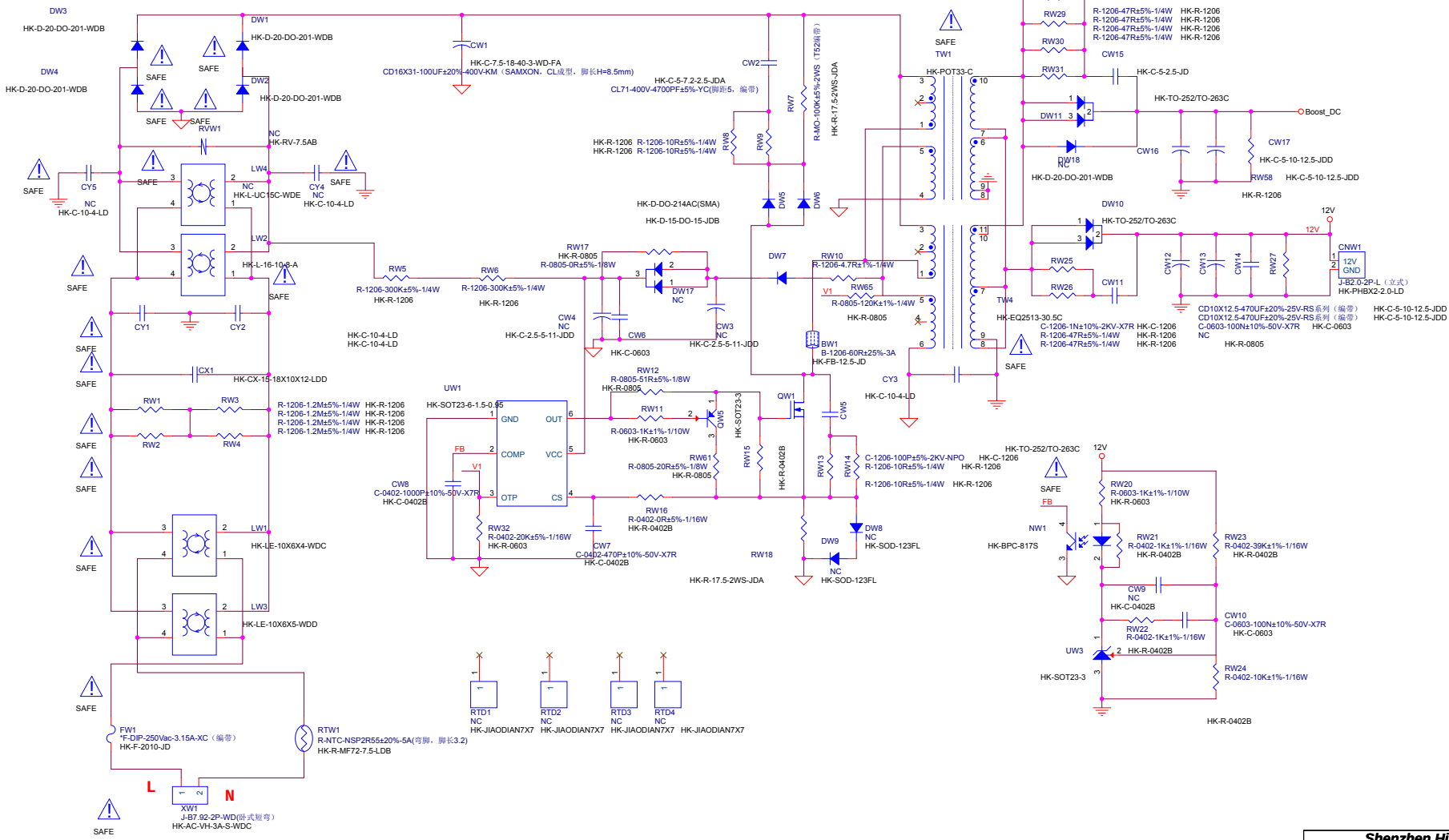
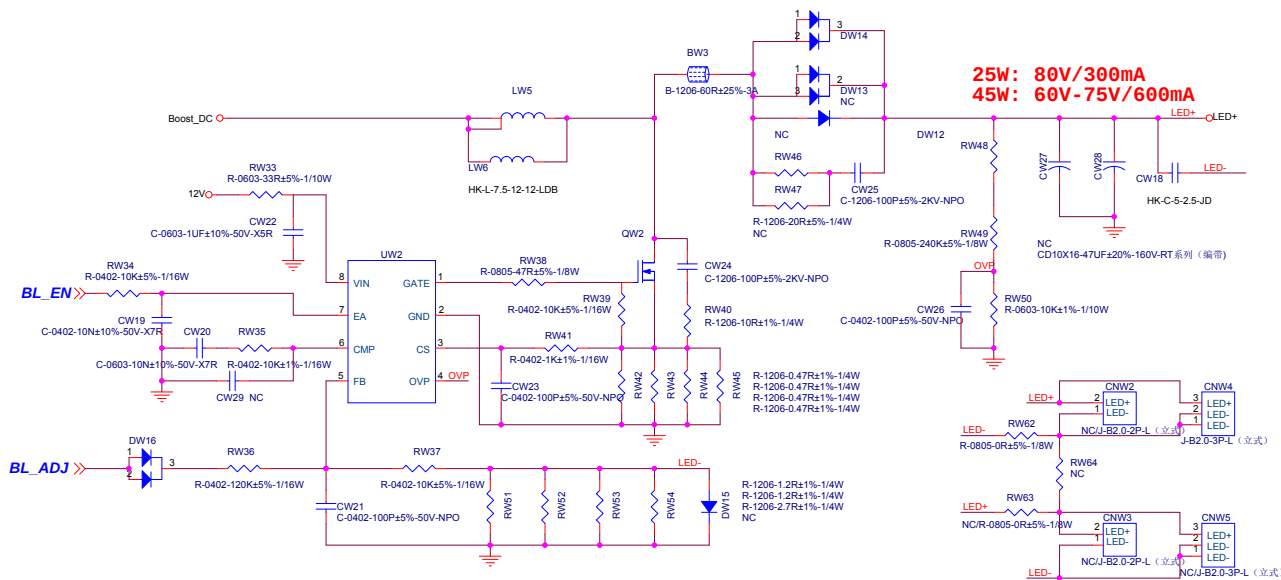
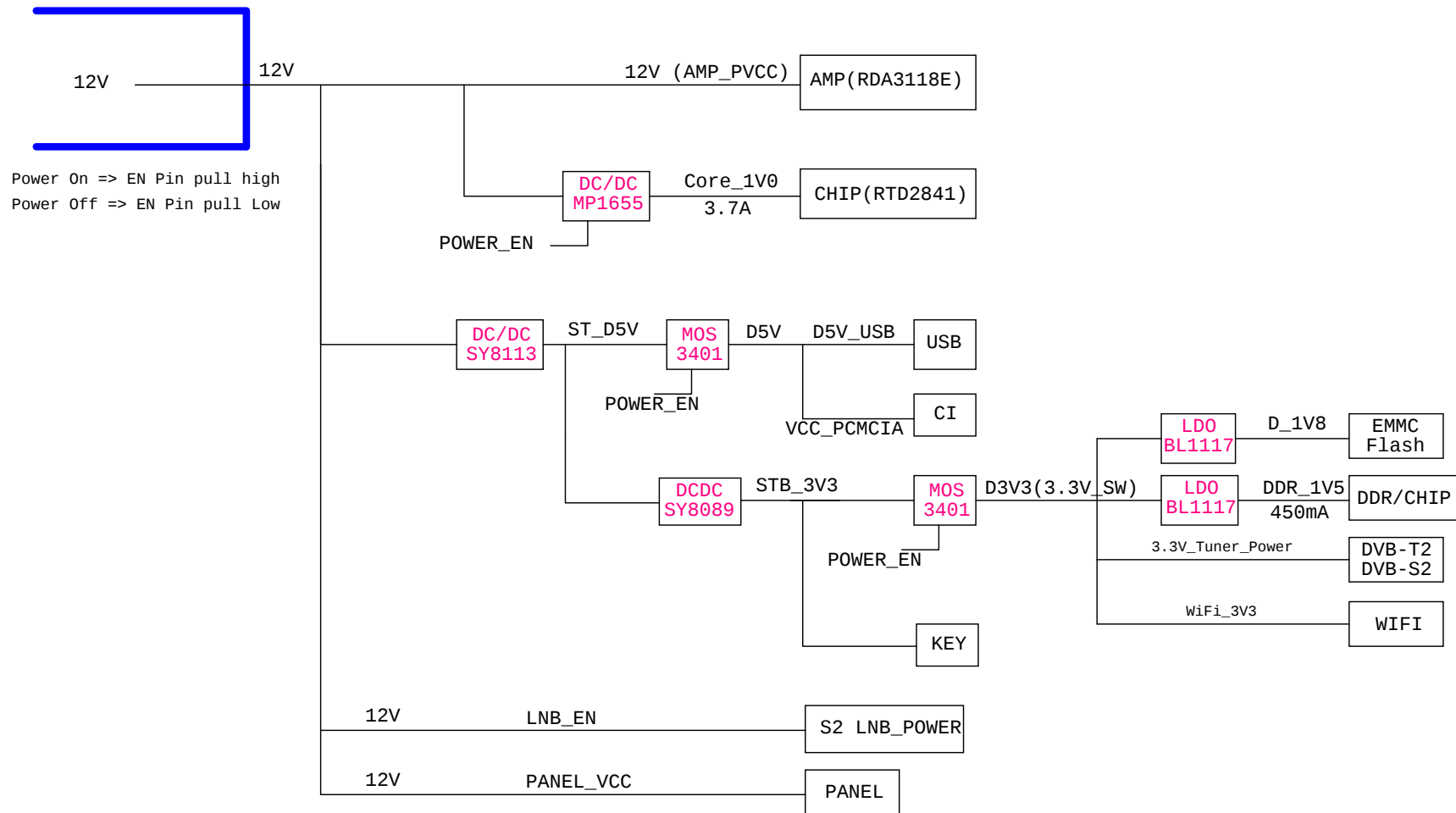
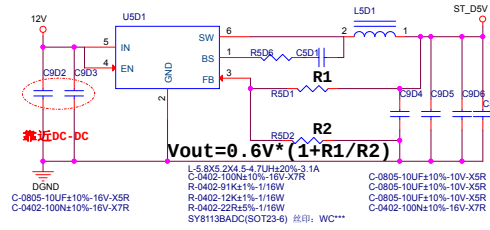




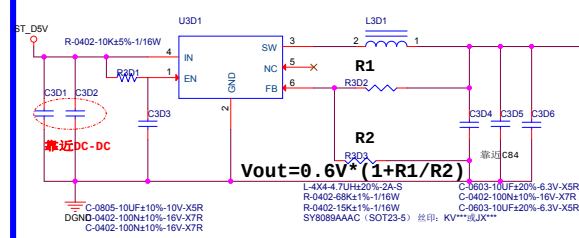




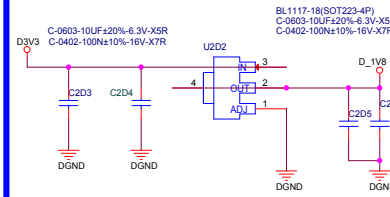
+5V Power for Standby (ST_D5V)



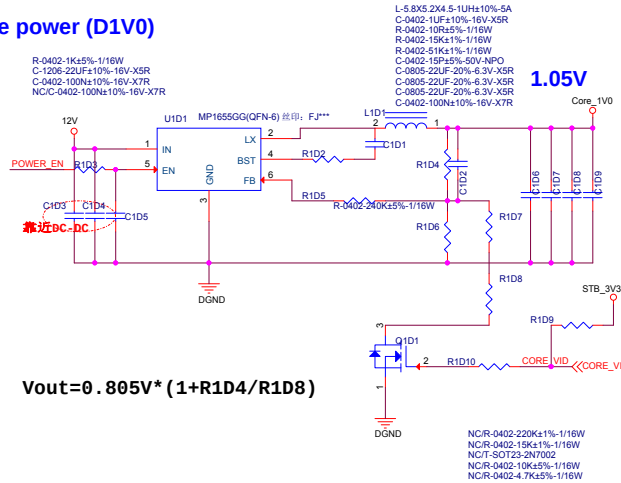
+3.3V_STANDBY (STB_3V3)



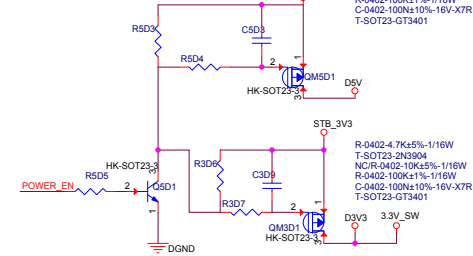
EMMC (D_1V8)



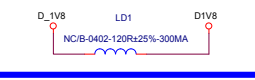
Core power (D1V0)



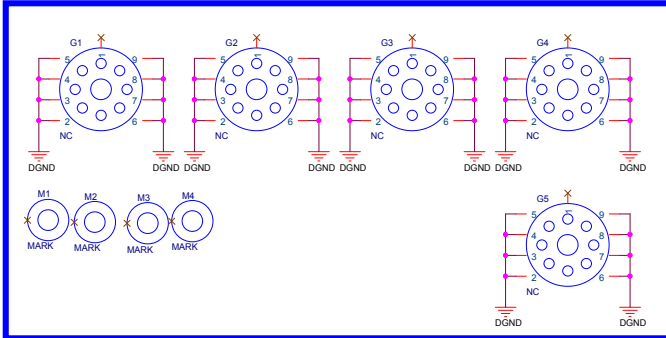
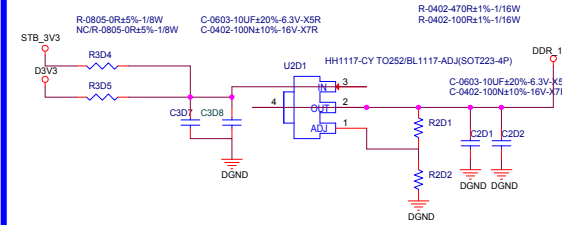
D5V& D3V3 SWITCH

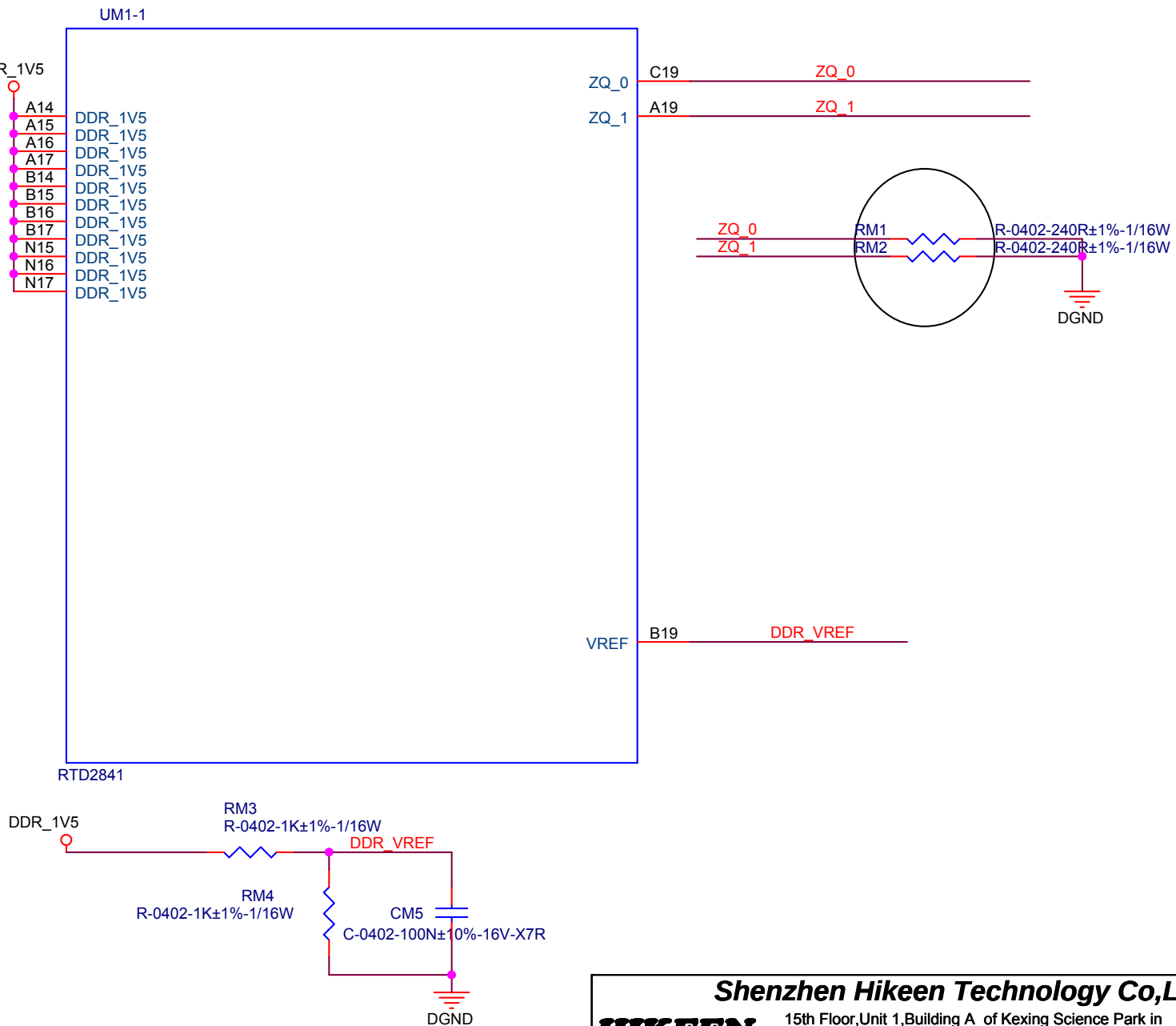


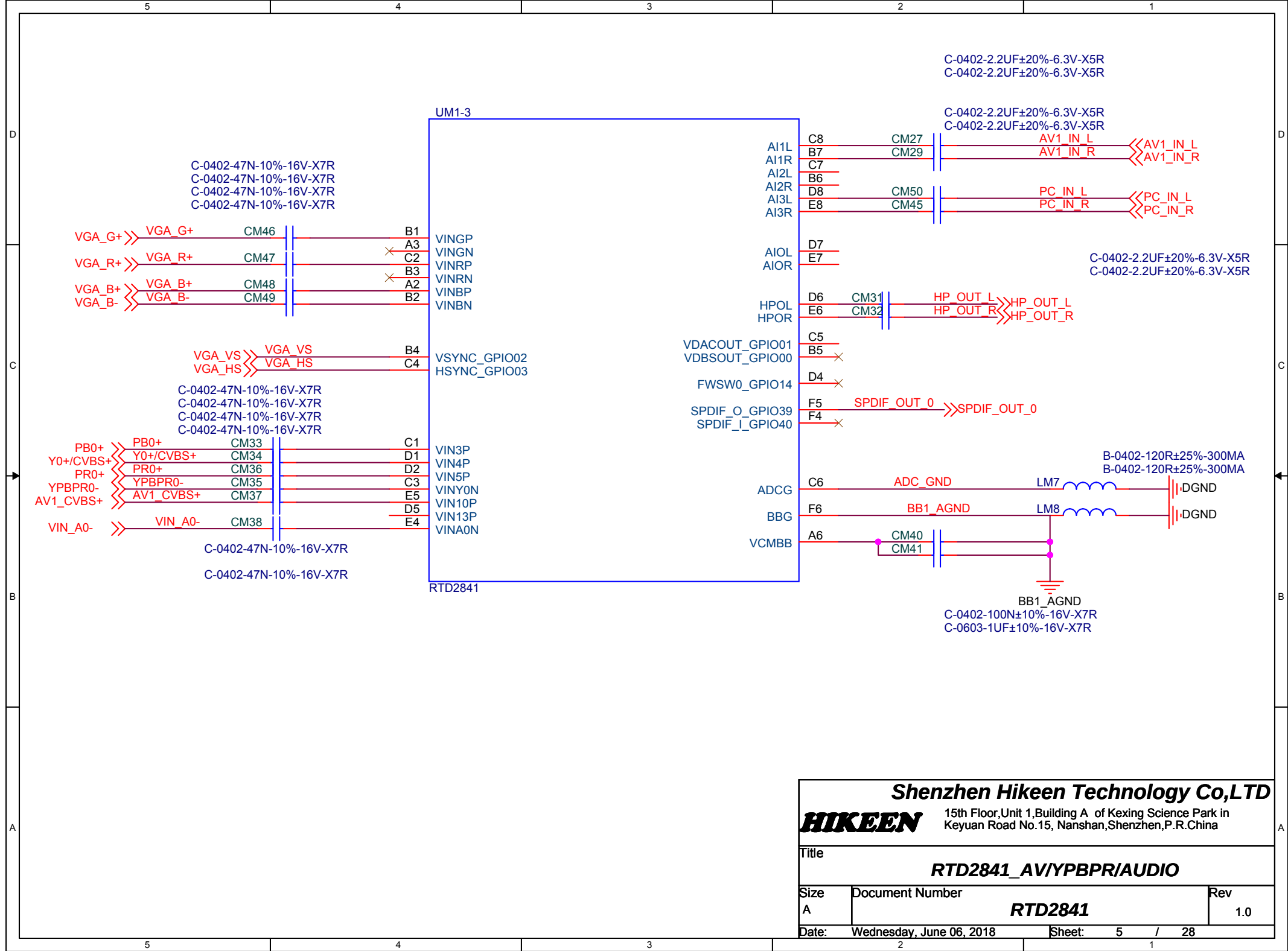
D1V8_NORMAL(D1V8)

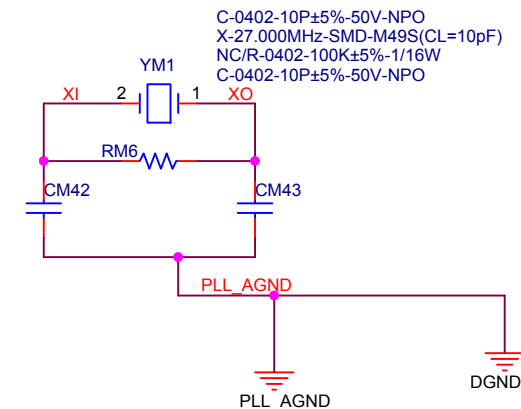
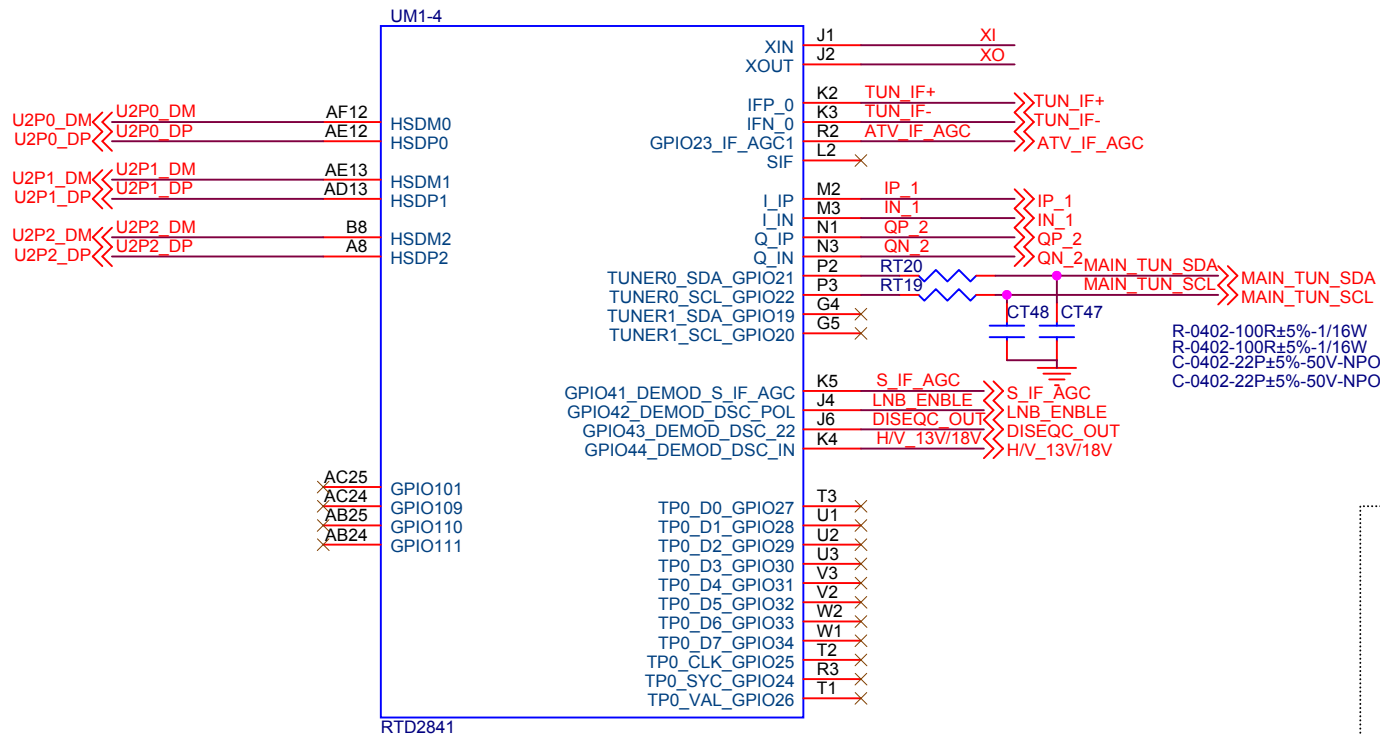


DDR_1V5

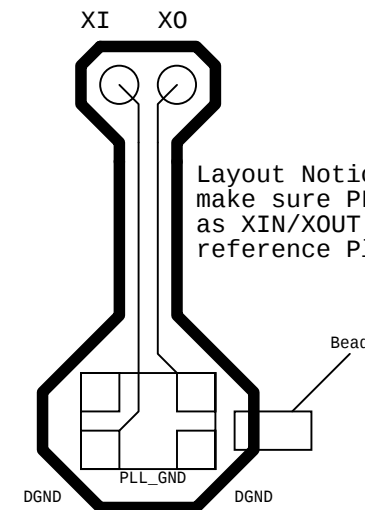




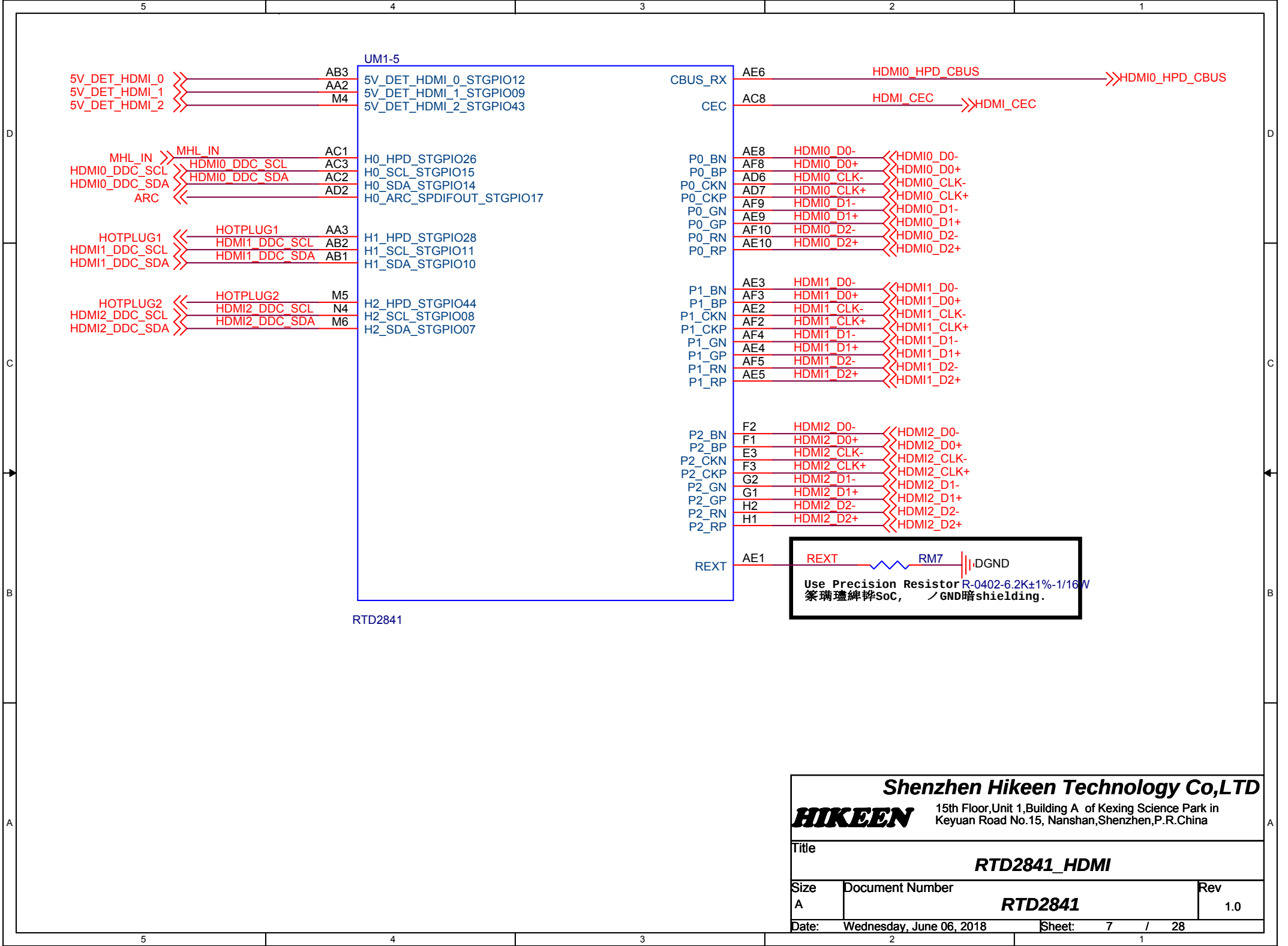


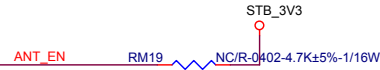
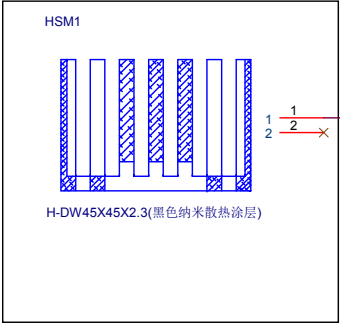


Shielding XTAL by PLL_GND



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Title		
RTD2841_IF/USB		
Size A4	Document Number RTD2841	Rev 1.0
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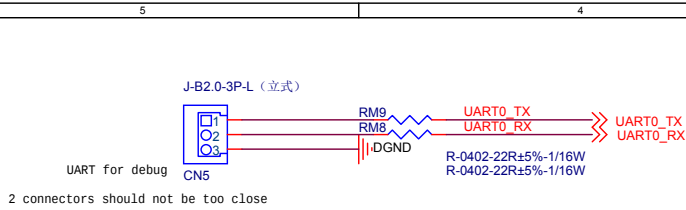




PC_CD#	PC_CD#	AF14	PC_CD1_N_GPIO46
PC_CE1#	PC_CE1#	AA16	PC_CE1_1_N_GPIO57
PC_OE#	PC_OE#	AF17	PC_OE_N_GPIO59
PC_IORD#	PC_IORD#	AD17	PC_IORD_N_GPIO60
PC_IOWR#	PC_IOWR#	AC17	PC_IOWR_N_GPIO62
PC_REG#	PC_REG#	AF23	PC_REG_N_GPIO89
PC_RST	PC_RST	AB21	PC_RST_GPIO83
PC_WE#	PC_WE#	AD19	PC_WE_N_GPIO71
PC_INPACK#	PC_INPACK#	AB22	PC_INPACK_N_GPIO87(PC_CD2_N)
PC_WAIT#	PC_WAIT#	AD22	PC_WAIT_N_GPIO85
PC_IRQ#	PC_IRQ#	AA19	CAM_JRE_N_5V_GPIO45
PC_ADDR0	PC_ADDR0	AE24	PC_A0_GPIO94
PC_ADDR1	PC_ADDR1	AB23	PC_A1_GPIO92
PC_ADDR2	PC_ADDR2	AD23	PC_A2_GPIO90
PC_ADDR3	PC_ADDR3	AE23	PC_A3_GPIO88
PC_ADDR4	PC_ADDR4	AC22	PC_A4_GPIO86
PC_ADDR5	PC_ADDR5	AE22	PC_A5_GPIO84
PC_ADDR6	PC_ADDR6	AC21	PC_A6_GPIO82
PC_ADDR7	PC_ADDR7	AE21	PC_A7_GPIO80
PC_ADDR8	PC_ADDR8	AE18	PC_A8_GPIO65
PC_ADDR9	PC_ADDR9	AA17	PC_A9_GPIO63
PC_ADDR10	PC_ADDR10	AE17	PC_A10_GPIO58
PC_ADDR11	PC_ADDR11	AB17	PC_A11_GPIO61
PC_ADDR12	PC_ADDR12	AA20	PC_A12_GPIO78
PC_ADDR13	PC_ADDR13	AC18	PC_A13_GPIO67
PC_ADDR14	PC_ADDR14	AA18	PC_A14_GPIO69
PC_DATA0	PC_DATA0	AE25	PC_D0_GPIO96
PC_DATA1	PC_DATA1	AD25	PC_D1_GPIO98
PC_DATA2	PC_DATA2	AD24	PC_D2_GPIO100
PC_DATA3	PC_DATA3	AC14	PC_D3_GPIO47
PC_DATA4	PC_DATA4	AE15	PC_D4_GPIO49
PC_DATA5	PC_DATA5	AC15	PC_D5_GPIO51
PC_DATA6	PC_DATA6	AA15	PC_D6_GPIO53
PC_DATA7	PC_DATA7	AD16	PC_D7_GPIO55
TPI_DATA0	TPI_DATA0	AF25	TP1_D0_GPIO95
TPI_DATA1	TPI_DATA1	AE26	TP1_D1_GPIO97
TPI_DATA2	TPI_DATA2	AD26	TP1_D2_GPIO99
TPI_DATA3	TPI_DATA3	AF15	TP1_D3_GPIO48
TPI_DATA4	TPI_DATA4	AD15	TP1_D4_GPIO50
TPI_DATA5	TPI_DATA5	AB15	TP1_D5_GPIO52
TPI_DATA6	TPI_DATA6	AE16	TP1_D6_GPIO54
TPI_DATA7	TPI_DATA7	AB16	TP1_D7_GPIO56
TPI_CLK	TPI_CLK	AD21	TP1_CLK_GPIO81
TPI_VALID	TPI_VALID	AC23	TP1_VAL_GPIO91
TPI_SYNC	TPI_SYNC	AF24	TP1_SYC_GPIO93
TPO_DATA0	TPO_DATA0	AD18	TPO_D0_GPIO66
TPO_DATA1	TPO_DATA1	AB18	TPO_D1_GPIO68
TPO_DATA2	TPO_DATA2	AE19	TPO_D2_GPIO70
TPO_DATA3	TPO_DATA3	AB19	TPO_D3_GPIO72
TPO_DATA4	TPO_DATA4	AF20	TPO_D4_GPIO73
TPO_DATA5	TPO_DATA5	AD20	TPO_D5_GPIO75
TPO_DATA6	TPO_DATA6	AC20	TPO_D6_GPIO77
TPO_DATA7	TPO_DATA7	AF21	TPO_D7_GPIO79
TPO_CLK	TPO_CLK	AB20	TPO_CLK_GPIO76
TPO_VALID	TPO_VALID	AE20	TPO_VAL_GPIO74
TPO_SYNC	TPO_SYNC	AF18	TPO_SYC_GPIO64

GPIO35_TP2_SYNC	G6	X
GPIO36_TP2_CLK	H5	X
GPIO37_TP2_VAL	H6	X
GPIO38_TP2_D0	J5	X
GPIO108_I2C1_SCL	AA25	X
GPIO107_I2C1_SDA	AA28	X
EMMC_D0	U26	EMMC_D0
EMMC_D1	U25	EMMC_D1
EMMC_D2	U24	EMMC_D2
EMMC_D3	V26	EMMC_D3
EMMC_D4	V24	EMMC_D4
EMMC_D5	V25	EMMC_D5
EMMC_D6	T24	EMMC_D6
EMMC_D7	T25	EMMC_D7
EMMC_D8	W24	EMMC_D8
EMMC_D9	Y24	EMMC_D9
EMMC_CLK	W25	EMMC_CLK
EMMC_CMD	Y26	EMMC_CMD
EMMC_RST_N	Y26	EMMC_RSTN
GPIO113	AC26	X
GPIO119	AA24	X
GPIO120	AA22	X
GPIO114	AA23	X
GPIO169_SC_DATA	J22	X
GPIO170_SC_RSTn	J21	X
GPIO171_SC_CLK	H22	X
GPIO172_SC_CD	H21	X
GPIO173_LD_SCK	G22	X
GPIO174_LD_SD0	G23	X
GPIO175_LD_VSYNC	G21	X
GPIO176_LD_SDI	F23	X
GPIO177	F22	X
GPIO178_WCLK	C12	X
GPIO179_MCLK	B12	X
GPIO180_SCLK	C11	X
GPIO181_I2S_D0	B11	X
GPIO182_I2S_D1	A11	X

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Title		
RTD2841_Peripherals		
Size	Document Number	Rev
B	RTD2841	1.0
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Make on board

UART0 /URRBUS

Power On Latch

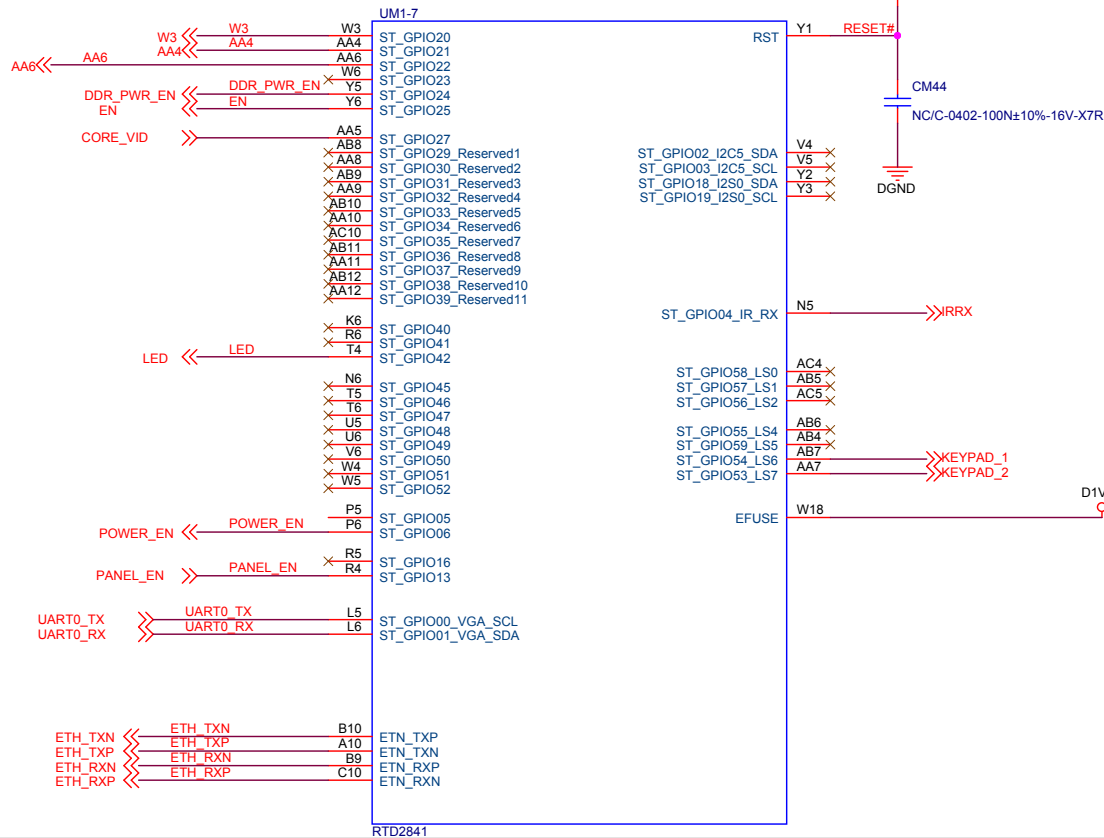
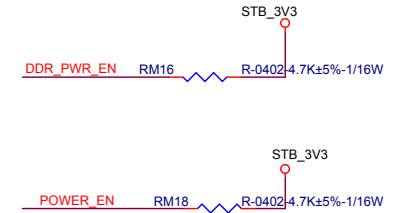
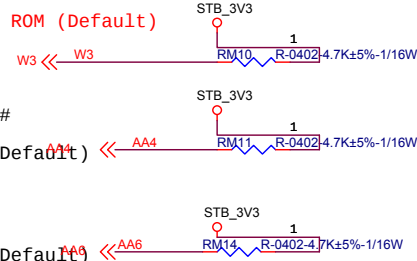
PORL_BOOT_MODE
0 : SPI
1 : BOOT FROM ROM (Default)

PORL_EJTAG_EN#

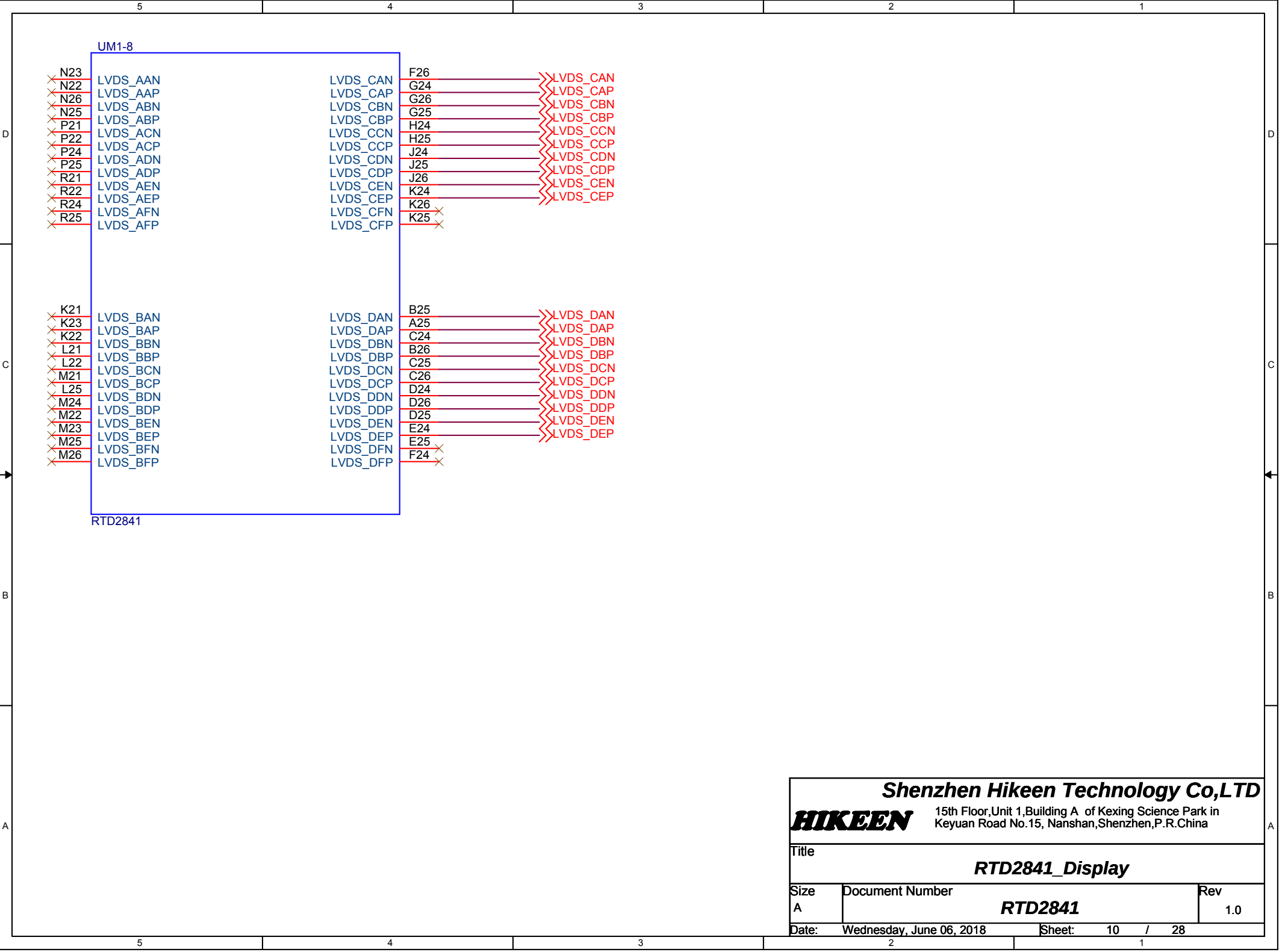
0 : Enable
1 : Disable (Default)

POL_TEST_EN#

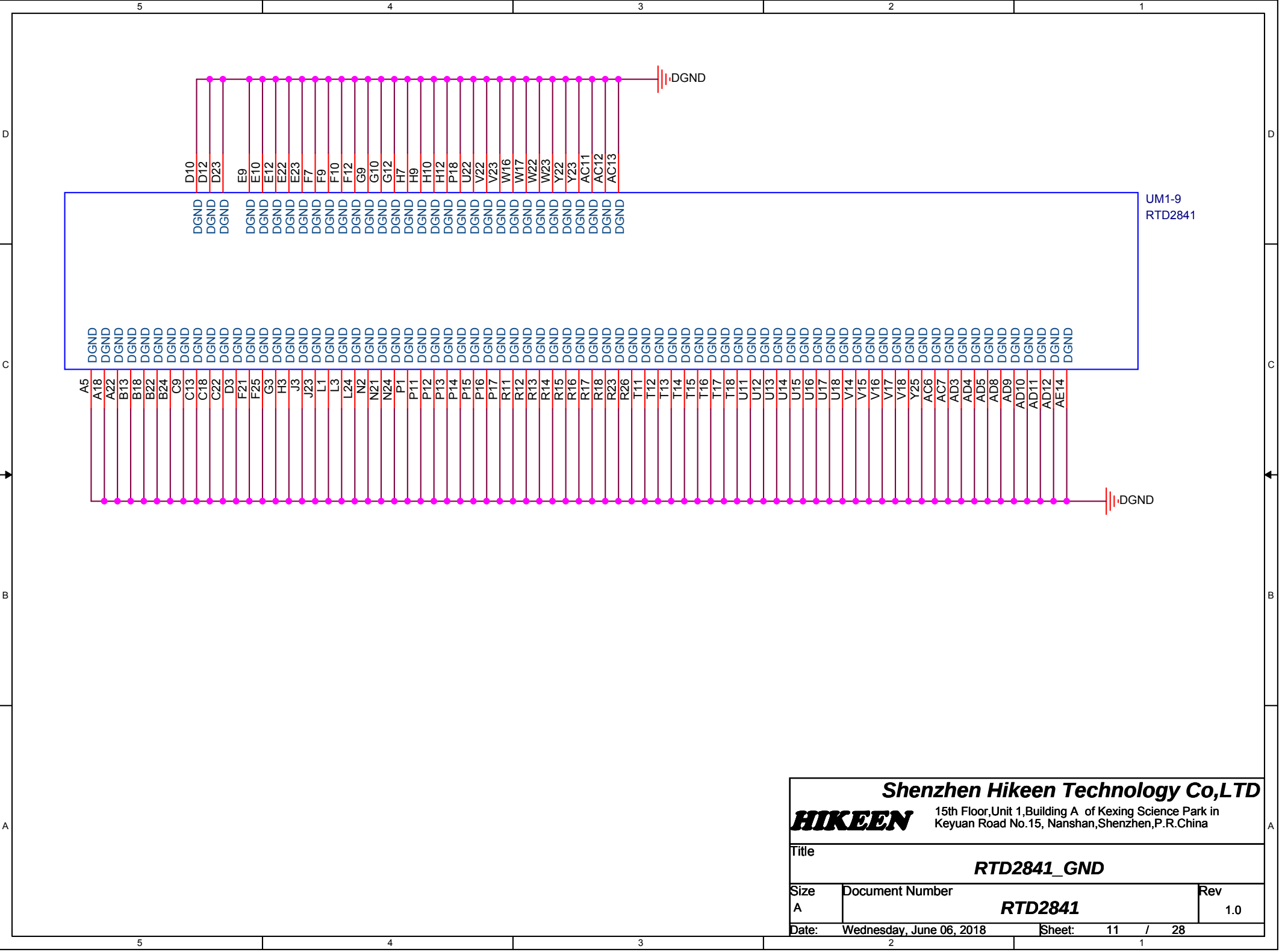
0 : Enable
1 : Disable (Default)



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Title			
RTD2841_STB			
Size	Document Number	Rev	
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Title		
RTD2841_Display		
Size	Document Number	Rev
A	RTD2841	1.0
Date:	Wednesday, June 06, 2018	Sheet: 10 / 28

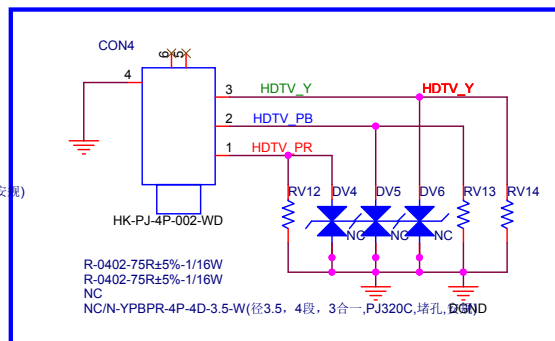
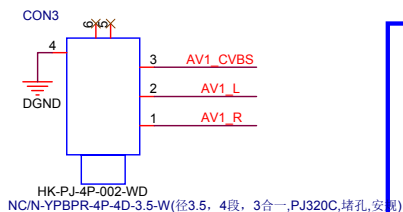
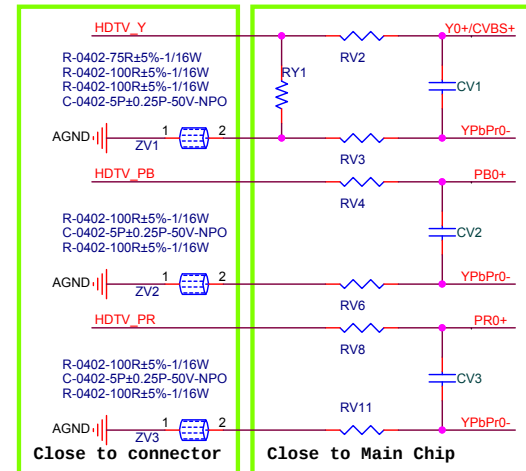
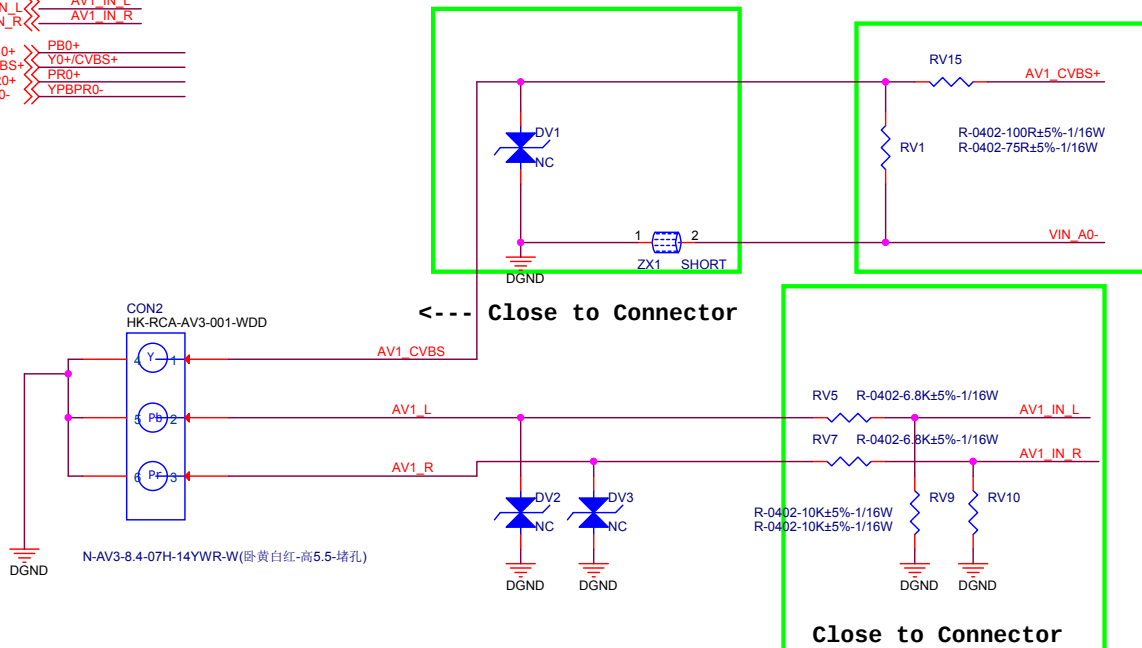


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Title RTD2841_GND		
Size A	Document Number RTD2841	Rev 1.0
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AV1_CVBS+Audio In

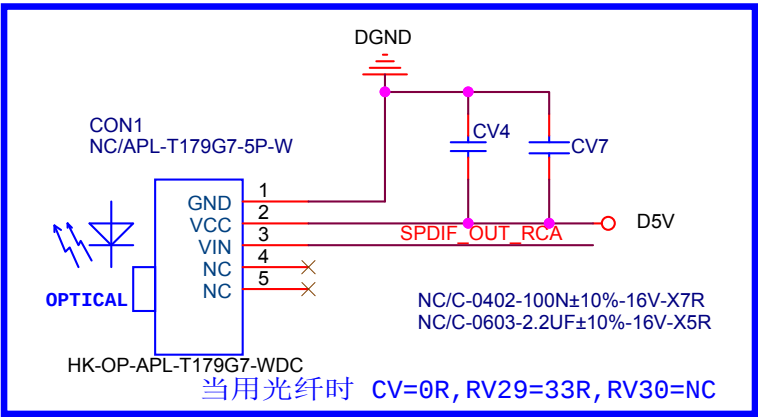
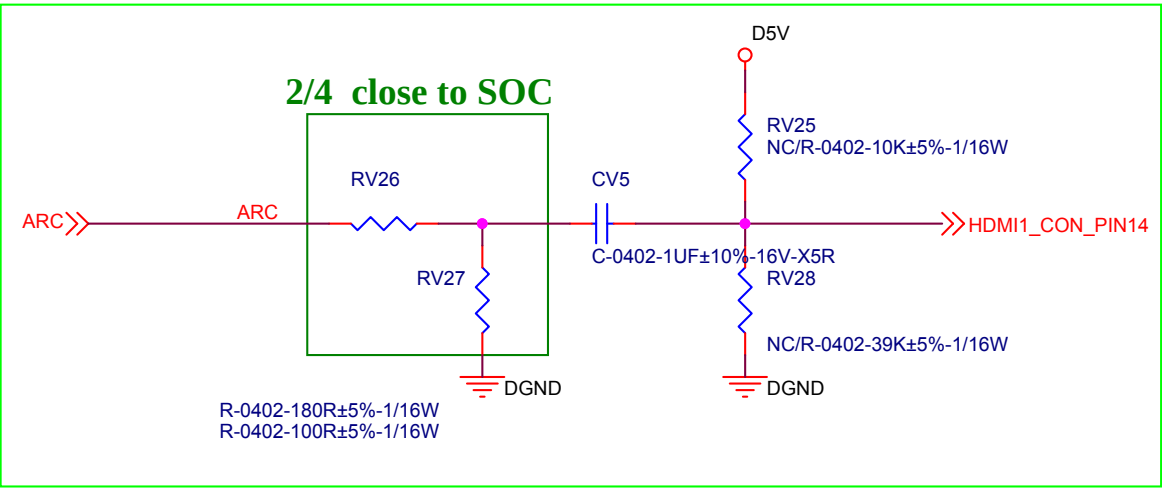
AV1_CVBS+ AV1_CVBS+
VIN_A0- VIN_A0-
AV1_IN_L AV1_IN_L
AV1_IN_R AV1_IN_R

PB0+ PB0+
Y0+/CVBS+ Y0+/CVBS+
PR0+ PR0+
YPBPR0- YPBPR0-

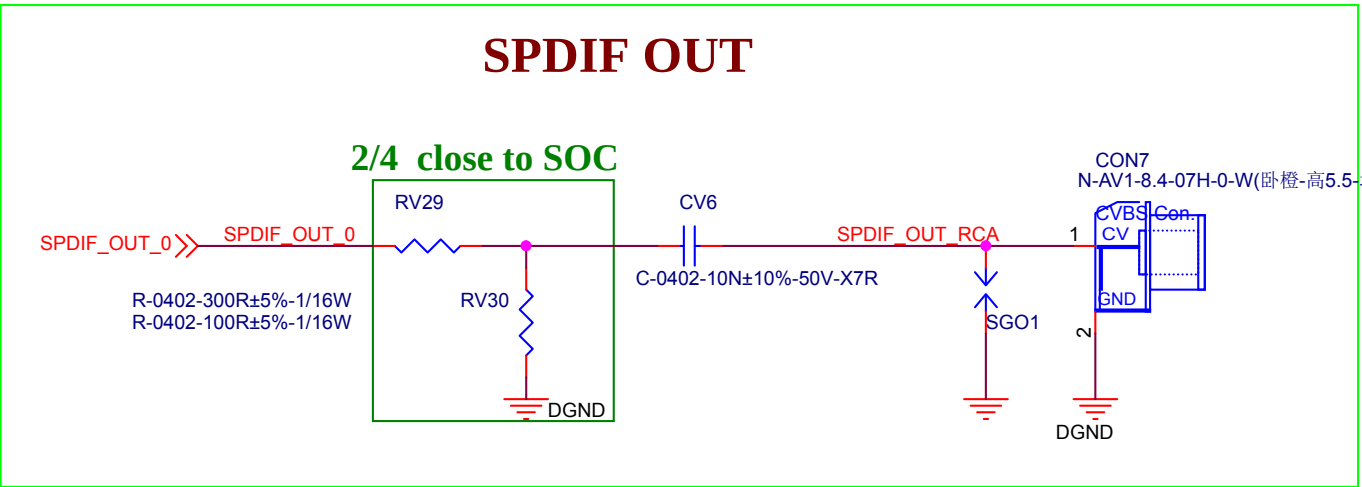


HDMI 1.4 ARC Fun.

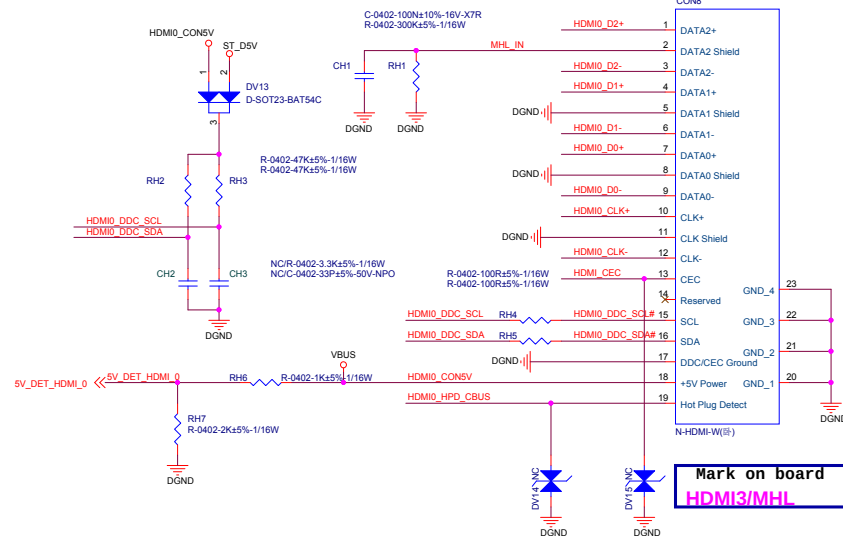
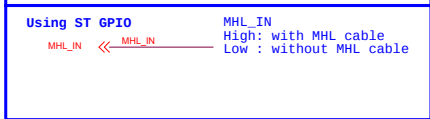
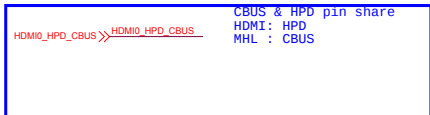
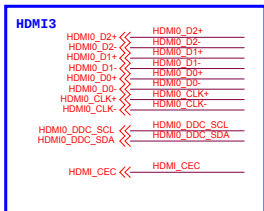
SPDIF_O one signal for two ball out



SPDIF OUT



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RTD2841_SPDIF OUT		
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MHL Impedence (D0+/D0-)

Differential mode =
100R ± 15%
Common mode = 30R ± 6R

2-Layer PCB

GND	4mil	D0+	4mil	GND	4mil	D0-	4mil	GND
>10mil		12mil		5mil		12mil		>10mil

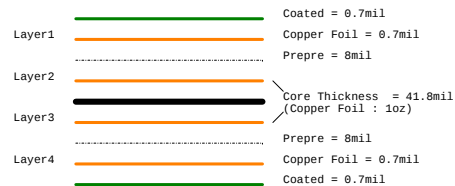
4-Layer PCB

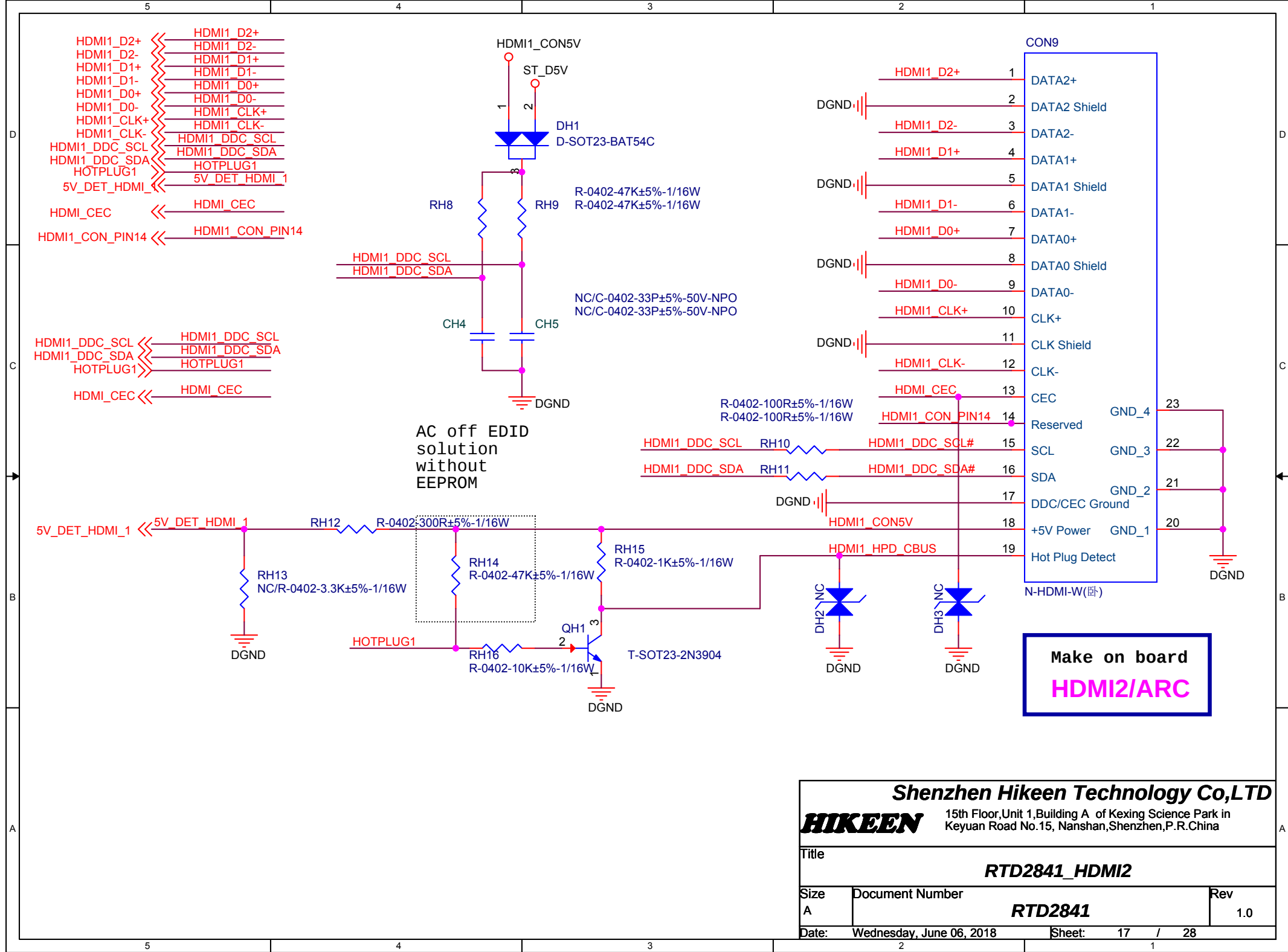
GND	8mil	D0+	7mil	D0-	8mil	GND		
>10mil		5mil		5mil		>10mil		

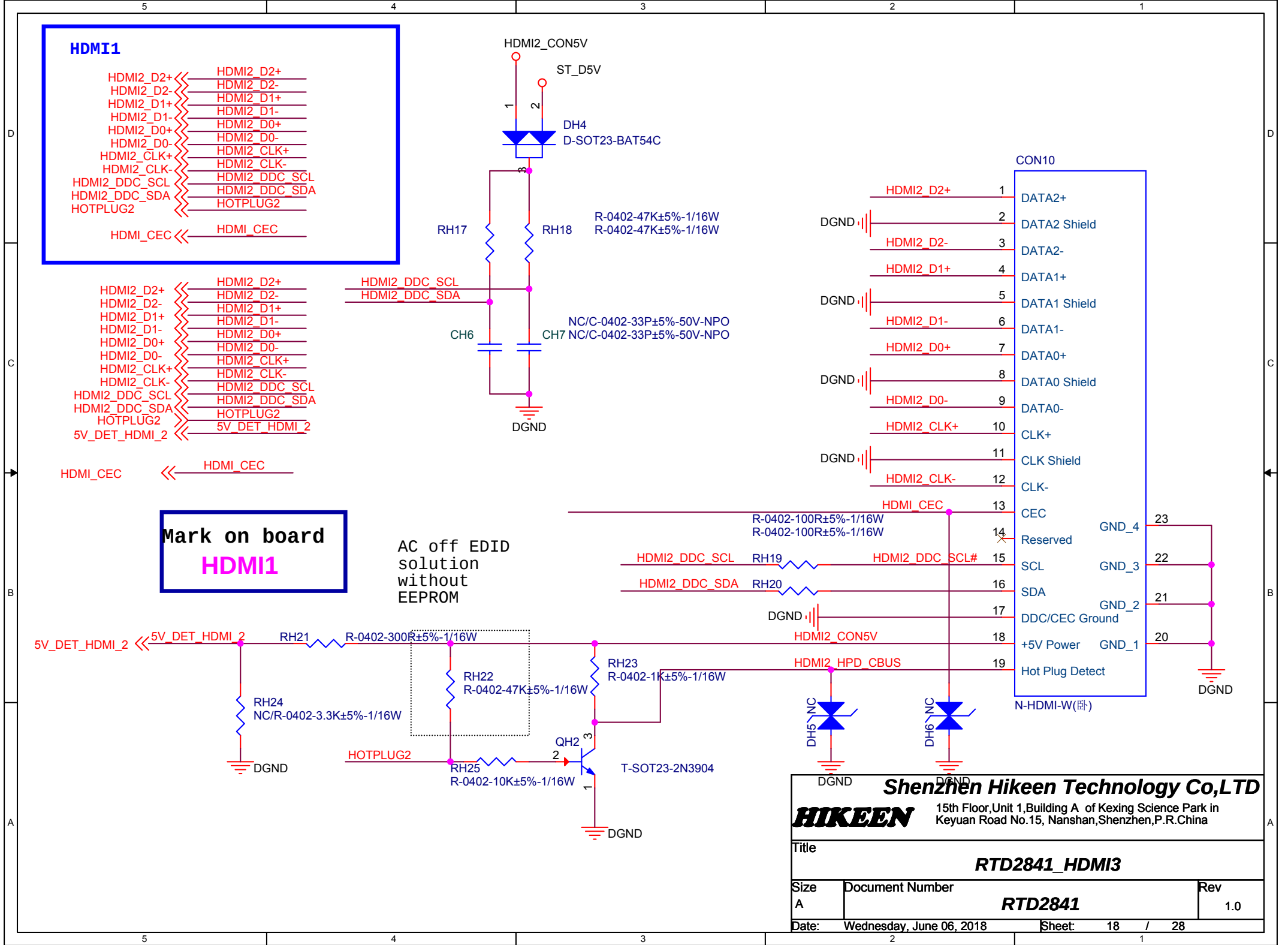
2-Layer PCB stack



4-Layer PCB stack

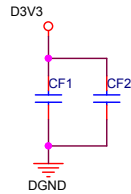
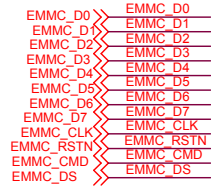




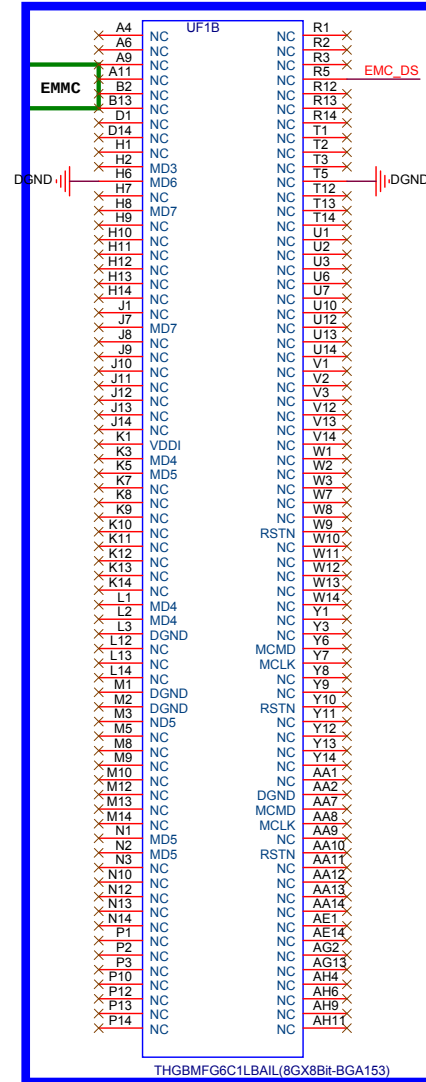
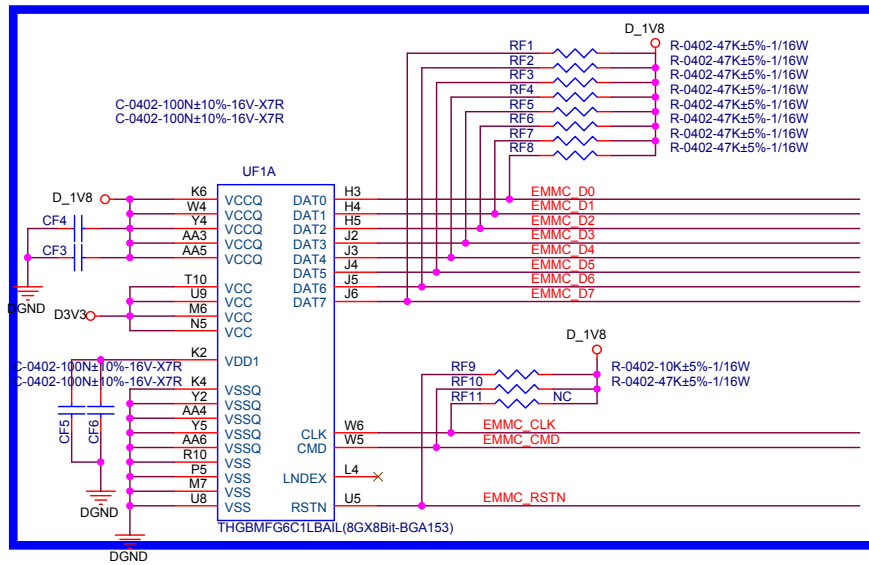




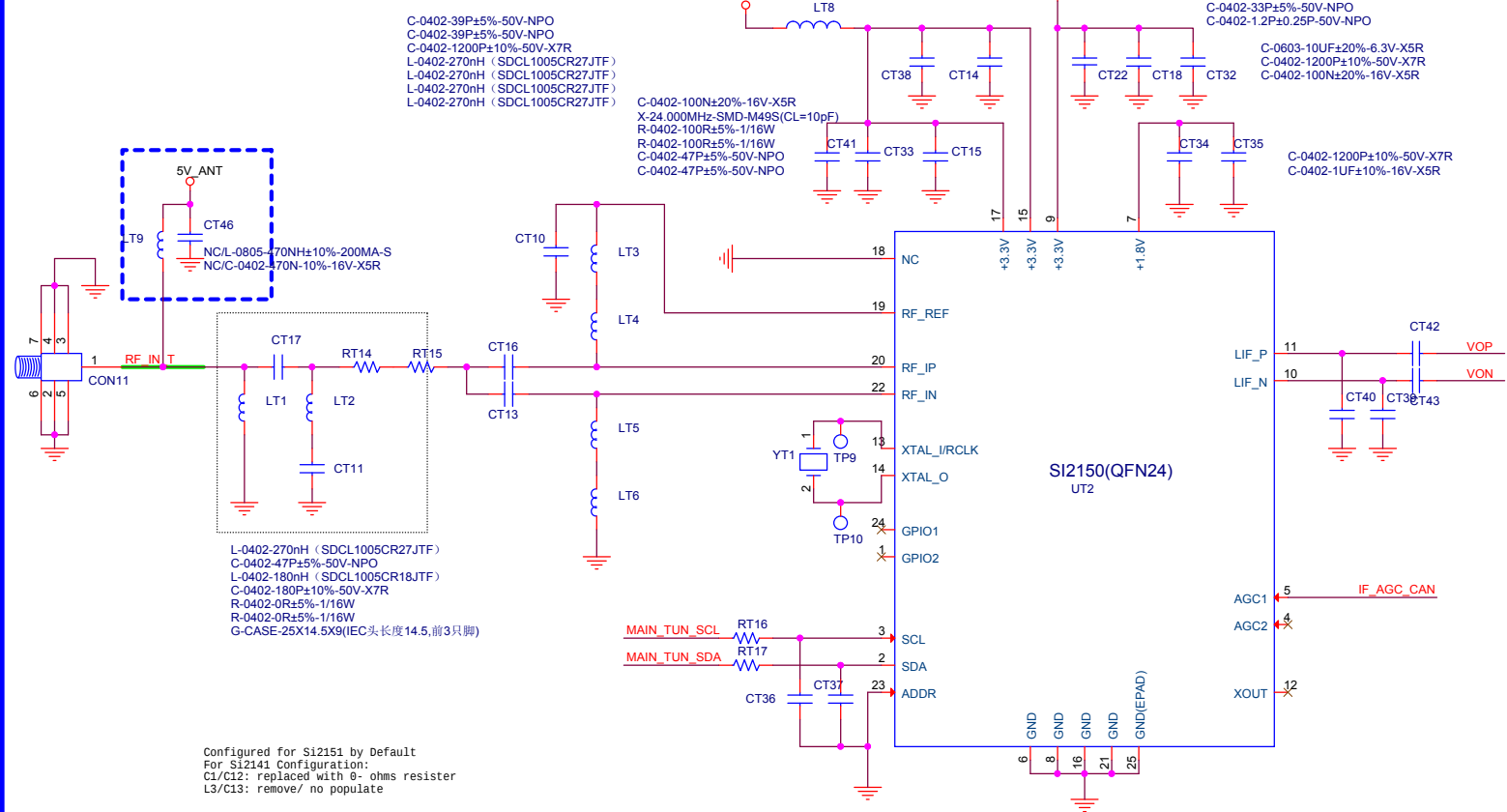
eMMC



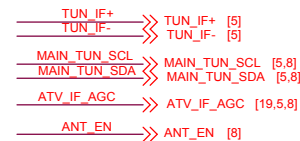
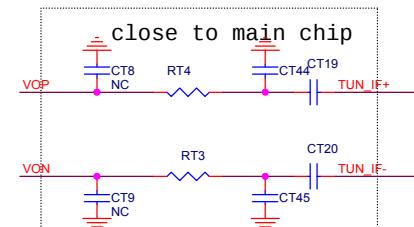
C-0603-2.2UF±10%-16V-X5R
C-0402-100N±10%-16V-X7R



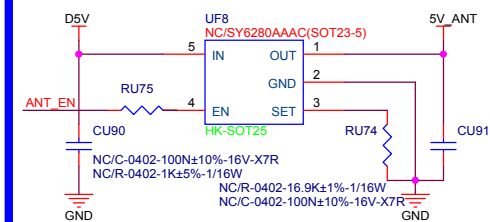
Tuner SI2150 For DVB-T/T2/C



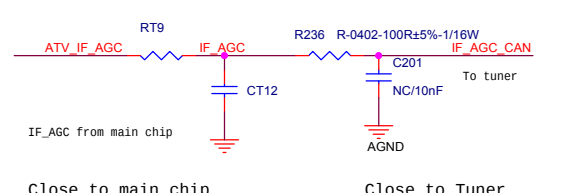
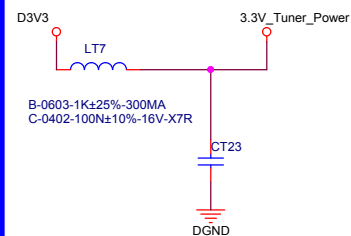
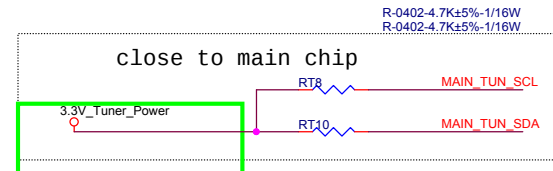
IF Interface Filter



5V ANT Power

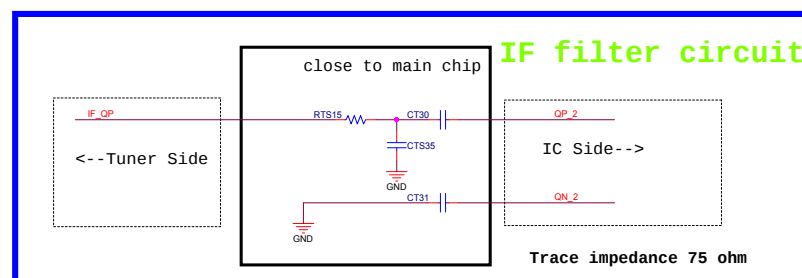
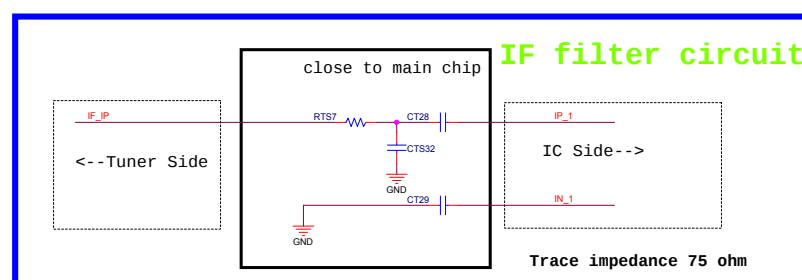
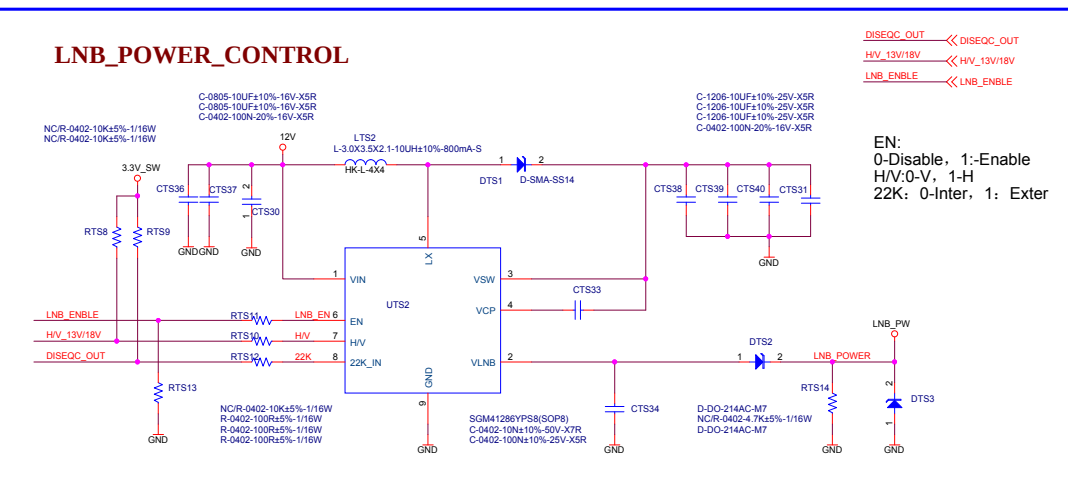
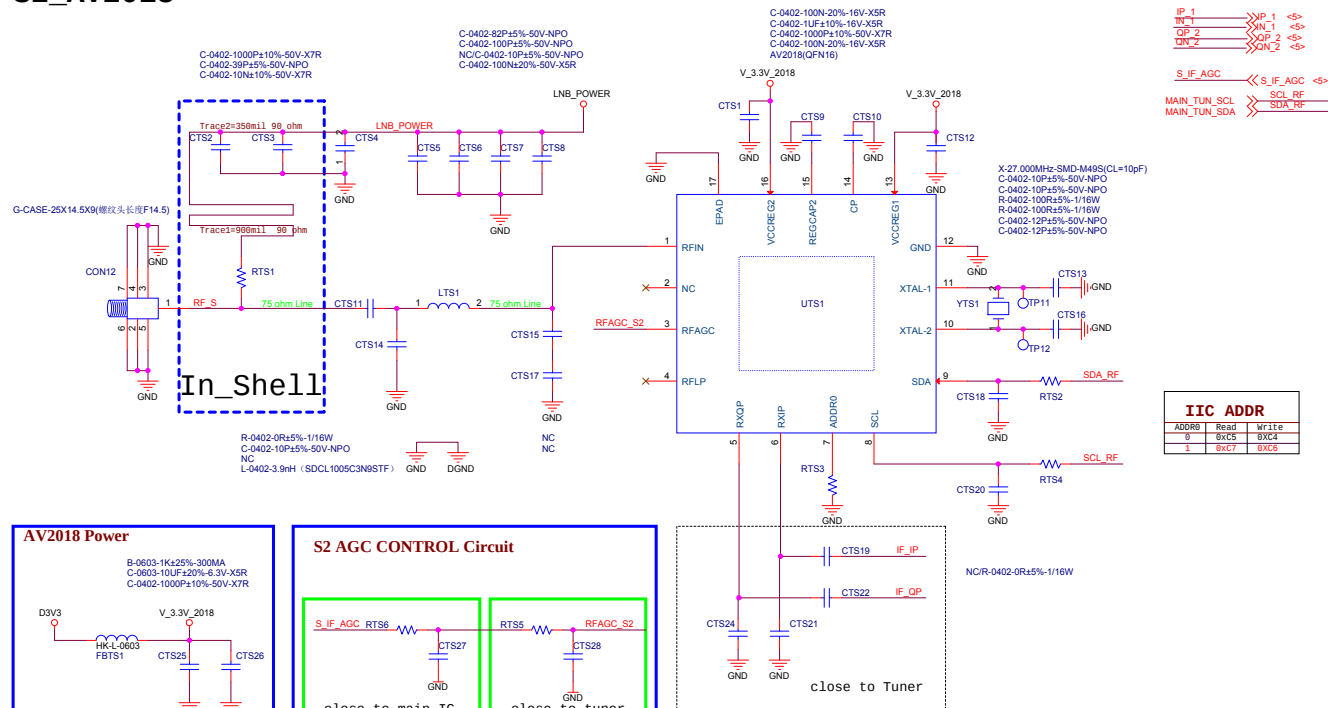


I2C for Tuner

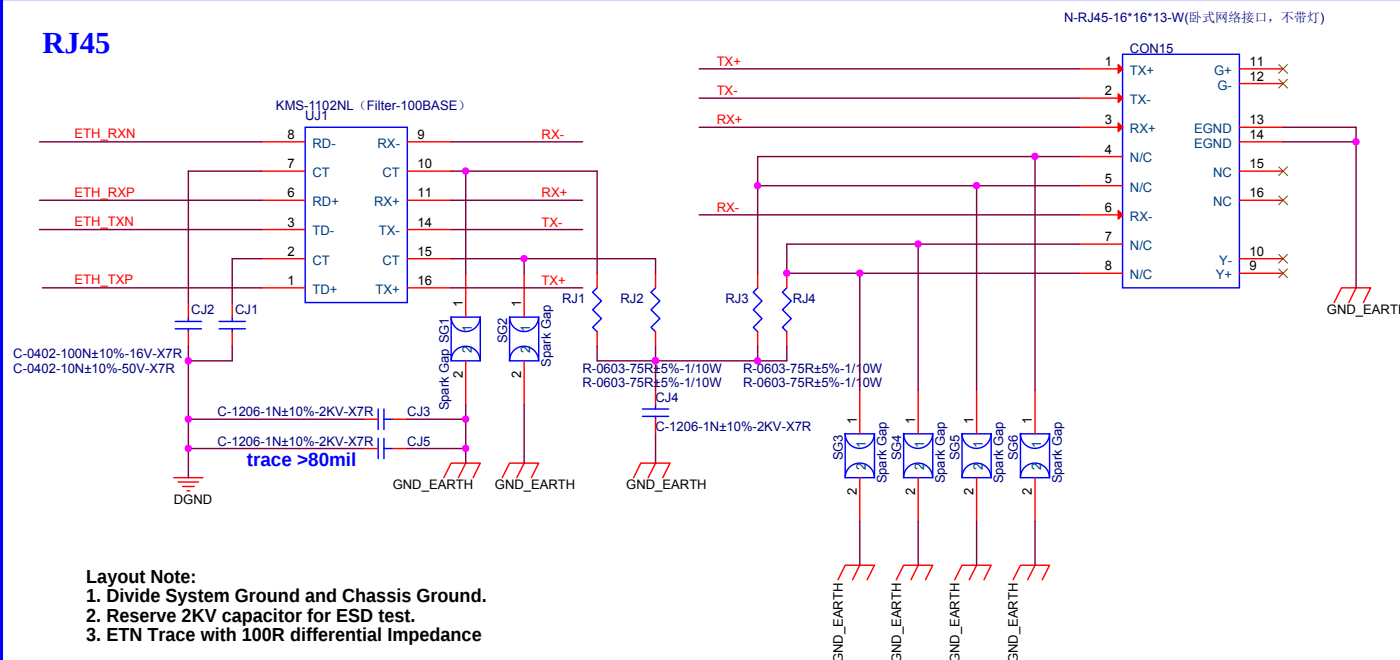


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Title			
Tuner(SI2151)			
Size	Document Number	Rev	
Custom	RTD2841	1.0	
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S2_AV2018



RJ45

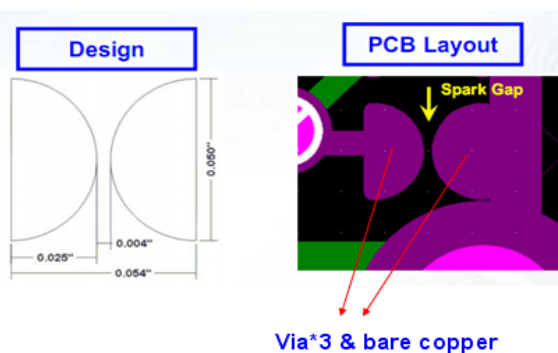


```
main chip <-->
```

[5] ETH_TXN >>> ETH_TXN
 [5] ETH_TXP >>> ETH_TXP

 [5] ETH_RXN <<< ETH_RXN
 [5] ETH_RXP <<< ETH_RXP

Spark Gap for ESD Protection



Via*3 & bare copper

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Title

Ethernet 10/100

Size	
B	

Document Number

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TPO : From Scalar (From demod for Europe)
TPI : To Scalar
PC : To Scalar

Mark on board
PC CARD

PC_CD# <<< PC_CD#
TPI_DATA3 <<< TPI_DATA3
TPI_DATA4 <<< TPI_DATA4
TPI_DATA5 <<< TPI_DATA5
TPI_DATA6 <<< TPI_DATA6
TPI_DATA7 <<< TPI_DATA7

PC_IORD# <<< PC_IORD#
PC_IOWR# <<< PC_IOWR#
TPO_SYNC <<< TPO_SYNC
TPO_DATA0 <<< TPO_DATA0
TPO_DATA1 <<< TPO_DATA1
TPO_DATA2 <<< TPO_DATA2
TPO_DATA3 <<< TPO_DATA3

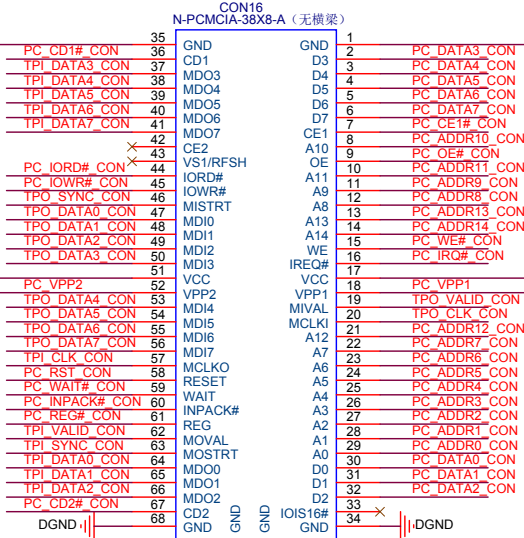
PC_ADDR14 <<< PC_ADDR14
PC_ADDR13 <<< PC_ADDR13
PC_ADDR12 <<< PC_ADDR12
PC_ADDR11 <<< PC_ADDR11
PC_ADDR10 <<< PC_ADDR10
PC_ADDR9 <<< PC_ADDR9
PC_ADDR8 <<< PC_ADDR8
PC_ADDR7 <<< PC_ADDR7
PC_ADDR6 <<< PC_ADDR6
PC_ADDR5 <<< PC_ADDR5
PC_ADDR4 <<< PC_ADDR4
PC_ADDR3 <<< PC_ADDR3
PC_ADDR2 <<< PC_ADDR2
PC_ADDR1 <<< PC_ADDR1
PC_ADDR0 <<< PC_ADDR0

TPO_DATA4 <<< TPO_DATA4
TPO_DATA5 <<< TPO_DATA5
TPO_DATA6 <<< TPO_DATA6
TPO_DATA7 <<< TPO_DATA7
TPI_CLK <<< TPI_CLK
PC_RST <<< PC_RST
PC_WAIT# <<< PC_WAIT#
PC_INPACK# <<< PC_INPACK#
PC_REG# <<< PC_REG#
TPI_VALID <<< TPI_VALID
TPI_SYNC <<< TPI_SYNC
TPI_DATA0 <<< TPI_DATA0
TPI_DATA1 <<< TPI_DATA1
TPI_DATA2 <<< TPI_DATA2
PC_CD# <<< PC_CD#

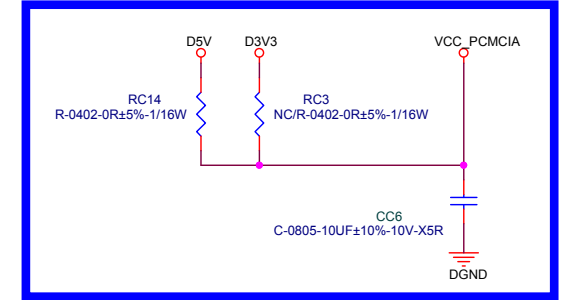
PC_VPP2 <<< PC_VPP2
TPO_DATA4_CON <<< TPO_DATA4_CON
TPO_DATA5_CON <<< TPO_DATA5_CON
TPO_DATA6_CON <<< TPO_DATA6_CON
TPO_DATA7_CON <<< TPO_DATA7_CON
TPI_CLK_CON <<< TPI_CLK_CON
PC_RST_CON <<< PC_RST_CON
PC_WAIT#_CON <<< PC_WAIT#_CON
PC_INPACK#_CON <<< PC_INPACK#_CON
PC_REG#_CON <<< PC_REG#_CON
TPI_VALID_CON <<< TPI_VALID_CON
TPI_SYNC_CON <<< TPI_SYNC_CON
TPI_DATA0_CON <<< TPI_DATA0_CON
TPI_DATA1_CON <<< TPI_DATA1_CON
TPI_DATA2_CON <<< TPI_DATA2_CON
PC_CD2#_CON <<< PC_CD2#_CON

PC_VPP1 <<< PC_VPP1
TPO_VALID_CON <<< TPO_VALID_CON
TPO_CLK_CON <<< TPO_CLK_CON
PC_ADDR12_CON <<< PC_ADDR12_CON
PC_ADDR7_CON <<< PC_ADDR7_CON
PC_ADDR6_CON <<< PC_ADDR6_CON
PC_ADDR5_CON <<< PC_ADDR5_CON
PC_ADDR4_CON <<< PC_ADDR4_CON
PC_ADDR3_CON <<< PC_ADDR3_CON
PC_ADDR2_CON <<< PC_ADDR2_CON
PC_ADDR1_CON <<< PC_ADDR1_CON
PC_ADDR0_CON <<< PC_ADDR0_CON

VCC_PCMCIA
CC1
DGND
C-0402-100N±10%-16V-X7R
C-0402-100N±10%-16V-X7R



VCC_PCMCIA
CC3
CC4
DGND
C-0402-100N±10%-16V-X7R
C-0402-100N±10%-16V-X7R



PC_CD1#	PC_CD2#	PC_CD#
GND	GND	0V
GND	NC	2.38V
NC	GND	2.38V
NC	NC	5V

PC_CD1# <<< PC_CD1#_CON
TPI_DATA3 <<< TPI_DATA3_CON
TPI_DATA4 <<< TPI_DATA4_CON
TPI_DATA5 <<< TPI_DATA5_CON
TPI_DATA6 <<< TPI_DATA6_CON
TPI_DATA7 <<< TPI_DATA7_CON

PC_IORD# <<< PC_IORD#_CON
PC_IOWR# <<< PC_IOWR#_CON
TPO_SYNC <<< TPO_SYNC_CON
TPO_DATA0 <<< TPO_DATA0_CON
TPO_DATA1 <<< TPO_DATA1_CON
TPO_DATA2 <<< TPO_DATA2_CON
TPO_DATA3 <<< TPO_DATA3_CON

R-0402-22R±5%-1/16W

PC_DATA3_CON <<< PC_DATA3
PC_DATA4_CON <<< PC_DATA4
PC_DATA5_CON <<< PC_DATA5
PC_DATA6_CON <<< PC_DATA6
PC_DATA7_CON <<< PC_DATA7
PC_CE1#_CON <<< PC_CE1#
PC_ADDR10_CON <<< PC_ADDR10
PC_OE#_CON <<< PC_OE#
PC_ADDR11_CON <<< PC_ADDR11
PC_ADDR9_CON <<< PC_ADDR9
PC_ADDR8_CON <<< PC_ADDR8
PC_ADDR13_CON <<< PC_ADDR13
PC_ADDR14_CON <<< PC_ADDR14
PC_WE#_CON <<< PC_WE#
PC_IRQ#_CON <<< PC_IRQ#

R-0402-22R±5%-1/16W

TPO_VALID_CON <<< TPO_VALID
TPO_CLK_CON <<< TPO_CLK
PC_ADDR12_CON <<< PC_ADDR12
PC_ADDR7_CON <<< PC_ADDR7
PC_ADDR6_CON <<< PC_ADDR6
PC_ADDR5_CON <<< PC_ADDR5
PC_ADDR4_CON <<< PC_ADDR4
PC_ADDR3_CON <<< PC_ADDR3
PC_ADDR2_CON <<< PC_ADDR2
PC_ADDR1_CON <<< PC_ADDR1
PC_ADDR0_CON <<< PC_ADDR0
PC_DATA0_CON <<< PC_DATA0
PC_DATA1_CON <<< PC_DATA1
PC_DATA2_CON <<< PC_DATA2

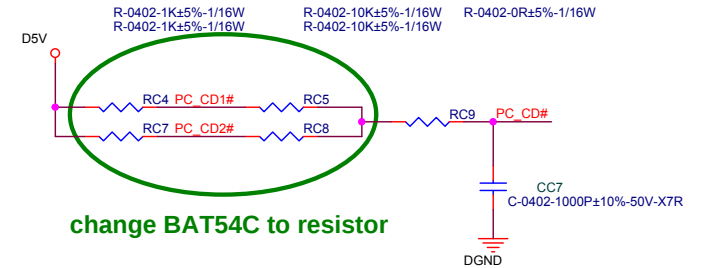
CC8
DGND
NC/C-0402-100P±5%-50V-NPO

CC9
DGND
NC/C-0402-100P±5%-50V-NPO

SYNC/DATA0/CLK ground

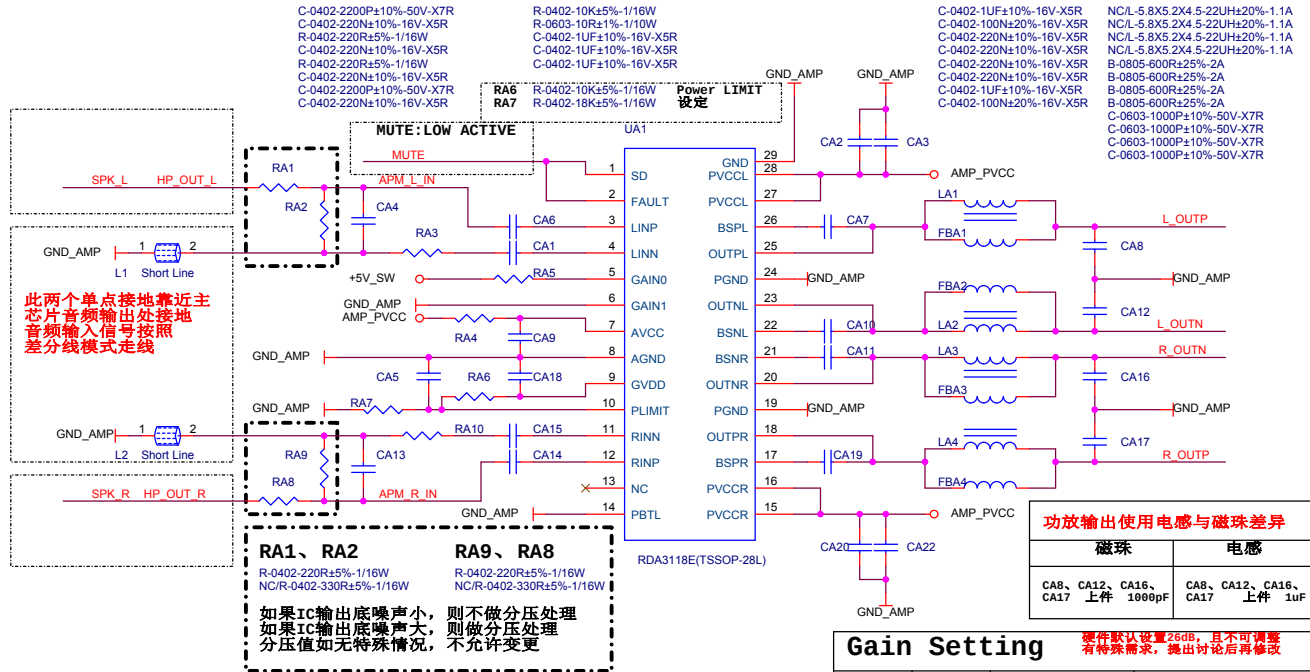
D3V3
RC1
R-0402-10K±5%-1/16W
PC_WAIT#

RC2
R-0402-10K±5%-1/16W
PC_IRQ#



change BAT54C to resistor

AMPLIFIER



更换不同IC，器件修改差异表

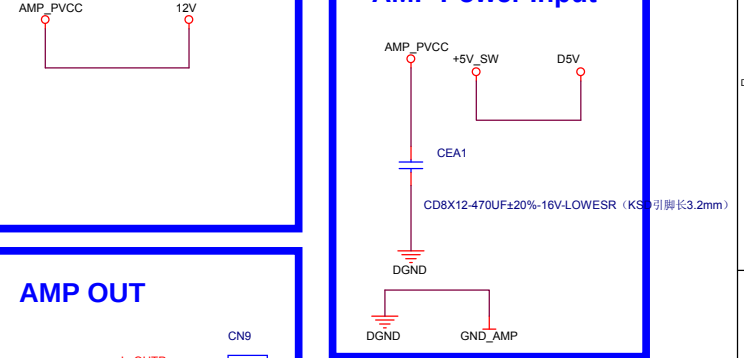
	TDA3110LD2 (26V)	RDA8118E (18V)	OB6220R (20V) OB6228VP (16V)	VA2221 (26V)
Gain设定	RA5上件10K	RA5上件10K	RA5 NC	RA5上件10K
Power LIMIT	RA7上件12K 功率限制约11W	RA7上件18K 功率限制约10.5W	CA14、RA6、RA7 NC 功率限制约10W	RA7上件 6.8K 功率限制约10.5W
其他				

Gain Setting

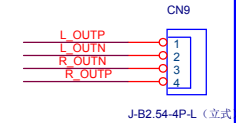
GAIN1	GAIN0	AMP GAIN (DB)	Input Impedance (K R)
		TYP	TYP
0	0	20	60
0	1	26	30
1	0	32	15
1	1	36	9

硬件默认设置26dB，且不可调整
有特殊需求，提出讨论后再修改

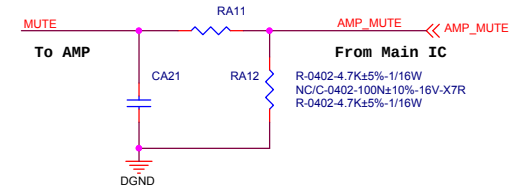
AMP Power Input



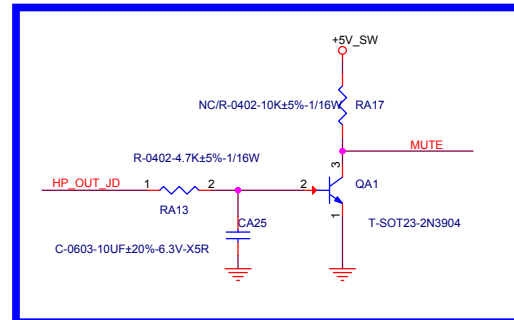
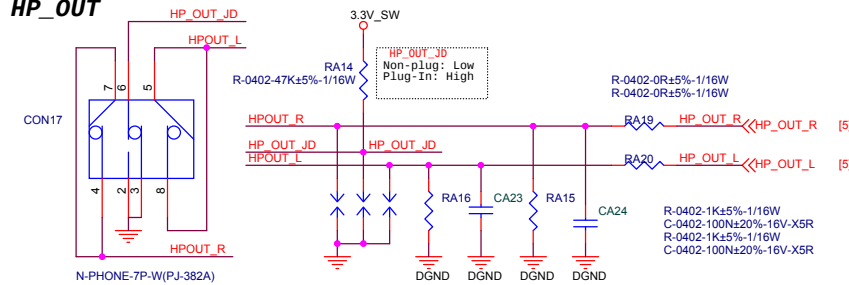
AMP OUT



MUTE: LOW ACTIVE



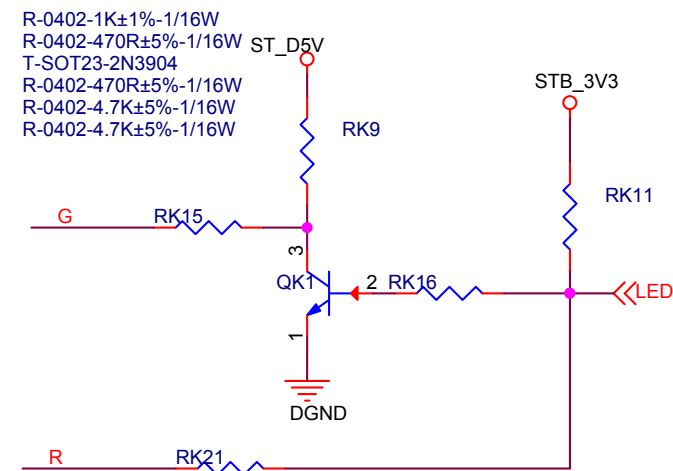
HP_OUT



From Main Chip



J-B2.0-14P-L (立式)



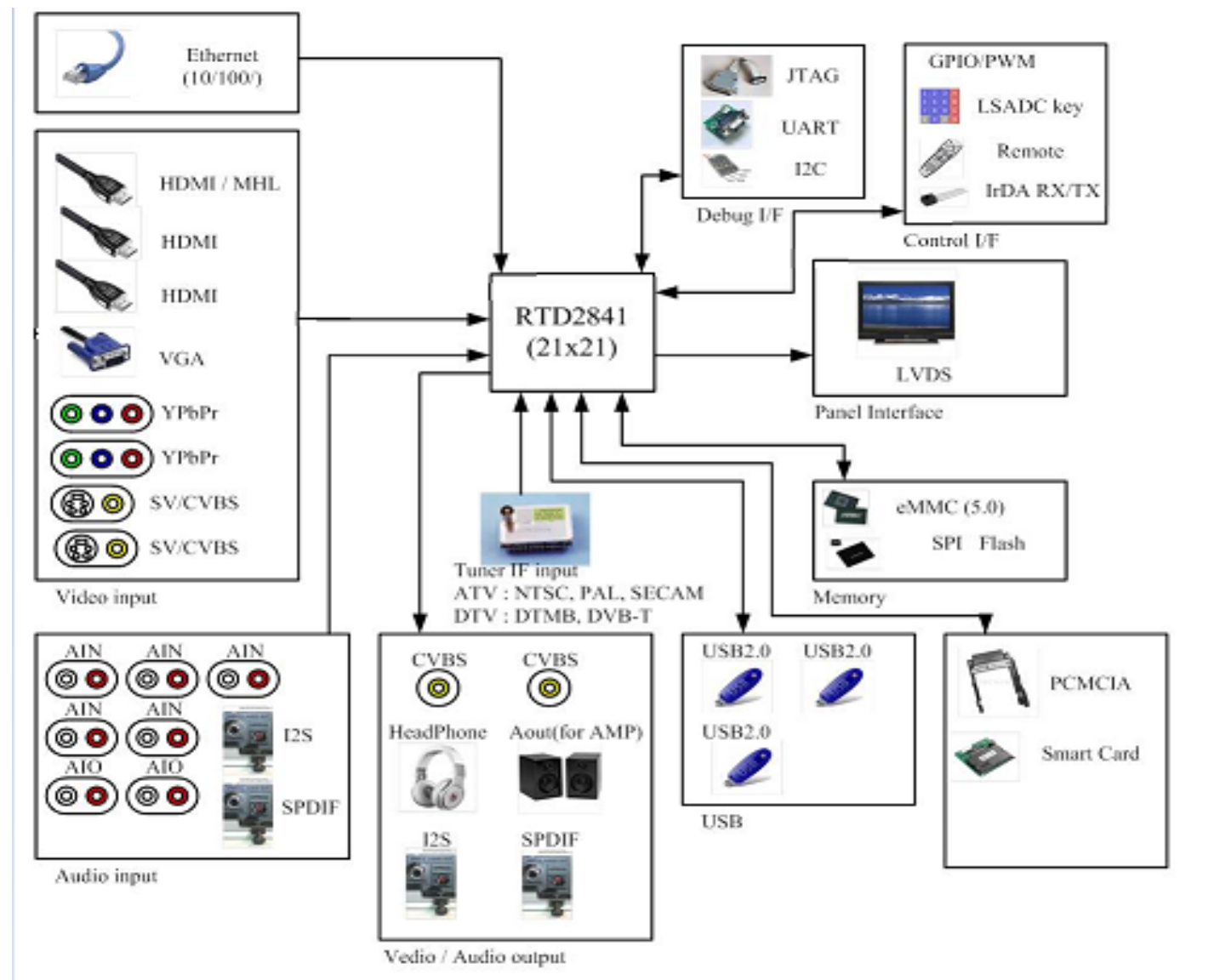
HIKEEN

Title

Size
A**RTD2841**

Rev	1.0
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Title Black Digram		
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