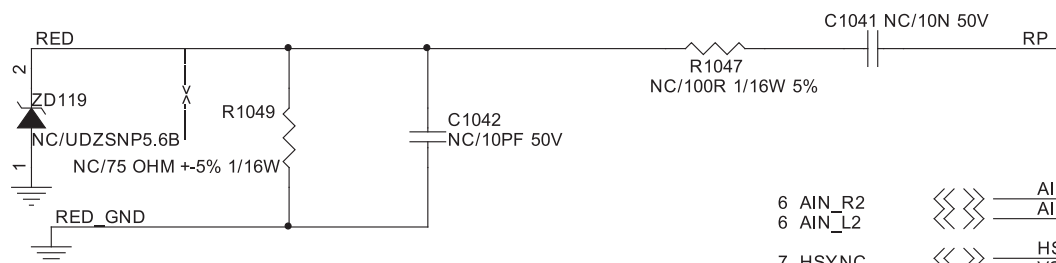
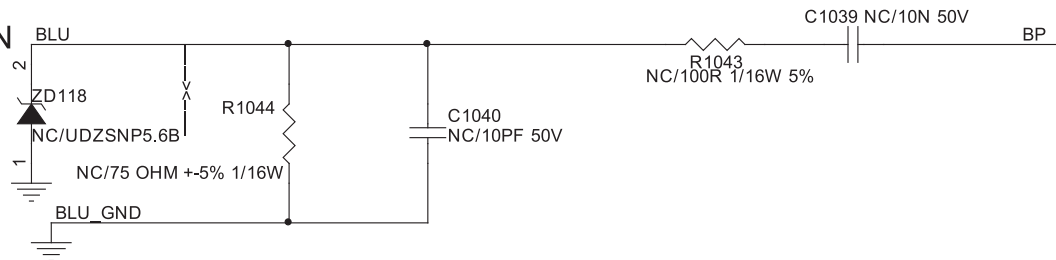
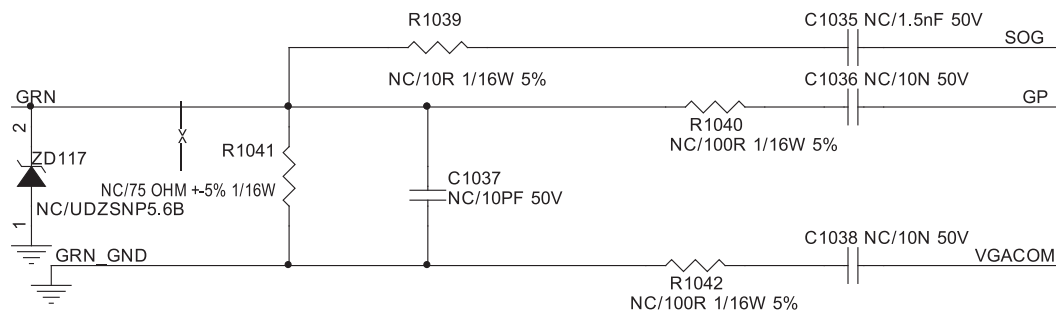
VGA Audio Input



VGA AUDIO

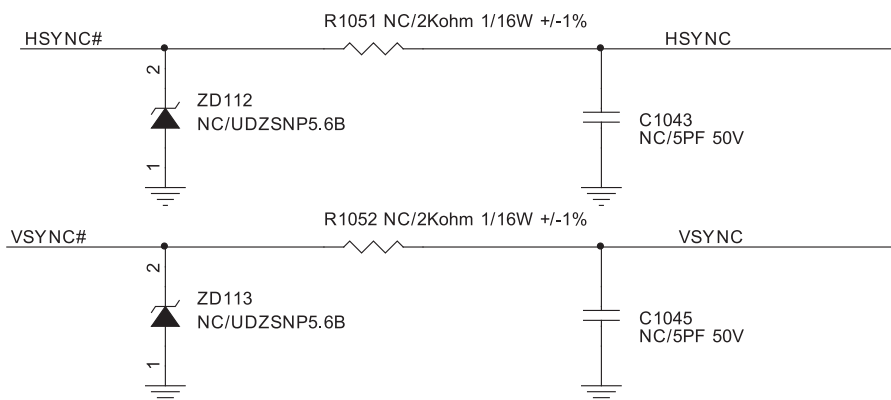


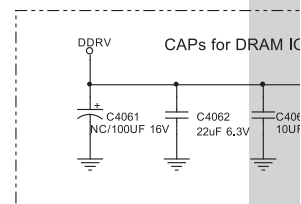
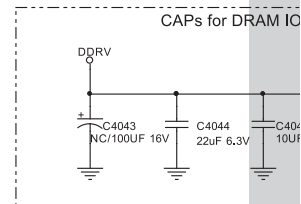
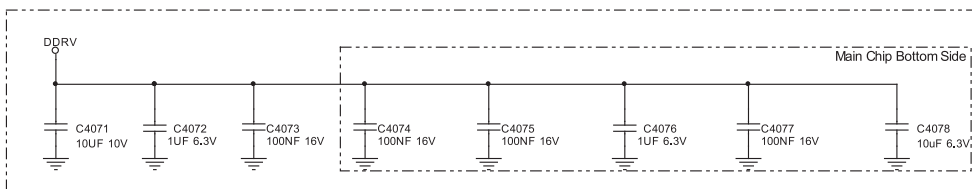
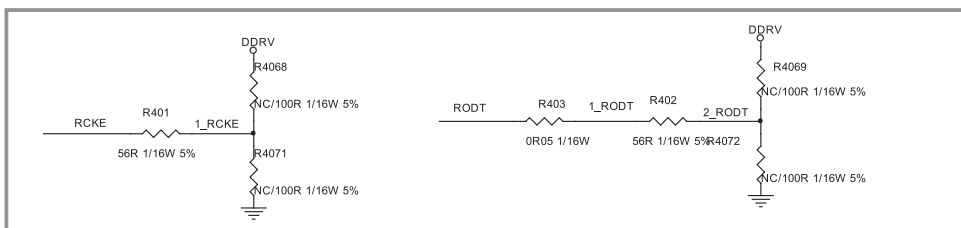
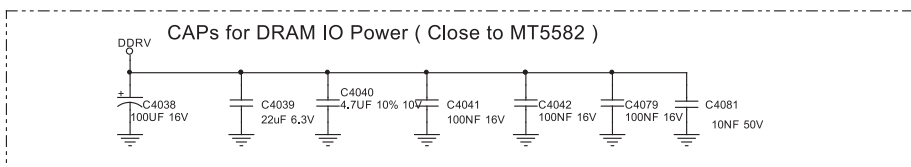
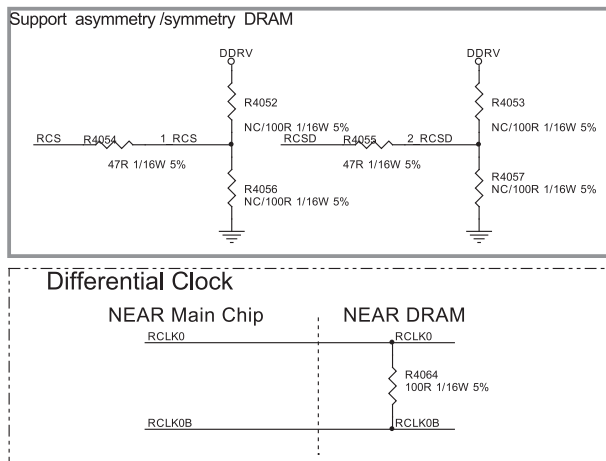
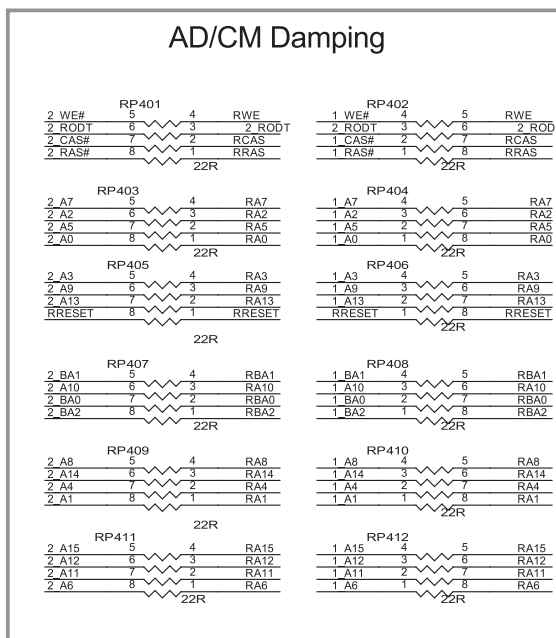
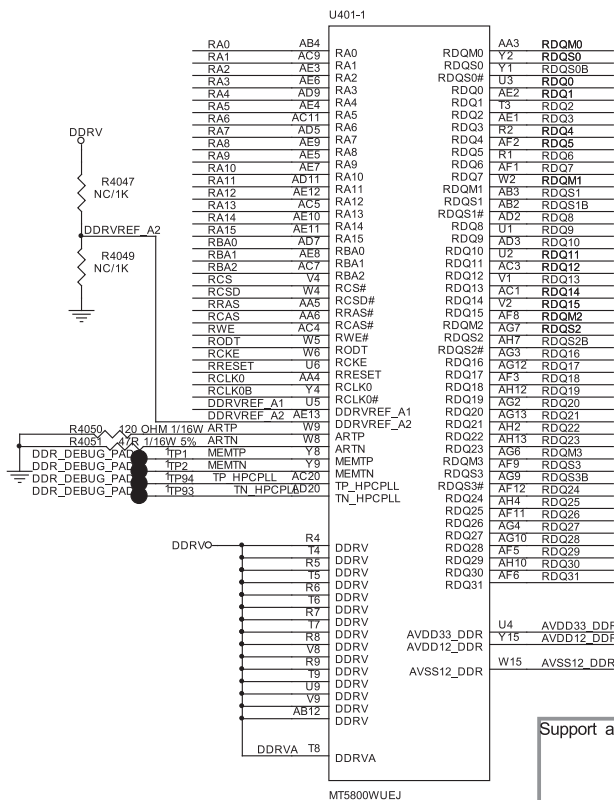
VGA IN

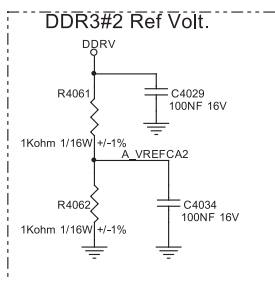
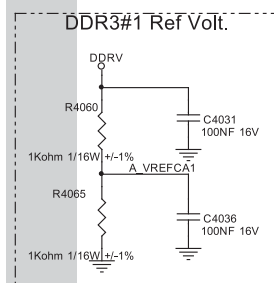
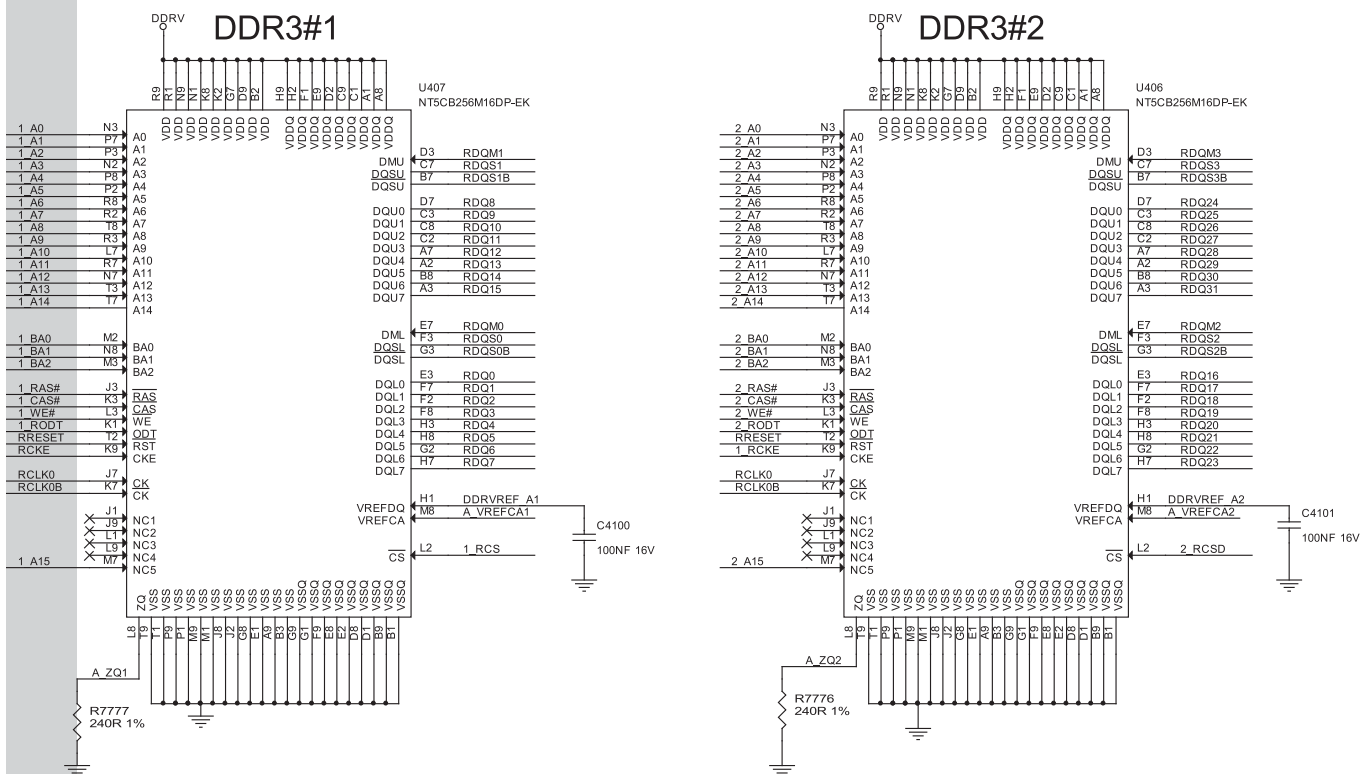


6	AIN_R2	⟷	AIN_R2
6	AIN_L2	⟷	AIN_L2
7	HSYNC	⟷	HSYNC
7	VSYNC	⟷	VSYNC
7	RP	⟷	RP
7	GP	⟷	GP
7	BP	⟷	BP
7	VGACOM	⟷	VGACOM
7	SOG	⟷	SOG
7	VGASDA	⟷	VGASDA
7	VGASCL	⟷	VGASCL

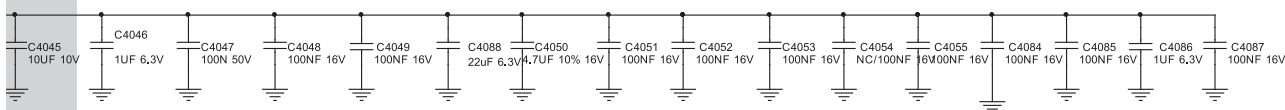
VGA SYNC SLICER



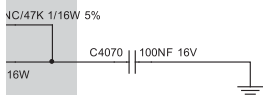
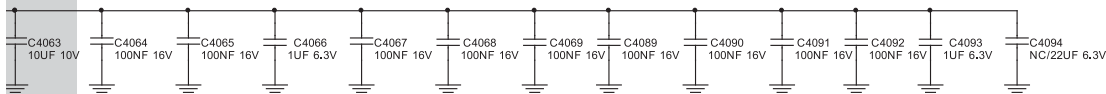




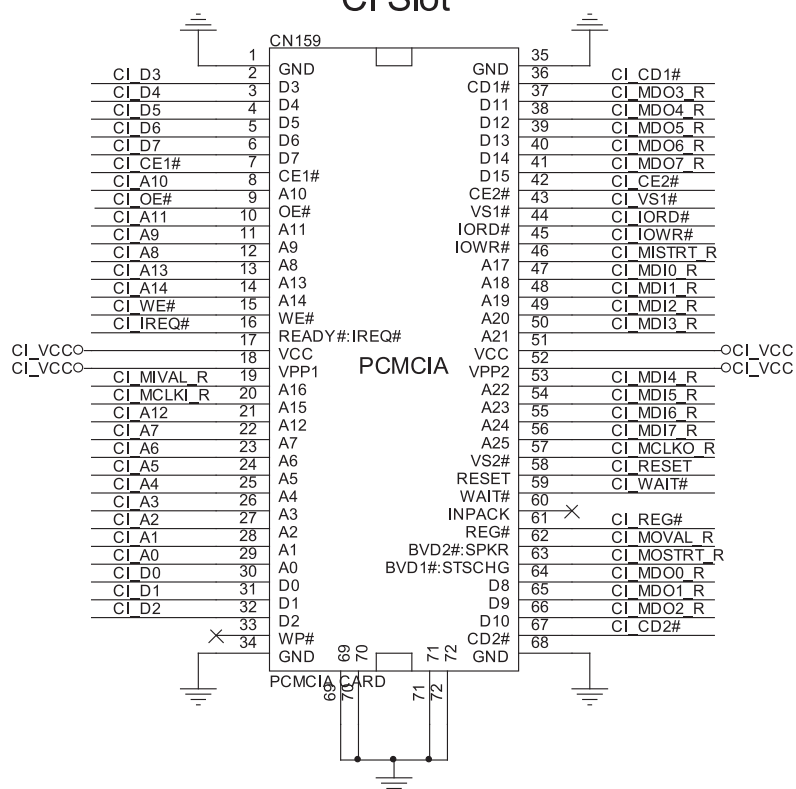
RAM IO Power (Close to DDR#1)



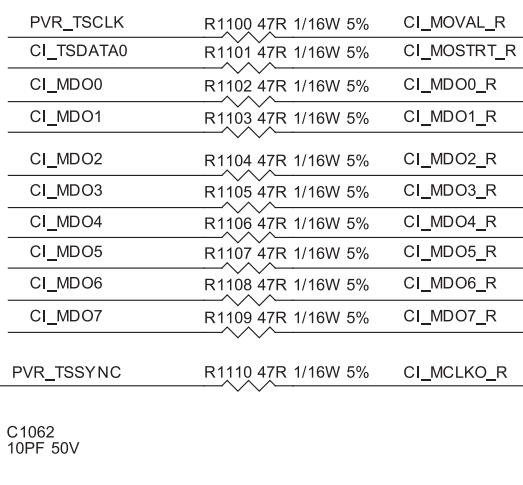
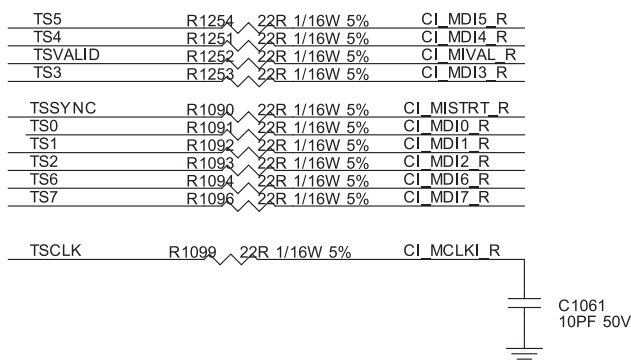
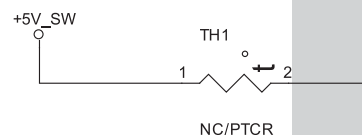
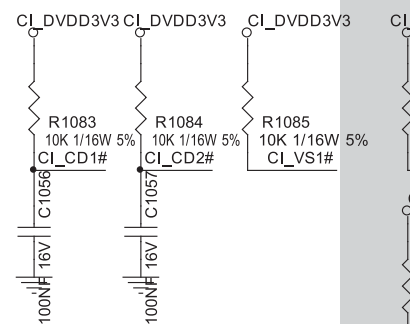
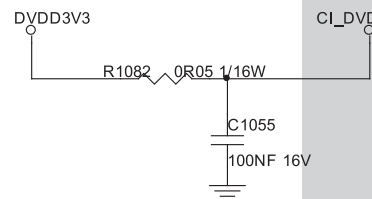
RAM IO Power (Close to DDR#2)



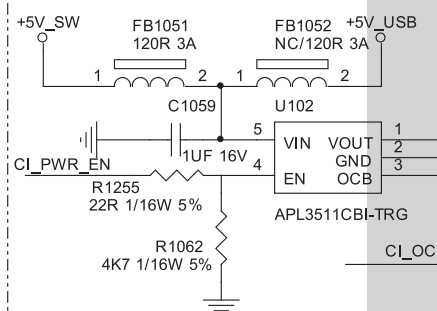
CI Slot



CI 3V3 POWER

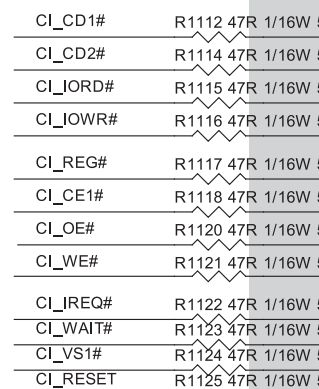


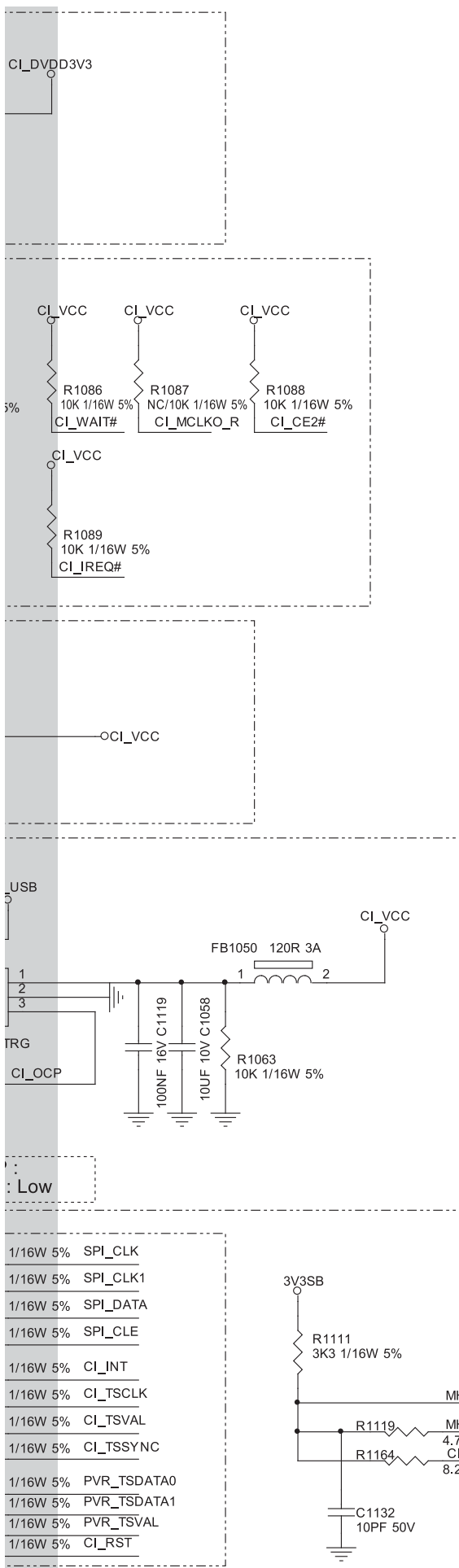
CI Bus Power Control



CI_PWR_EN :
Enable : High
Disable : Low

CI_OCP :
Disable : Low





13	CI_A0	CI_A0
13	CI_A1	CI_A1
13	CI_A2	CI_A2
13	CI_A3	CI_A3
13	CI_A4	CI_A4
13	CI_A5	CI_A5
13	CI_A6	CI_A6
13	CI_A7	CI_A7
13	CI_A8	CI_A8
13	CI_A9	CI_A9
13	CI_A10	CI_A10
13	CI_A11	CI_A11
13	CI_A12	CI_A12
13	CI_A13	CI_A13
13	CI_A14	CI_A14

13	CI_D0	CI_D1
13	CI_D1	CI_D2
13	CI_D2	CI_D3
13	CI_D3	CI_D4
13	CI_D4	CI_D5
13	CI_D5	CI_D6
13	CI_D6	CI_D7
13	CI_D7	CI_MDO0
13	CI_MDO0	CI_MDO1
13	CI_MDO1	CI_MDO2
13	CI_MDO2	CI_MDO3
13	CI_MDO3	CI_MDO4
13	CI_MDO4	CI_MDO5
13	CI_MDO5	CI_MDO6
13	CI_MDO6	CI_MDO7

13	CI_INT	CI_INT
13	CI_TSCCLK	CI_TSCCLK
13	CI_TSVAL	CI_TSVAL
13	CI_TSSYNC	CI_TSSYNC
13	CI_TSDATA0	CI_TSDATA0

13	PVR_TSCCLK	PVR_TSCCLK
13	PVR_TSVAL	PVR_TSVAL
13	PVR_TSSYNC	PVR_TSSYNC
13	PVR_TSDATA0	PVR_TSDATA0
13	PVR_TSDATA1	PVR_TSDATA1

13	SPI_CLK1	SPI_CLK1
13	SPI_CLK	SPI_CLK
13	SPI_DATA	SPI_DATA
13	SPI_CLE	SPI_CLE

13	CI_RST	CI_RST
----	--------	--------

3	TS7	TS7
3	TS6	TS6
3	TS5	TS5
3	TS4	TS4
3	TS3	TS3
3	TS2	TS2
3	TS1	TS1
3	TS0	TS0

13	TSSYNC	TSSYNC
13	TSVALID	TSVALID
13	TSCLK	TSCLK

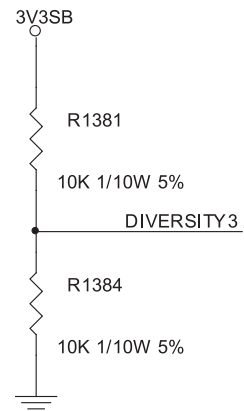
13	CI_PWR_EN	CI_PWR_EN
----	-----------	-----------

13	MHL_CI_OC	MHL_CI_OC
----	-----------	-----------

14	MHL_OC	MHL_OC
----	--------	--------

TP	TP47	OPCTRL0	P26	OPCTRL0 OPCTRL1 OPCTRL2 OPCTRL3 OPCTRL4 OPCTRL5 OPCTRL6 OPCTRL7 OPCTRL8 OPCTRL9 OPCTRL10 OPCTRL11 OPCTRL12
TP	TP48	OPCTRL1	P25	
	Wi-Fi_PWR_EN	OPCTRL2	P24	
		OPCTRL3	N24	
	BT_IRQn	OPCTRL4	M24	
	WIFI_IRQn	OPCTRL5	M23	
	Wi-Fi_Reset	OPCTRL6	M22	
	DETECT_YBPBRn	OPCTRL7	K23	
	WOL_ON/OFF	OPCTRL8	L23	
	HPDET#	OPCTRL9	E20	
	BL_ON/OFF	OPCTRL10	D20	
	MHL_PWR_EN	OPCTRL11	G18	
	FB_PWR_EN	OPCTRL12	F18	

CI_MDI7	R1126	22R 1/16W 5%	TS7
CI_MDI6	R1128	22R 1/16W 5%	TS6
CI_MDI5	R1130	22R 1/16W 5%	TS5
CI_MDI4	R1132	22R 1/16W 5%	TS4
CI_MDI3	R1134	22R 1/16W 5%	TS3
CI_MDI2	R1136	22R 1/16W 5%	TS2
CI_MDI1	R1138	22R 1/16W 5%	TS1
CI_MDI0	R1140	22R 1/16W 5%	TS0
CI_MISTR	R1142	22R 1/16W 5%	TSSYNC
CI_MIVAL	R1144	22R 1/16W 5%	TSSVALD
CI_MCLKI	R1146	22R 1/16W 5%	TSCLK

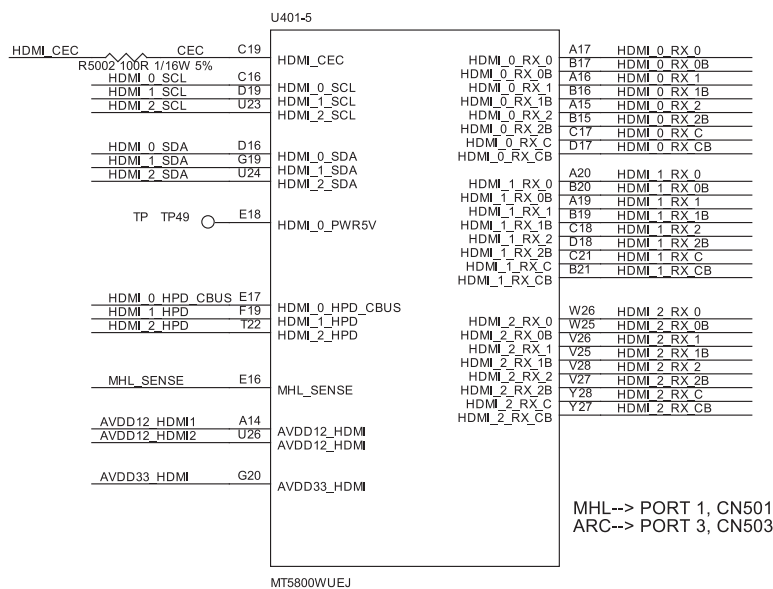


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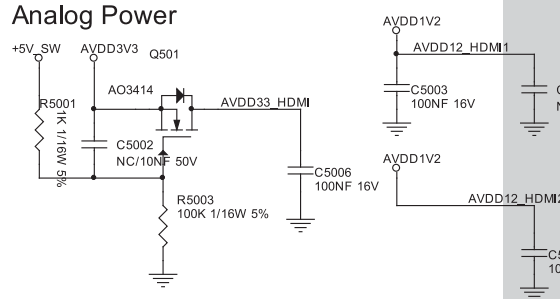
100

NF 16V

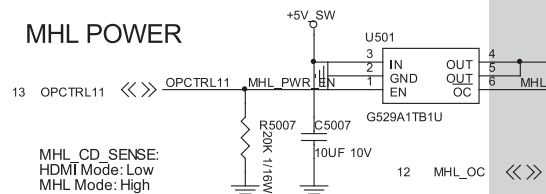
5,6 OSD_A0	<<>>	OSD_A0	12 CI_TSCLK	<<>>	CI_TSCLK
5,6 OSC_L0	<<>>	OSC_L0	12 CI_TSVAL	<<>>	CI_TSVAL
			12 CI_TSSYNC	<<>>	CI_TSSYNC
			12 CI_TSDATA0	<<>>	CI_TSDATA0
12 CI_A0	<<>>	CI_A0	12 PVR_TSCLK	<<>>	PVR_TSCLK
12 CI_A1	<<>>	CI_A1	12 PVR_TSVAL	<<>>	PVR_TSVAL
12 CI_A2	<<>>	CI_A2	12 PVR_TSSYNC	<<>>	PVR_TSSYNC
12 CI_A3	<<>>	CI_A3	12 PVR_TSDATA0	<<>>	PVR_TSDATA0
12 CI_A4	<<>>	CI_A4	12 PVR_TSDATA1	<<>>	PVR_TSDATA1
12 CI_A5	<<>>	CI_A5			
12 CI_A6	<<>>	CI_A6	12 SPI_CLK1	<<>>	SPI_CLK1
12 CI_A7	<<>>	CI_A7	12 SPI_CLK	<<>>	SPI_CLK
12 CI_A8	<<>>	CI_A8	12 SPI_DATA	<<>>	SPI_DATA
12 CI_A9	<<>>	CI_A9	12 SPI_CLE	<<>>	SPI_CLE
12 CI_A10	<<>>	CI_A10	12 CI_INT	<<>>	CI_INT
12 CI_A11	<<>>	CI_A11			
12 CI_A12	<<>>	CI_A12	3,10 BL_DIMMING	<<>>	BL_DIMMING
12 CI_A13	<<>>	CI_A13	5 SYS_EEPROM_WP	<<>>	SYS_EEPROM_WP
12 CI_A14	<<>>	CI_A14			
12 CI_D0	<<>>	CI_D0	5,17 LED_PWM0	<<>>	LED_PWM0
12 CI_D1	<<>>	CI_D1	5,17 LED_PWM1	<<>>	LED_PWM1
12 CI_D2	<<>>	CI_D2	4 12V-DETECT	<<>>	12V-DETECT
12 CI_D3	<<>>	CI_D3			
12 CI_D4	<<>>	CI_D4	17 Bathroom_AUD_EN	<<>>	Bathroom_AUD_EN
12 CI_D5	<<>>	CI_D5			
12 CI_D6	<<>>	CI_D6	8 SCART_FS0	<<>>	SCART_FS0
12 CI_D7	<<>>	CI_D7	17 KEY_PAD0	<<>>	KEY_PAD0
12 CI_MDO0	<<>>	CI_MDO0			
12 CI_MDO1	<<>>	CI_MDO1	12 MHL_CI_OC	<<>>	MHL_CI_OC
12 CI_MDO2	<<>>	CI_MDO2			
12 CI_MDO3	<<>>	CI_MDO3	17 Ambi-Temp	<<>>	Ambi-Temp
12 CI_MDO4	<<>>	CI_MDO4			
12 CI_MDO5	<<>>	CI_MDO5	4 LNB_EN	<<>>	LNB_EN
12 CI_MDO6	<<>>	CI_MDO6			
12 CI_MDO7	<<>>	CI_MDO7			
12 CI_RST	<<>>	CI_RST	16 OPCTRL2	<<>>	OPCTRL2 Wi-Fi_PWR_EN
			5 OPCTRL3	<<>>	OPCTRL3
4 TUN_LNB	<<>>	TUN_LNB	16 OPCTRL4	<<>>	OPCTRL4 BT_IRQn
12 CI_PWR_EN	<<>>	CI_PWR_EN	16 OPCTRL5	<<>>	OPCTRL5 WIFI_IRQn
			16 OPCTRL6	<<>>	OPCTRL6 Wi-Fi-Reset
			7 OPCTRL7	<<>>	OPCTRL7 DETECT_YBPBRn
			16 OPCTRL8	<<>>	OPCTRL8 WOL_ON/OFF
			6 OPCTRL9	<<>>	OPCTRL9 HPDET#
			3,17 OPCTRL10	<<>>	OPCTRL10 BL_ON/OFF
			14 OPCTRL11	<<>>	OPCTRL11 MHL_PWR_EN
			3 OPCTRL12	<<>>	OPCTRL12 FB_PWR_EN
15 DEMOD_TS0	<<>>	DEMOD_TS0			
15 DEMOD_TSSYNC	<<>>	DEMOD_TSSYNC	15 DEMOD_RESET	<<>>	DEMOD_RESET
15 DEMOD_TSVALID	<<>>	DEMOD_TSVALID	17 AMBI-SPI-MOSI	<<>>	AMBI-SPI-MOSI
15 DEMOD_TSCLK	<<>>	DEMOD_TSCLK	17 AMBI-SPI-CLK	<<>>	AMBI-SPI-CLK
			16 USB_PWR_EN	<<>>	USB_PWR_EN
			17 AMBI-SPI-CLK	<<>>	AMBI-SPI-CLK
12 TS7	<<>>	TS7			
12 TS6	<<>>	TS6	6 AMP_RESET	<<>>	AMP_RESET
12 TS5	<<>>	TS5			
12 TS4	<<>>	TS4			
12 TS3	<<>>	TS3			
12 TS2	<<>>	TS2			
12 TS1	<<>>	TS1			
12 TS0	<<>>	TS0			
12 TSSYNC	<<>>	TSSYNC			
12 TSVALID	<<>>	TSVALID			
12 TSCLK	<<>>	TSCLK			



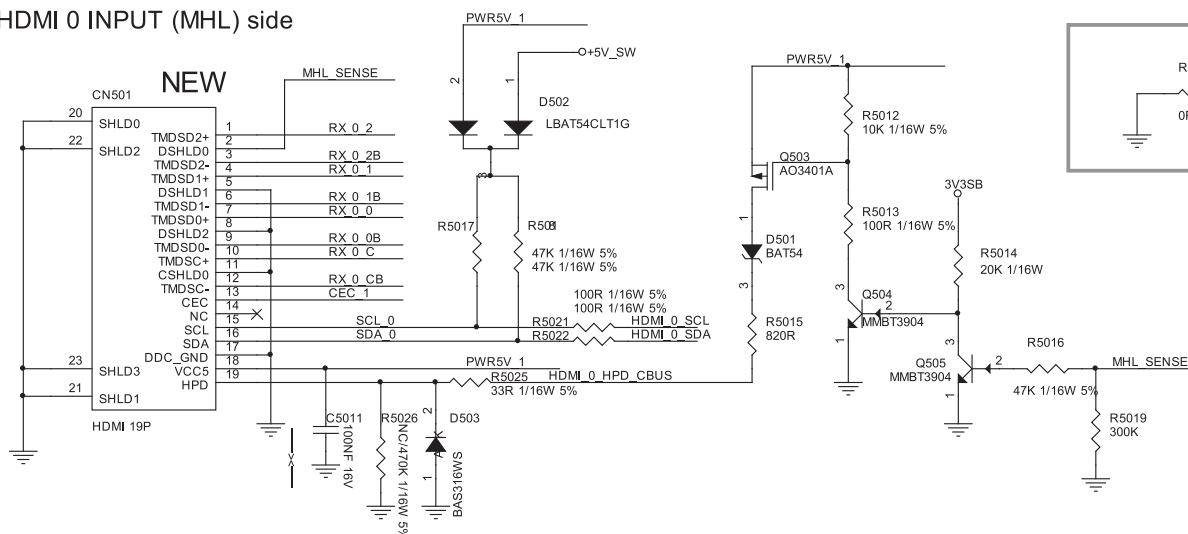
Analog Power



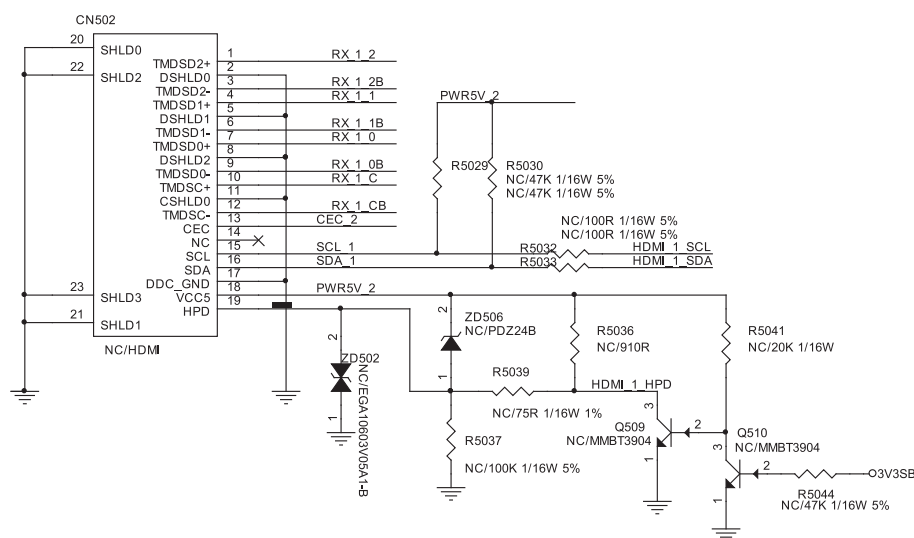
MHL POWER



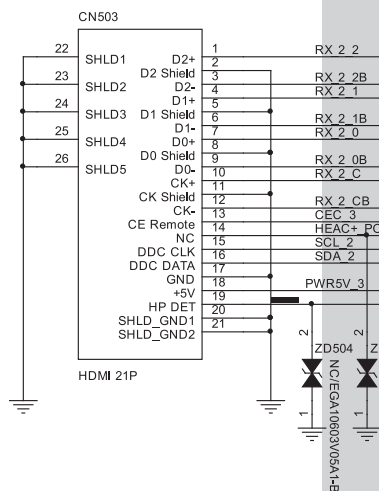
HDMI 0 INPUT (MHL) side



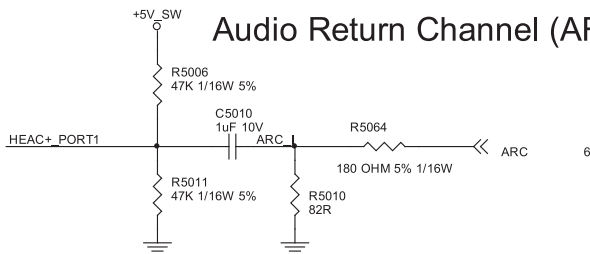
HDMI 1 INPUT Side



HDMI 2 INPUT (ARC) Back

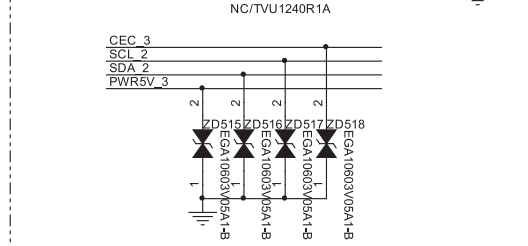
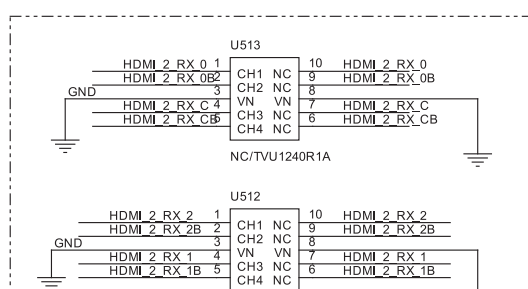
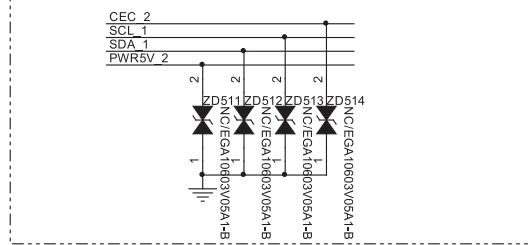
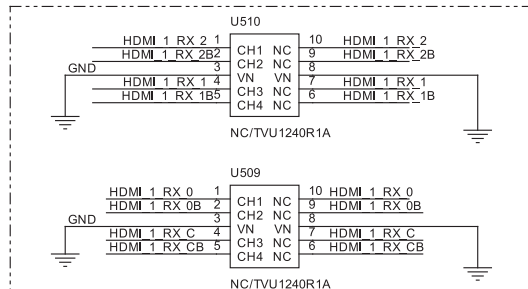
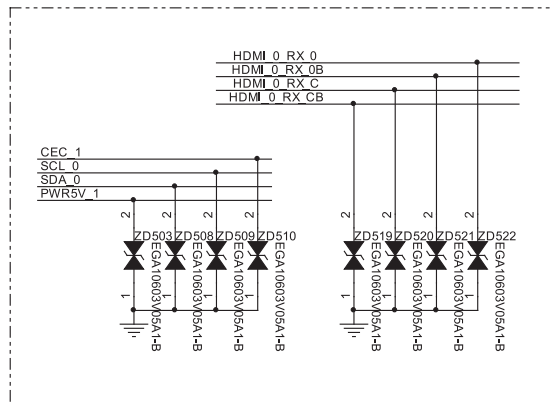
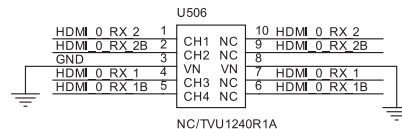
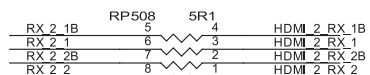
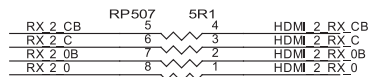
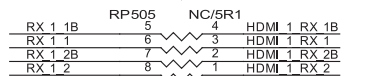
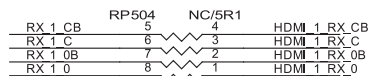
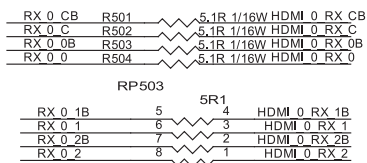
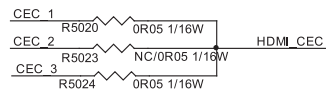


Audio Return Channel (ARC)

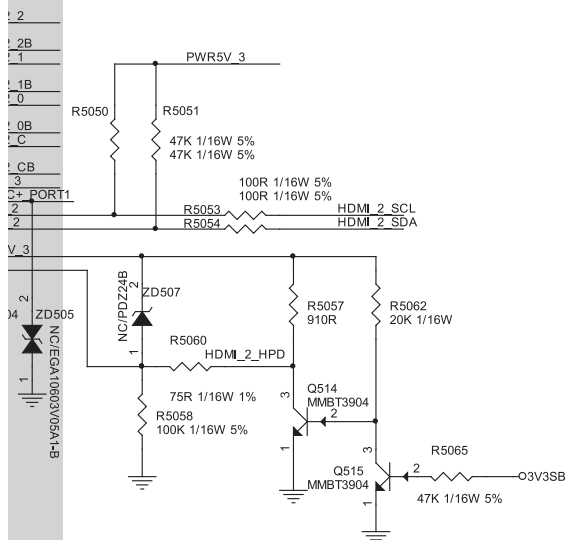


6

HDMI-CEC

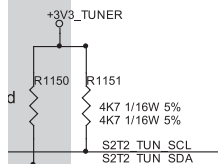


PCB Position:
(4453,4553)



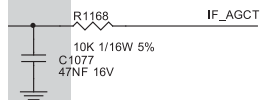
Интерфейс HDMI

В ПАПКУ РЕМОНТНИКА

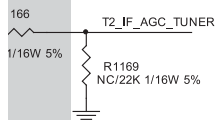


From MT5582

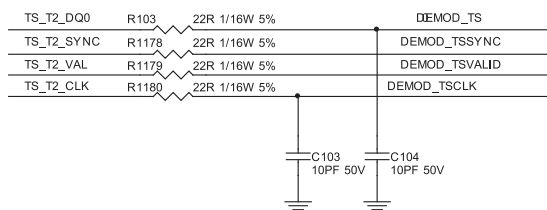
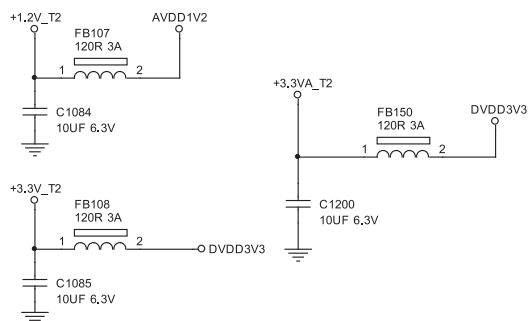
From MT5582



From T2 demod

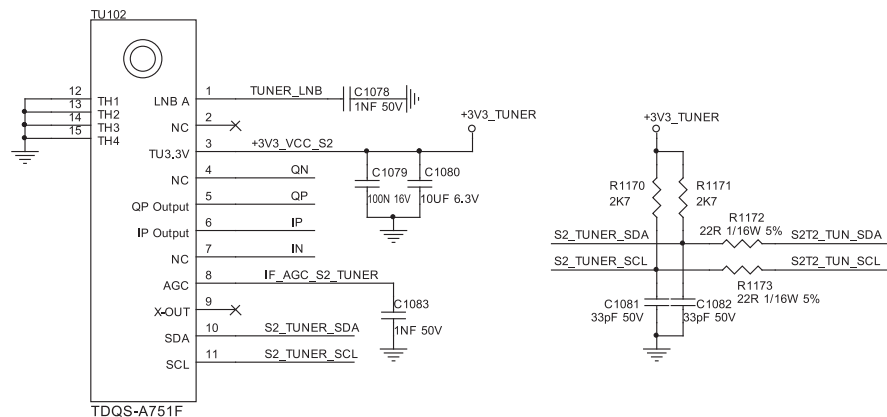


DEMOD POWER



S2 TUNER LGTuner with DVB-S/S2

K model : Samsung DNBU02112IH2



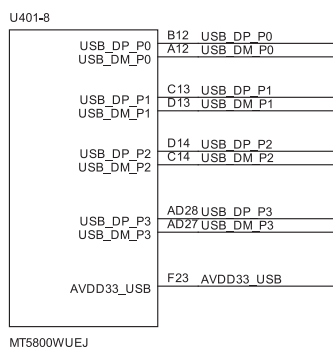
13 DEMOD_TSSYNC <<>> DEMOD_TSSYNC
13 DEMOD_TSVALID <<>> DEMOD_TSVALID
13 DEMOD_TSCLK <<>> DEMOD_TSCLK
13 DEMOD_TS0 <<>> DEMOD_TS0

7 IF_AGCT <<>> IF_AGCT
7 TU_FAT_IN2+ <<>> TU_FAT_IN2+
7 TU_FAT_IN2- <<>> TU_FAT_IN2-
7 OSCL1 <<>> OSCL1
7 OSD1 <<>> OSD1

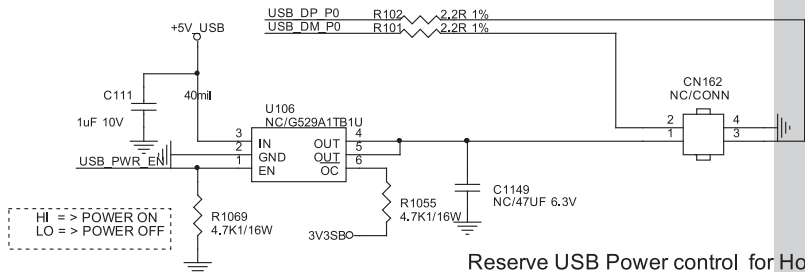
4 LINEDROP <<>> LINEDROP
4 13V/18V_SW <<>> 13V/18V_SW
4 TUNER_LNB <<>> TUNER_LNB
4 DISEQC_OUT <<>> DISEQC_OUT

13 DEMOD_RESET <<>> DEMOD_RESET

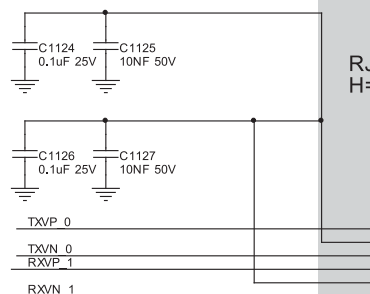
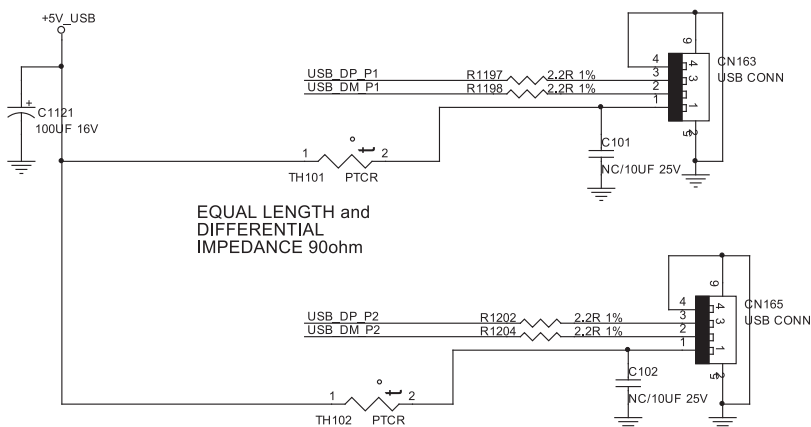
Model	Demod	Tuner
H (T/C)	NC	TU101
T (T2)	T2 Si2168 356G0575048610	TU101
K (S2)	Si2166	TU101/TU102
S (T2/S2)	Si2169 356G0575048613	TU101/TU102



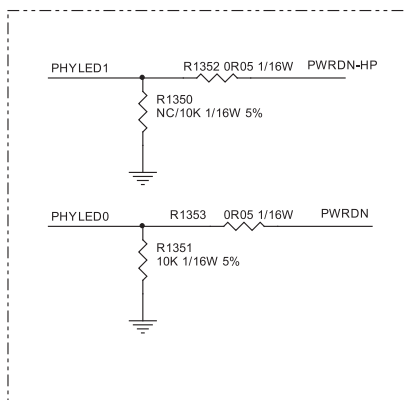
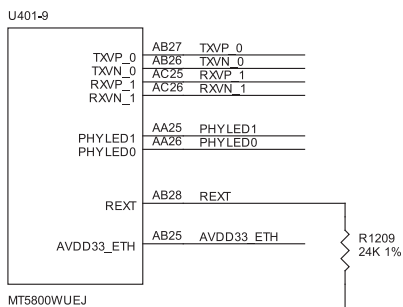
USB PORT 0 To HTV USB Connector



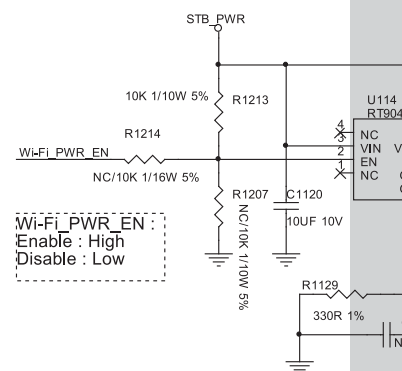
USB PORT 1 EQUAL LENGTH and DIFFERENTIAL IMPEDANCE 90ohm



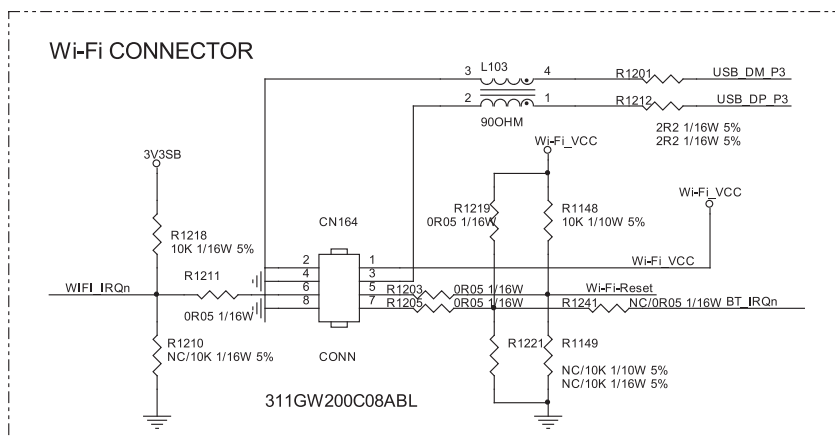
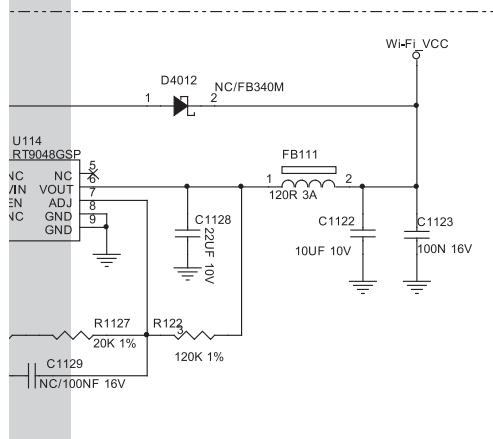
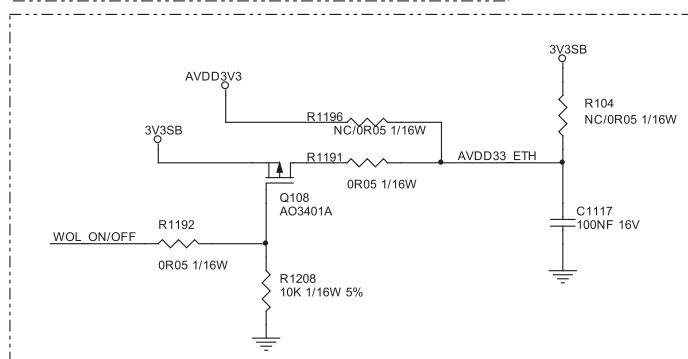
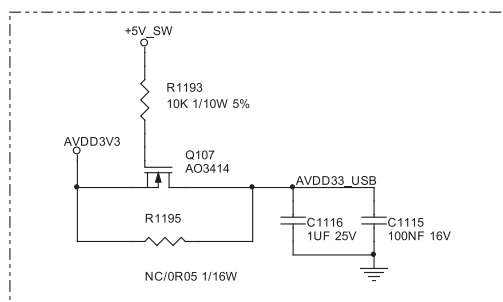
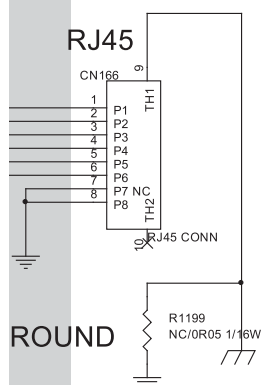
ETHERNET PHY



Wi-Fi Power Control



RJ45_388G342KEF4VGN
H=16.9 2016-0308



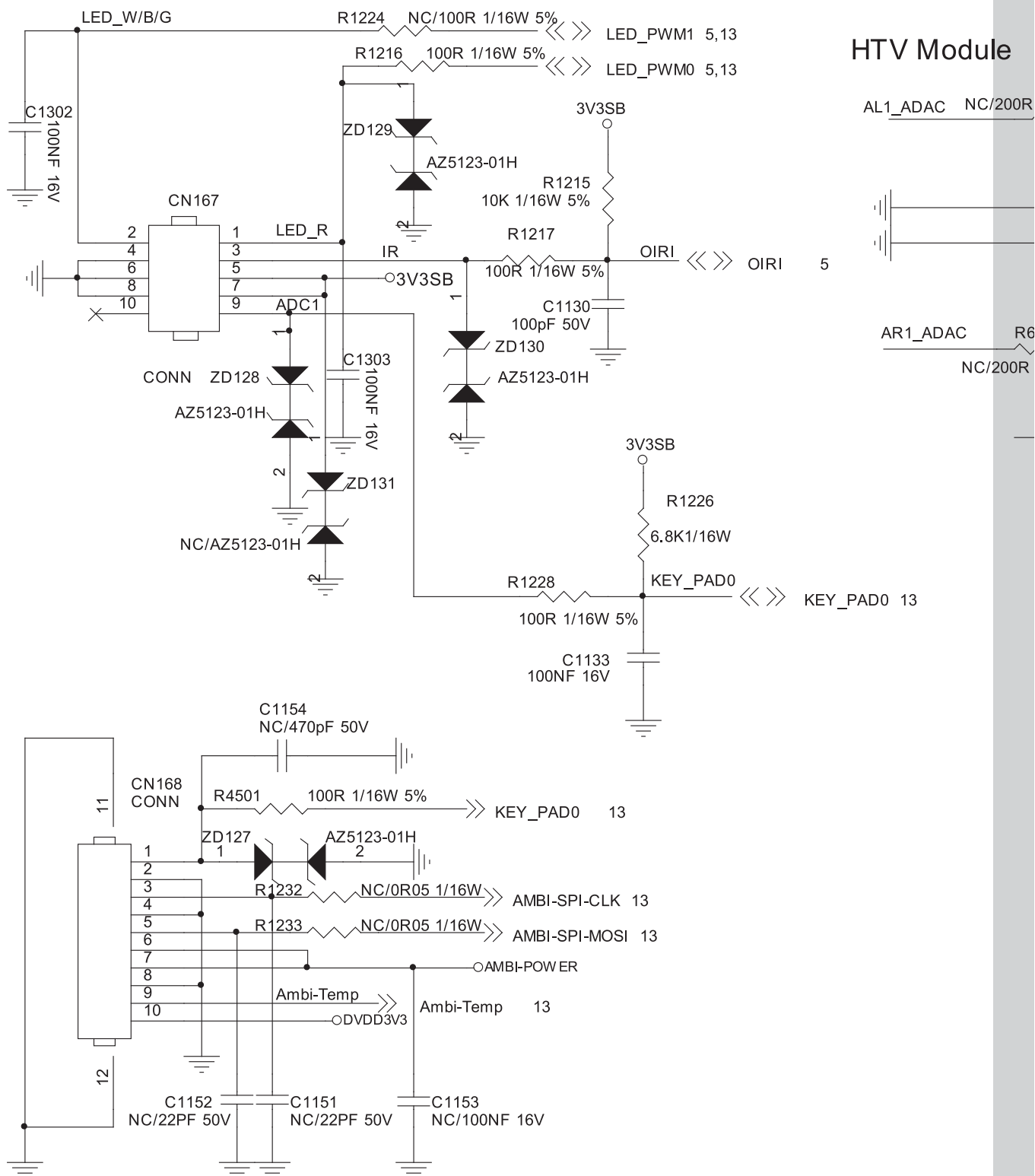
13	OPCTRL2	<<>>	<u>OPCTRL2 Wi-Fi_PWR_EN</u>
13	OPCTRL8	<<>>	<u>OPCTRL8 WOL_ON/OFF</u>
13	OPCTRL4	<<>>	<u>OPCTRL4 BT_IRQn</u>
13	OPCTRL5	<<>>	<u>OPCTRL5 WIFI_IRQn</u>
13	OPCTRL6	<<>>	<u>OPCTRL6 Wi-Fi_Reset</u>

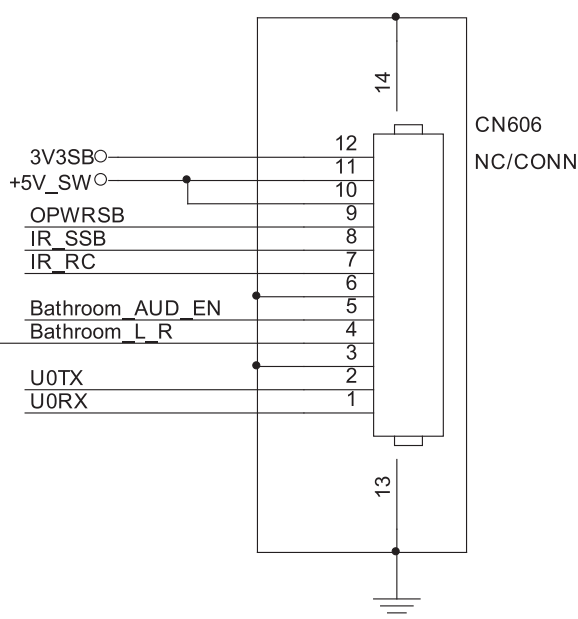
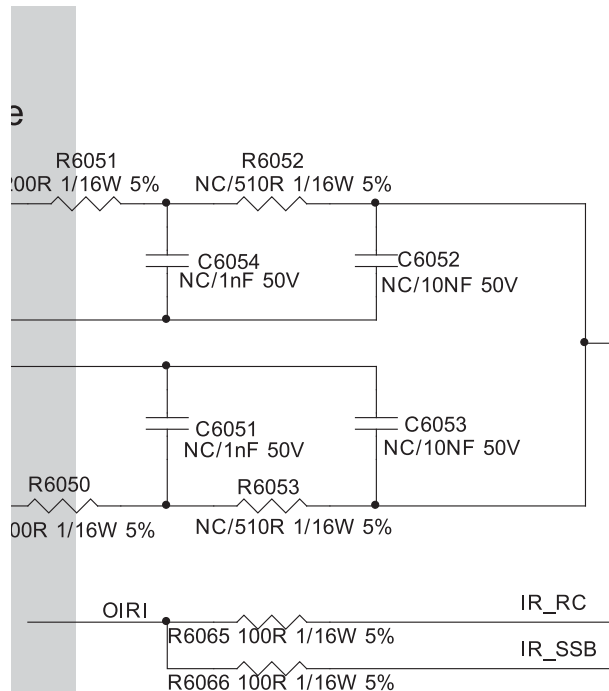
PWRDN → PWRDN 6

№7 «Ремонт & Сервис» июль 2021 XXVII

В ПАПКУ РЕМОНТНИКА

HTV Module





3,4,5 OPWRSB

OPWRSB
AR1_ADAC
AL1_ADAC

3,13 OPCTRL10
13 Bathroom_AUD_EN

AMBI_PWR_EN
Bathroom_AUD_EN

3

U0TX
U0RX

5
5

AL PROTECTION

