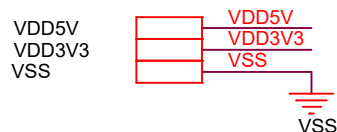


CON2					
PL4	1	2	nRESET		
PL5	3	4	RTC nRWAKE		
PN14	5	6	VSS		
PD15	7	8	PN15		
PN12	9	10	PK15		
PN13	11	12	PK14		
PN7	13	14	PK13		
PN6	15	16	PK12		
PN5	17	18	PL3		
PN4	19	20	PL2		
PN3	21	22	PL1		
PN2	23	24	PL0		
PN1	25	26	PJ15		
PN0	27	28	PJ14		
VSS	29	30	PJ13		
PN10	31	32	PJ12		
VSS	33	34	PL15		
PN11	35	36	PL14		
VSS	37	38	PL13		
PD9	39	40	PL12		
PD8	41	42	PL11		
PC4	43	44	PL10		
PC5	45	46	PD14		
PC0	47	48	PA14		
VSS	49	50	PA13		
PC1	51	52	PA12		
VSS	53	54	PA11		
PC2	55	56	PA10		
PC3	57	58	PA9		
PC7	59	60	PA8		
PC6	61	62	PA7		
VSS	63	64	PA6		
E MDIP0	65	66	PA5		
E MDIN0	67	68	PA4		
VSS	69	70	PA3		
E MDIP1	71	72	PA2		
E MDIN1	73	74	PA1		
VSS	75	76	PA0		
E MDIP2	77	78	PF14		
E MDIN2	79	80	E LED0		
VSS	81	82	E LED1		
E MDIP3	83	84	E LED2		
E MDIN3	85	86	F LED0		
VSS	87	88	F LED1		
F MDIP0	89	90	F LED2		
F MDIN0	91	92	EADC0 CH7		
VSS	93	94	EADC0 CH3		
F MDIP1	95	96	EADC0 CH6		
F MDIN1	97	98	EADC0 CH2		
VSS	99	100	EADC0 CH5		
F MDIP2	101	102	EADC0 CH1		
F MDIN2	103	104	EADC0 CH4		
VSS	105	106	EADC0 CH0		
F MDIP3	107	108	VSS		
F MDIN3	109	110	HSUSB0 D+		
VSS	111	112	HSUSB0 D-		
PE15	113	114	VSS		
PE14	115	116	HSUSB1 D+		
HSUSB0_ID	117	118	HSUSB1 D-		
PF15	119	120	VSS		

DF40C-120DS-0.4V (51) (Pitch 0.4mm, female)

CON3				
VDD5V	1	2	VDD5V	
VDD5V	3	4	VDD5V	
VDD5V	5	6	VDD5V	
VSS	7	8	VSS	
PH3	9	10	PH4	
PH2	11	12	PH5	
PH1	13	14	PH6	
PH0	15	16	PH7	
PI15	17	18	PC12	
PI14	19	20	PC13	
PI13	21	22	PC14	
PI12	23	24	PC15	
PI11	25	26	PH12	
PI10	27	28	PH13	
PI9	29	30	PH14	
PI8	31	32	PH15	
PB15	33	34	VSS	
PB14	35	36	PG10	
PB13	37	38	VSS	
PB12	39	40	PG9	
PB11	41	42	PG8	
PB10	43	44	PK4	
PB9	45	46	PK5	
PB8	47	48	PK6	
PK3	49	50	PK7	
PK2	51	52	PM15	
PK1	53	54	PM14	
PK0	55	56	PM13	
PI7	57	58	PM12	
PI6	59	60	VSS	
PI5	61	62	PL6	
PI4	63	64	VSS	
PI3	65	66	PG15	
PI2	67	68	PG14	
PI1	69	70	PG13	
PI0	71	72	PG12	
PD13	73	74	PG11	
PD12	75	76	PG7	
PD11	77	78	PG6	
PD10	79	80	PG5	
PL9	81	82	PG4	
PL8	83	84	PG3	
PL7	85	86	PG2	
PH9	87	88	PG1	
PH8	89	90	PG0	
VSS	91	92	VSS	
PK10	93	94	PD0	
VSS	95	96	PD3	
PK9	97	98	PD4	
VSS	99	100	PD2	
PM2	101	102	VSS	
PM3	103	104	PD1	
PM4	105	106	VSS	
PM5	107	108	PD5	
PM6	109	110	VSS	
PM7	111	112	PM1	
PM8	113	114	PK8	
PM9	115	116	PK11	
PM10	117	118	PM0	
PM11	119	120	VSS	

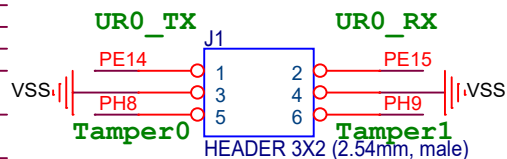
DF40C-120DS-0.4V (51) (Pitch 0.4mm, female)



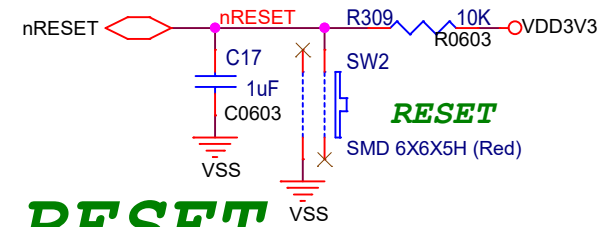
## Power

PA[14:0]	PA[14:0]
PB[15:8]	PB[15:8]
PC[7:0]	PC[7:0]
PC[15:12]	PC[15:12]
PD[5:0]	PD[5:0]
PD[15:8]	PD[15:8]
PE[15:14]	PE[15:14]
PF[15:14]	PF[15:14]
PG[15:0]	PG[15:0]
PH[9:0]	PH[9:0]
PH[15:12]	PH[15:12]
PI[15:0]	PI[15:0]
PJ[15:12]	PJ[15:12]
PK[15:0]	PK[15:0]
PL[15:0]	PL[15:0]
PM[15:0]	PM[15:0]
PN[7:0]	PN[7:0]
PN[15:10]	PN[15:10]

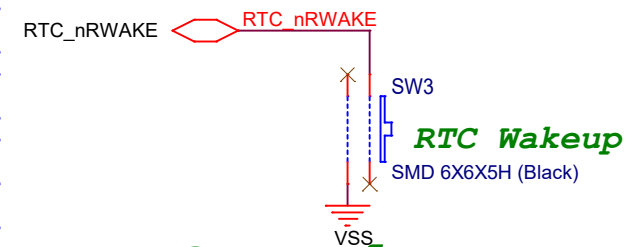
## GPIO



## UART0 & Tamper



## RESET



## RTC Wakeup

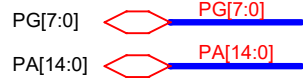
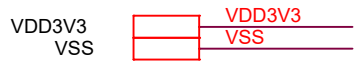
HSUSB0_ID	HSUSB0_ID
HSUSB0_D+	HSUSB0_D+
HSUSB0_D-	HSUSB0_D-
HSUSB1_D+	HSUSB1_D+
HSUSB1_D-	HSUSB1_D-

## HSUSB

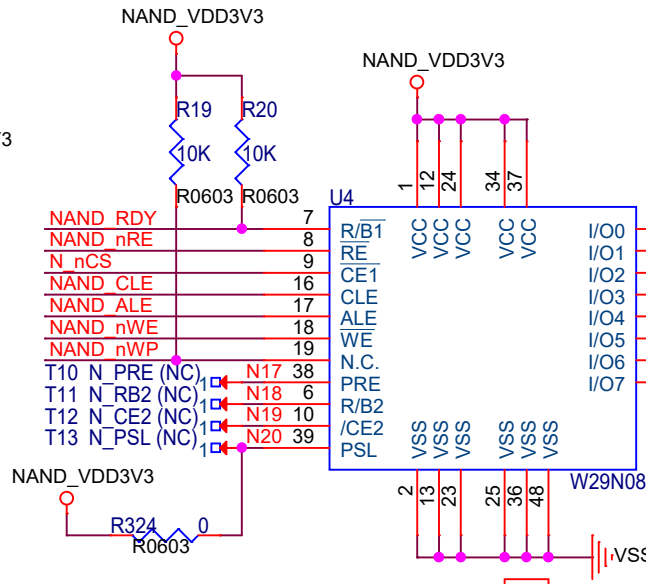
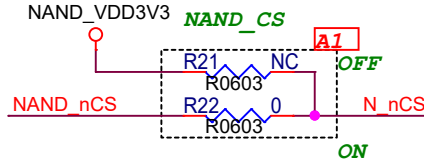
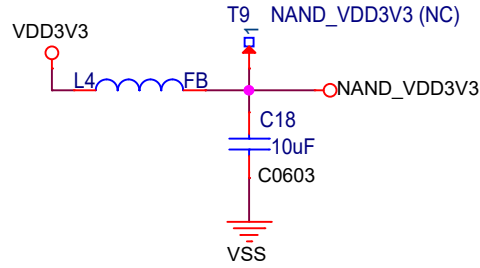
EADC0_CH[7:0]	EADC0_CH[7:0]
E_MDIP[3:0]	E_MDIP[3:0]
E_MDIN[3:0]	E_MDIN[3:0]
E_LED[2:0]	E_LED[2:0]
F_MDIP[3:0]	F_MDIP[3:0]
F_MDIN[3:0]	F_MDIN[3:0]
F_LED[2:0]	F_LED[2:0]

## Ethernet

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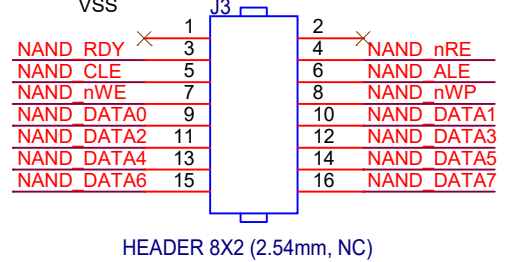
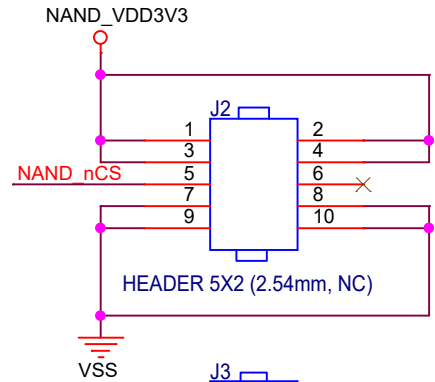


PA0	NAND_DATA0
PA1	NAND_DATA1
PA2	NAND_DATA2
PA3	NAND_DATA3
PA4	NAND_DATA4
PA5	NAND_DATA5
PA6	NAND_DATA6
PA7	NAND_DATA7
PA8	NAND_RDY
PA9	NAND_nRE
PA10	NAND_nWE
PA11	NAND_CLE
PA12	NAND_ALE
PA13	NAND_nCS
PA14	NAND_nWP



## NAND Flash

W29N08GV5IAA (NAND Flash)



## Power-on Setting

PG0	Secure Boot
L	Secure Boot Enable
H	Secure Boot Disable

PG1	Boot Source QSPI0, SD/eMMC I/O Voltage
L	3.3V
H	1.8V

PG3	PG2	Boot Source
L	L	QSPI0 Flash
L	H	SD/eMMC
H	L	NAND Flash
H	H	USB

PG7	PG6	Bootting from QSPI0
L	L	SPI-NAND, 1-bit
H	L	SPI-NOR, 1-bit

PG6	Bootting from SD/eMMC
L	SD0/eMMC0 bootting
H	SD1/eMMC1 bootting

PG7	Bootting from SD/eMMC
L	eMMC 4-bit bootting
H	eMMC 8-bit bootting

PG5	PG4	Bootting from NAND
L	L	Ignore
L	H	NAND flash page 2KB
H	L	NAND flash page 4KB
H	H	NAND flash page 8KB

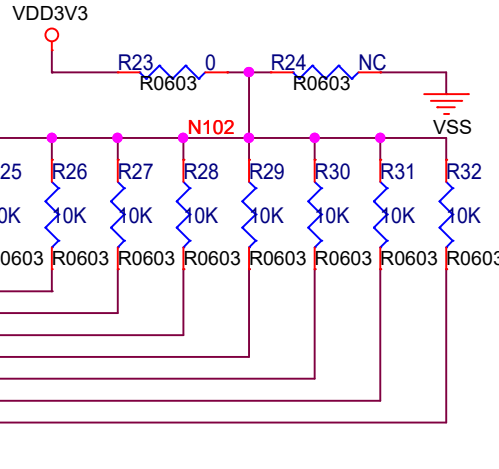
PG7	PG6	Bootting from NAND
L	L	Ignore
L	H	BCH T12
H	L	BCH T24
H	H	NO ECC

PG4	Bootting from USB
L	USBD bootting
H	USBH bootting

PG5	Bootting from USBH
L	USBH port 0 bootting
H	USBH port 1 bootting

PG6	Bootting from USBH
L	Over-current low-active detect
H	Over-current high-active detect

Note: These GPIO PG0~PG7 pins are internal pull-low inside MA35D1 chip.

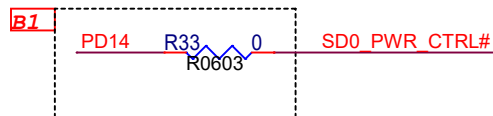
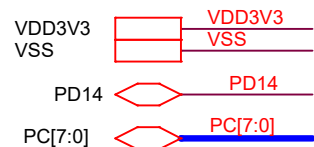


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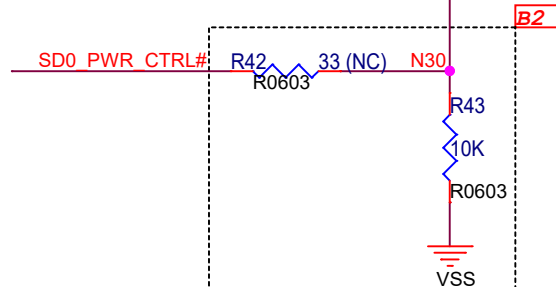
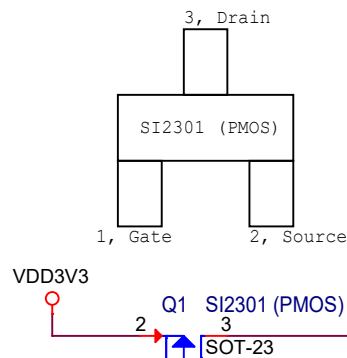
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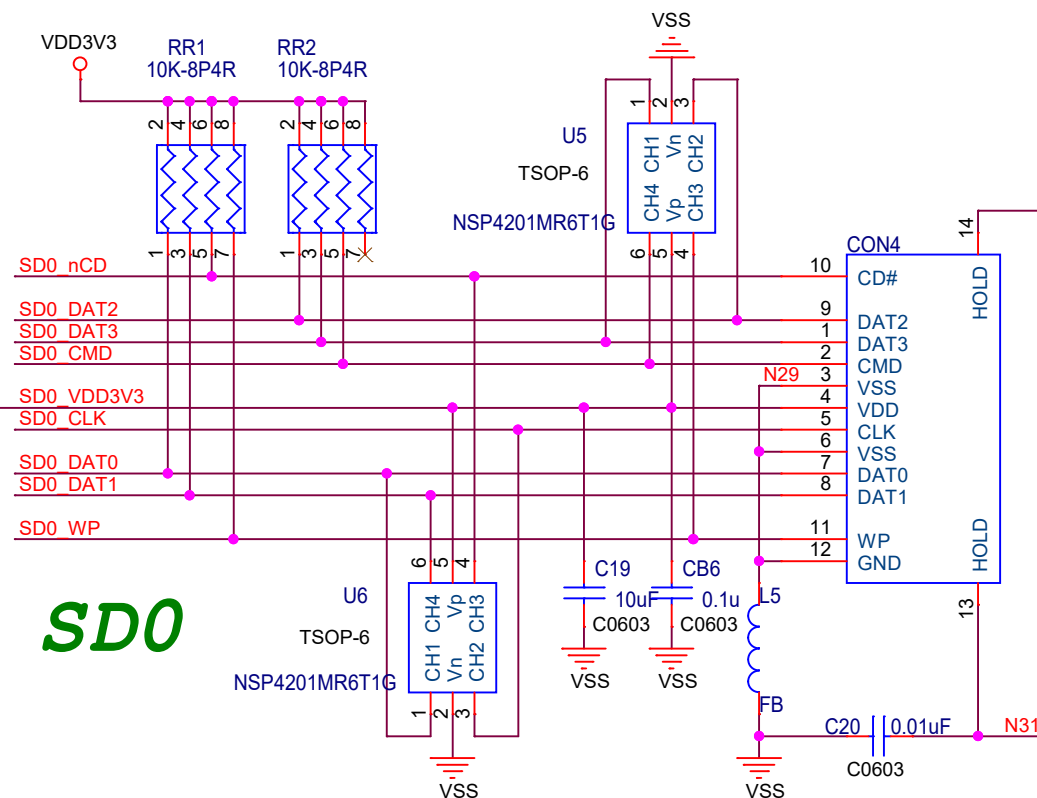


PC0	R34	33	R0402	SD0_CMD
PC1	R35	33	R0402	SD0_CLK
PC2	R36	33	R0402	SD0_DAT0
PC3	R37	33	R0402	SD0_DAT1
PC4	R38	33	R0402	SD0_DAT2
PC5	R39	33	R0402	SD0_DAT3
PC6	R40	33	R0402	SD0_nCD
PC7	R41	33	R0402	SD0_WP



SD0 Power Ctrl

Note: SD0\_VDD3V3 always ON (uncontrollable) by default.



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Title NuMaker\_MA35D1\_Base

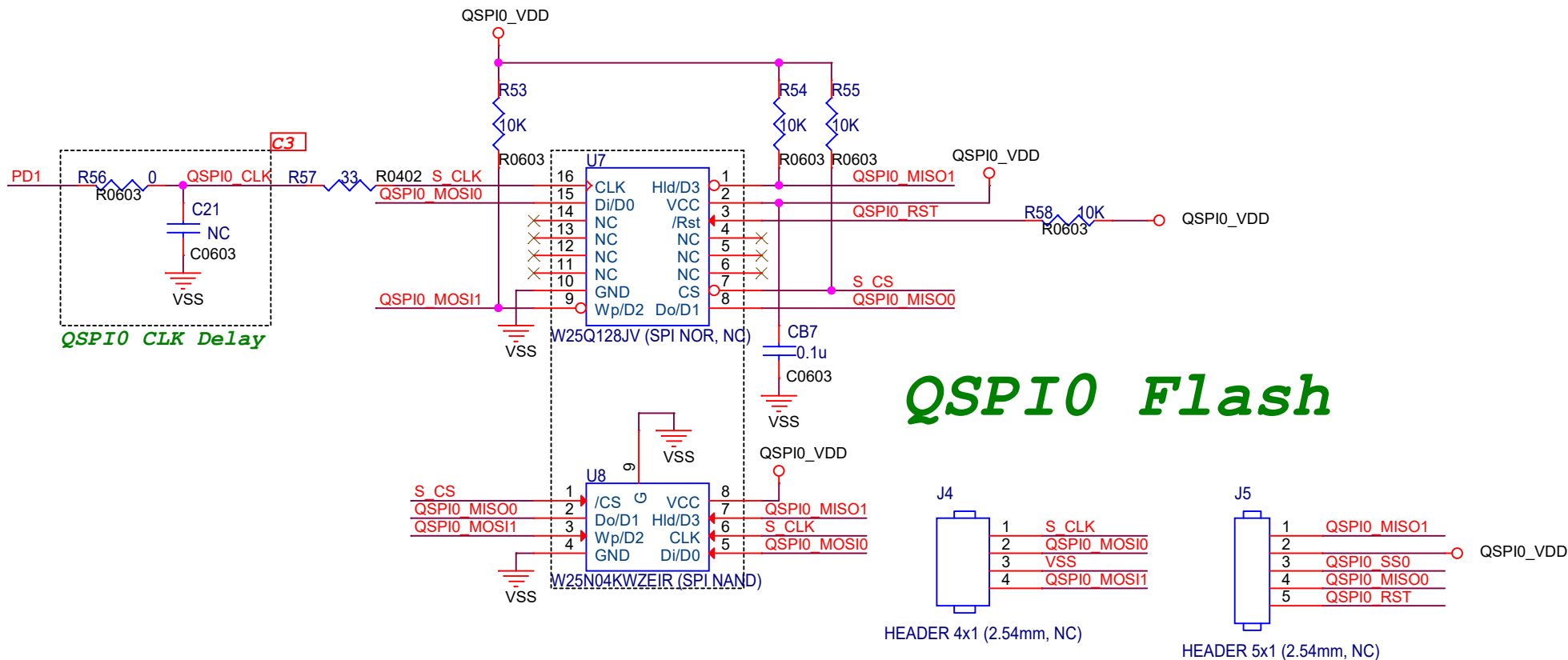
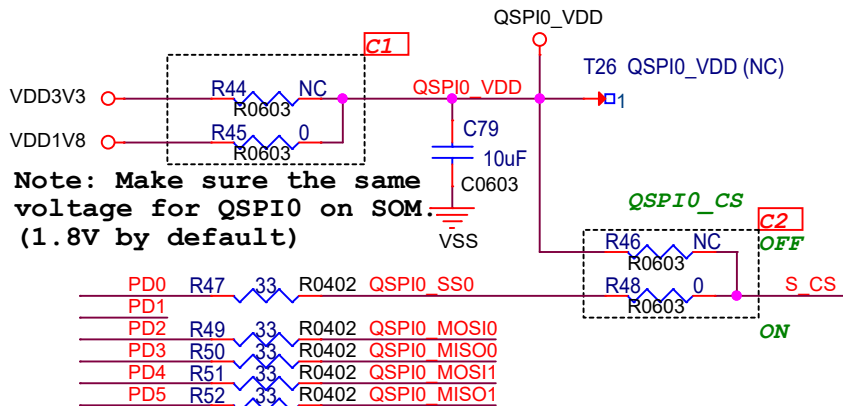
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VDD3V3 VDD1V8 VSS

PD[5:0] PD[5:0]



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**QSPI0**

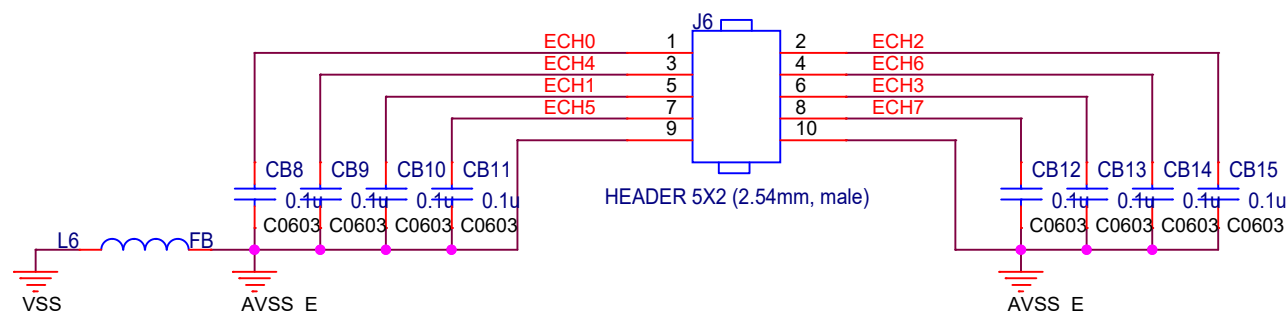
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VSS  VSS

EADC0\_CH[7:0]  EADC0\_CH[7:0]

EADC0_CH0	R59_33	R0402	ECH0
EADC0_CH4	R60_33	R0402	ECH4
EADC0_CH1	R61_33	R0402	ECH1
EADC0_CH5	R62_33	R0402	ECH5
EADC0_CH2	R63_33	R0402	ECH2
EADC0_CH6	R64_33	R0402	ECH6
EADC0_CH3	R65_33	R0402	ECH3
EADC0_CH7	R66_33	R0402	ECH7



**EADC0**

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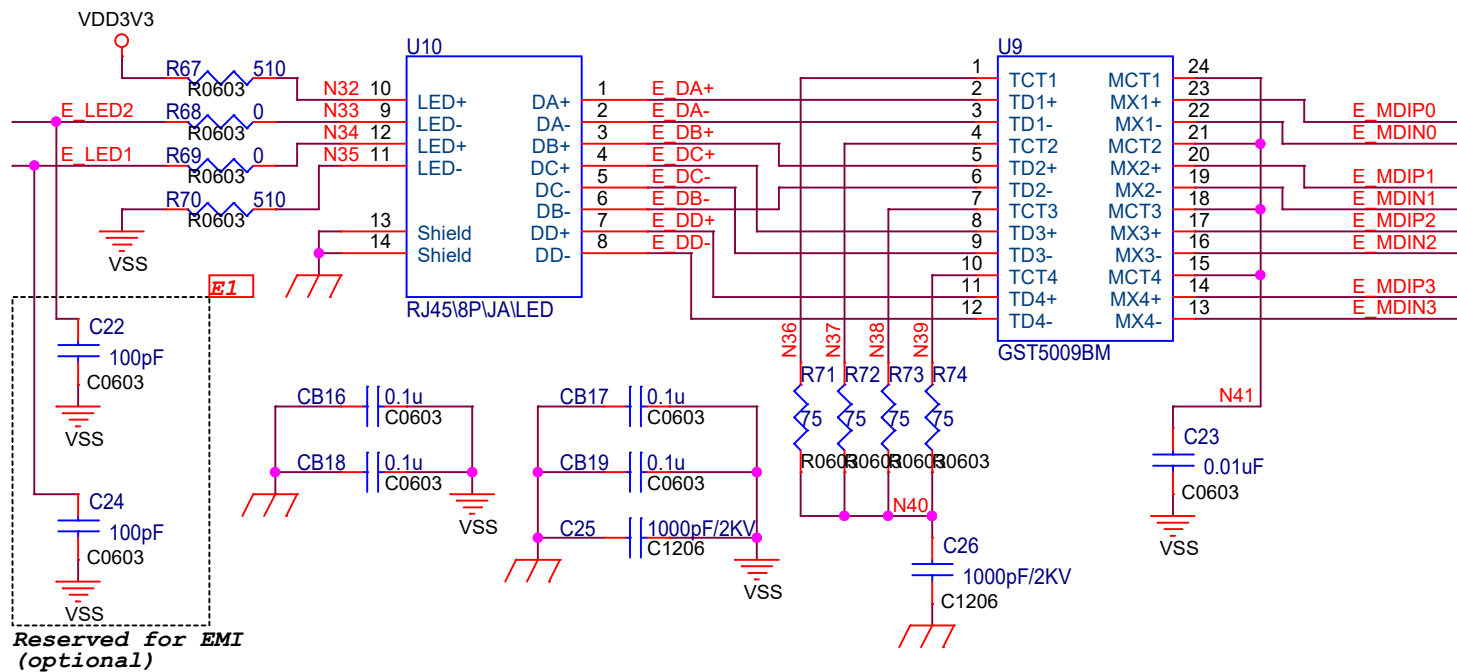
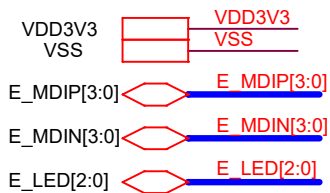
Title  
**NuMaker\_MA35D1\_Base**

Size  
A Document Number  
**EADC0**

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Title

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Size A

Document Number

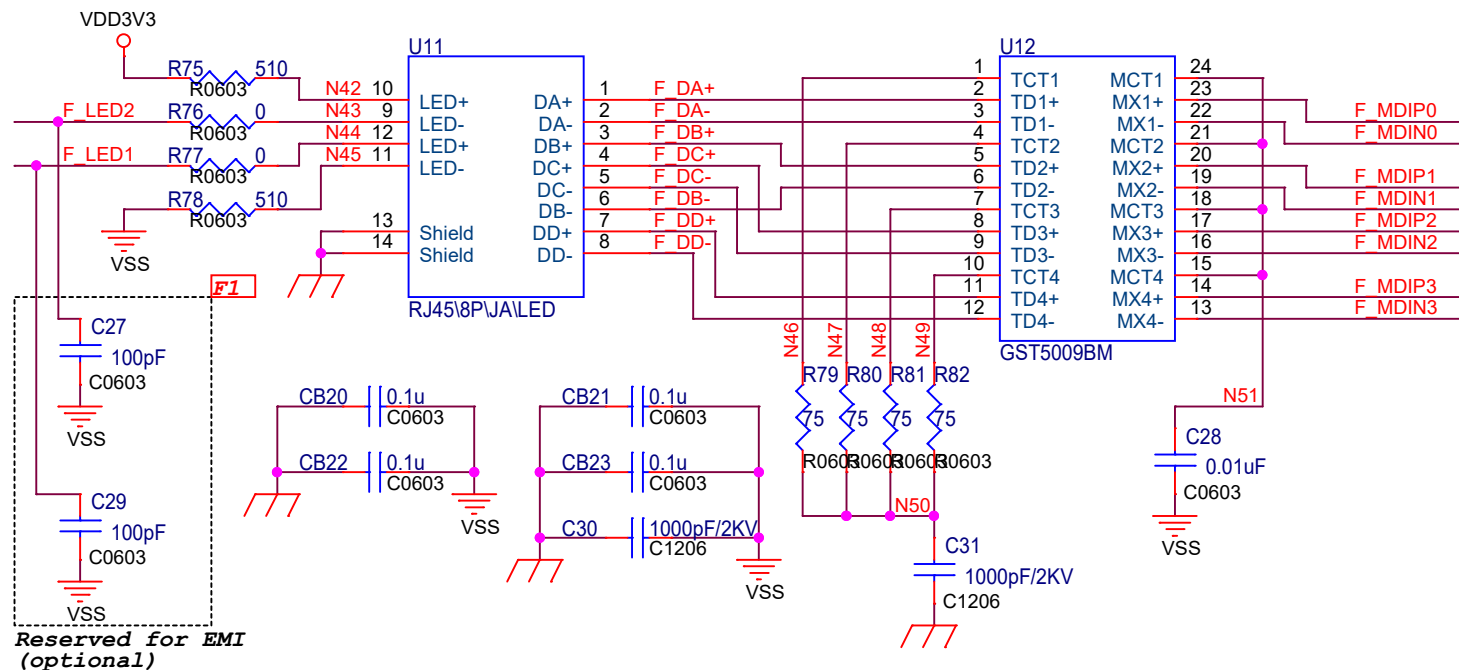
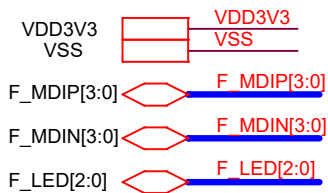
Ethernet 0 (PE)

Rev

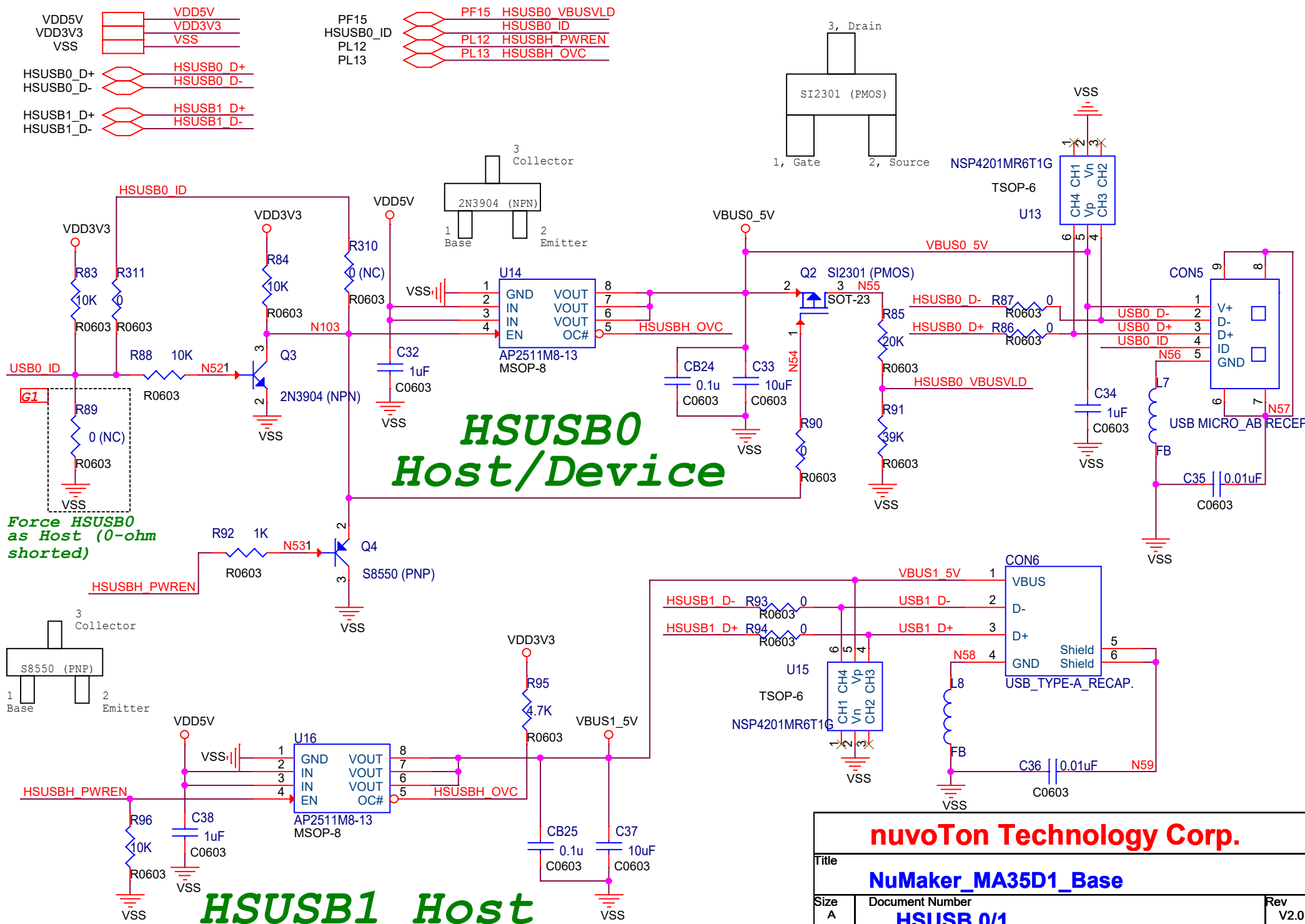
V2.0

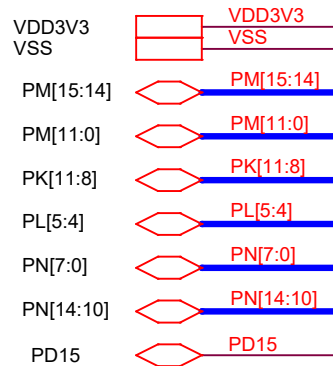
Date: Thursday, February 10, 2022

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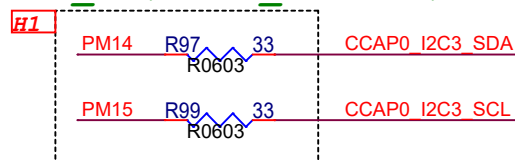




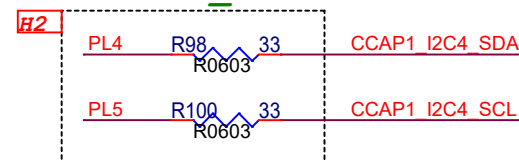




## I2C\_3 (TRACE DATA2/3)

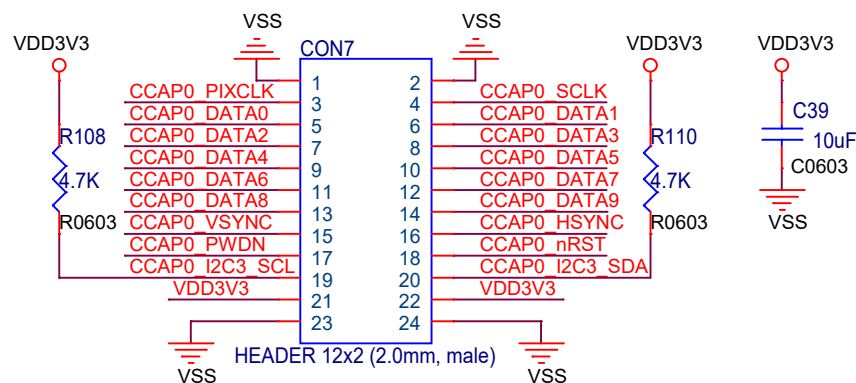


## I2C\_4



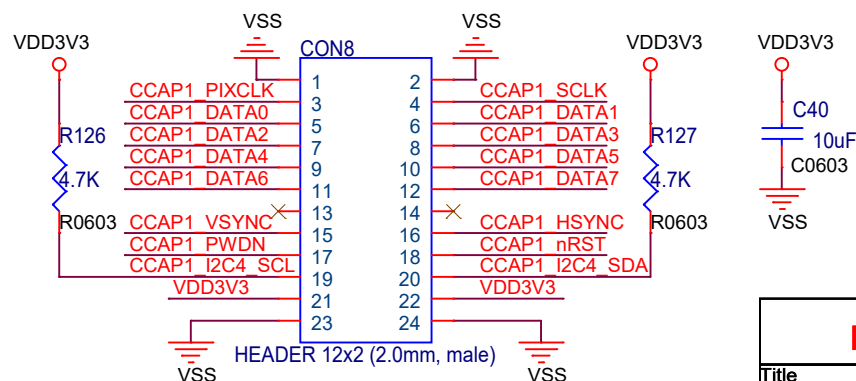
# CCAP0 Connector

PM2	R10133	R0402	CCAP0_DATA0
PM3	R10233	R0402	CCAP0_DATA1
PM4	R10333	R0402	CCAP0_DATA2
PM5	R10533	R0402	CCAP0_DATA3
PM6	R10433	R0402	CCAP0_DATA4
PM7	R10633	R0402	CCAP0_DATA5
PM8	R10733	R0402	CCAP0_DATA6
PM9	R10933	R0402	CCAP0_DATA7
PM10	R11133	R0402	CCAP0_DATA8
PM11	R11233	R0402	CCAP0_DATA9
PK9	R11333	R0402	CCAP0_SCLK
PK10	R11433	R0402	CCAP0_PIXCLK
PK11	R11533	R0402	CCAP0_HSYNC
PM0	R11633	R0402	CCAP0_VSYNC
PM1	R11733	R0402	CCAP0_nRST
PK8	R11833	R0402	CCAP0_PWDN



# CCAP1 Connector

PN0	R11933	R0402	CCAP1_DATA0
PN1	R12033	R0402	CCAP1_DATA1
PN2	R12133	R0402	CCAP1_DATA2
PN3	R12233	R0402	CCAP1_DATA3
PN4	R12333	R0402	CCAP1_DATA4
PN5	R12433	R0402	CCAP1_DATA5
PN6	R12533	R0402	CCAP1_DATA6
PN7	R12633	R0402	CCAP1_DATA7
PN10	R12933	R0402	CCAP1_SCLK
PN11	R13033	R0402	CCAP1_PIXCLK
PN12	R13133	R0402	CCAP1_HSYNC
PN13	R13233	R0402	CCAP1_VSYNC
PN14	R13333	R0402	CCAP1_nRST
PD15	R13433	R0402	CCAP1_PWDN



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VDD5V  
VDD3V3  
VSS

nRESET

PM12

PD12

PJ[13:12]

PB[15:10]

PG[10:8]

PK[7:4]

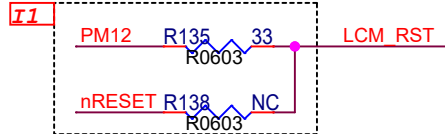
PI[15:8]

PH[7:0]

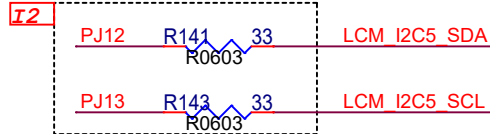
PC[15:12]

PH[15:12]

## LCM\_RST (TRACE DATA0)



## I2C\_5 (EBI\_ADR12/13)

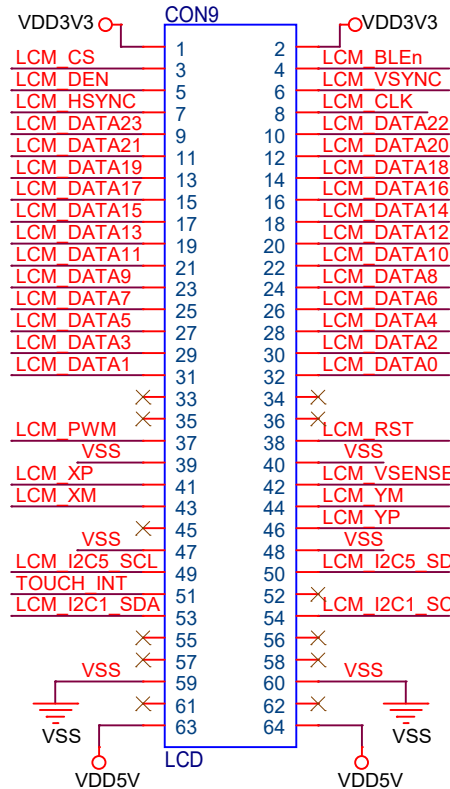


## MPU6500 I2C1\_SDA/SCL

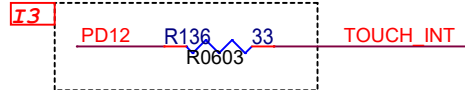
I2C1\_SDA

I2C1\_SCL

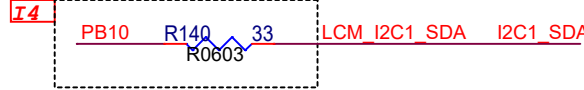
PG8	R15333	R0402	LCM_VSYN
PG9	R14733	R0402	LCM_HSYN
PG10	R14833	R0402	LCM_CLK
PK4	R14933	R0402	LCM_DEN
PK5	R15033	R0402	LCM_PWM
PK6	R15133	R0402	LCM_CS
PK7	R15233	R0402	LCM_BLEn
PI8	R15433	R0402	LCM_DATA0
PI9	R15533	R0402	LCM_DATA1
PI10	R15633	R0402	LCM_DATA2
PI11	R15733	R0402	LCM_DATA3
PI12	R15833	R0402	LCM_DATA4
PI13	R15933	R0402	LCM_DATA5
PI14	R16033	R0402	LCM_DATA6
PI15	R16133	R0402	LCM_DATA7
PH0	R16233	R0402	LCM_DATA8
PH1	R16333	R0402	LCM_DATA9
PH2	R16433	R0402	LCM_DATA10
PH3	R16533	R0402	LCM_DATA11
PH4	R16633	R0402	LCM_DATA12
PH5	R16733	R0402	LCM_DATA13
PH6	R16833	R0402	LCM_DATA14
PH7	R16933	R0402	LCM_DATA15
PC12	R17033	R0402	LCM_DATA16
PC13	R17133	R0402	LCM_DATA17
PC14	R17233	R0402	LCM_DATA18
PC15	R17333	R0402	LCM_DATA19
PH12	R17433	R0402	LCM_DATA20
PH13	R17533	R0402	LCM_DATA21
PH14	R17633	R0402	LCM_DATA22
PH15	R17733	R0402	LCM_DATA23



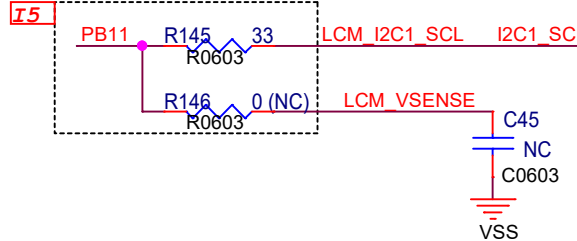
## TOUCH\_INT (EBI\_nCS1)



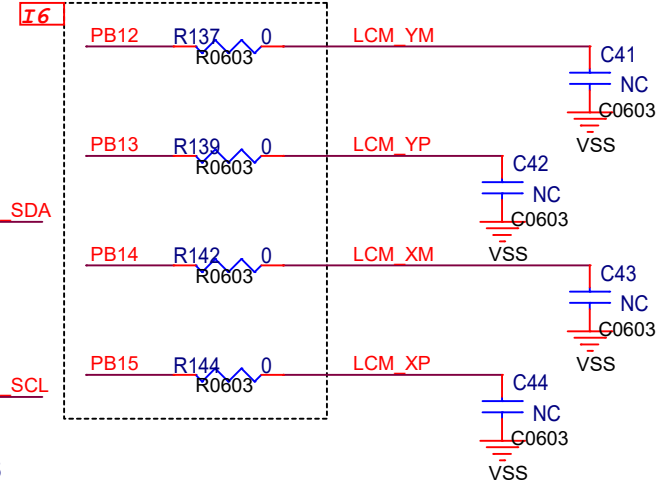
## I2C1\_SDA (EBI\_MCLK)



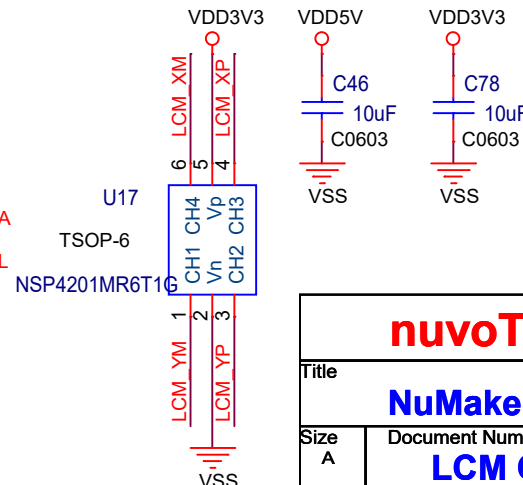
## I2C1\_SCL (LCM\_VSENSE)



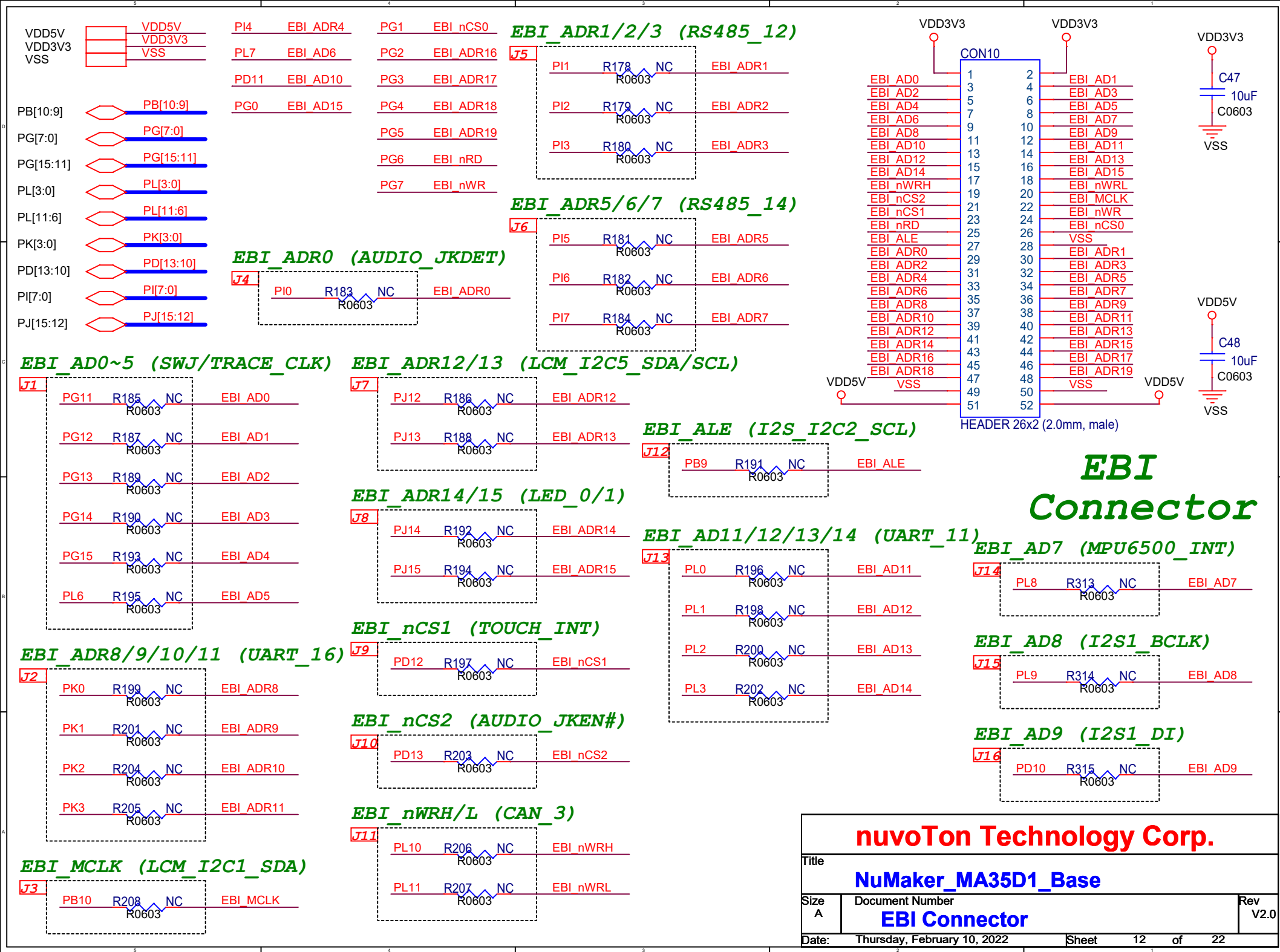
## LCM\_Touch



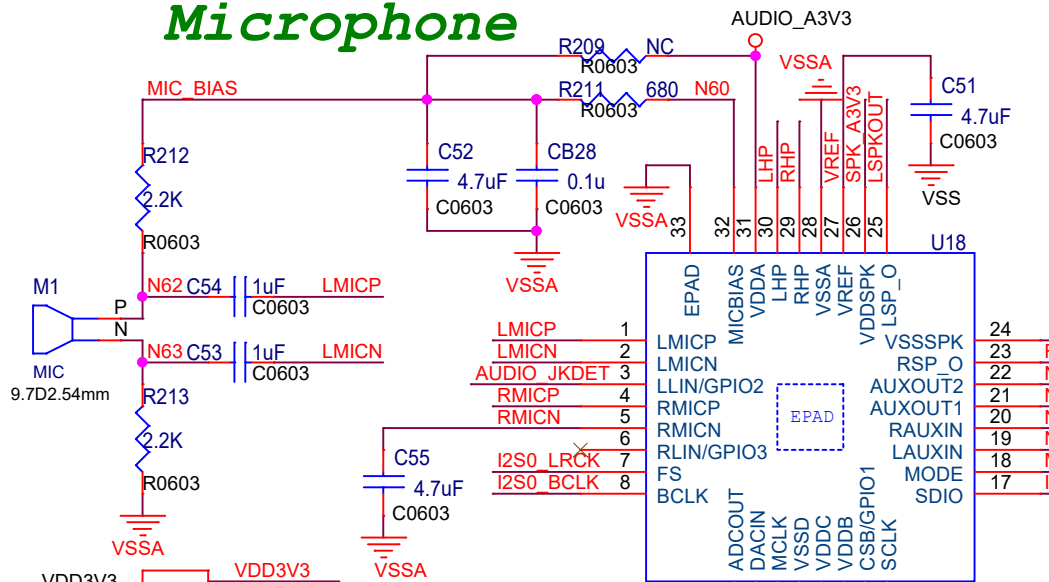
# LCM Connector



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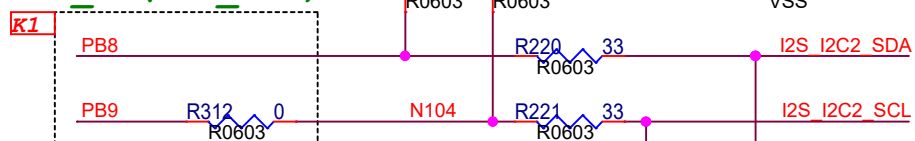


# Microphone

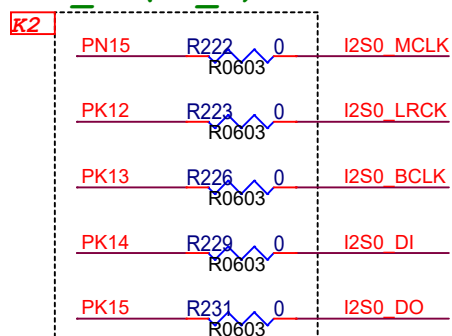


# Codec

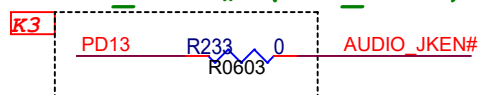
## I2C\_2 (EBI\_ALE)



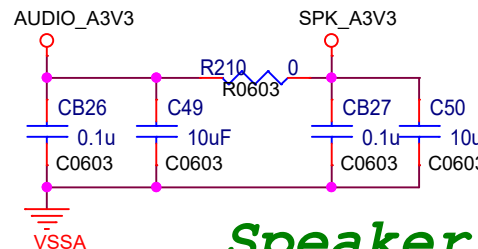
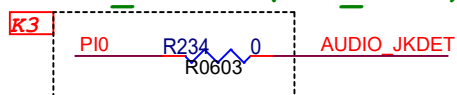
## I2S\_0 (SC\_0)



## AUDIO\_JKEN# (EBI\_nCS2)

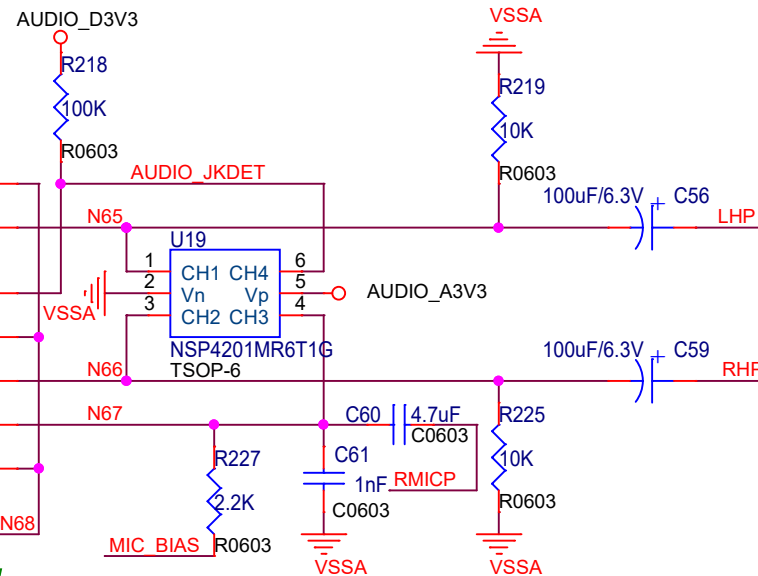
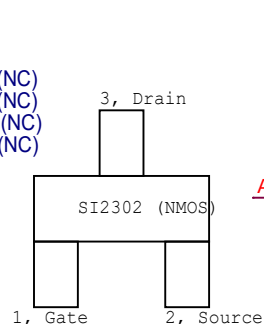
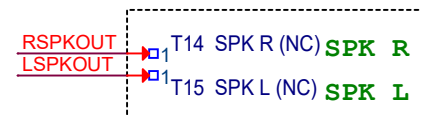


## AUDIO\_JKDET (EBI\_ADR0)



# Speaker

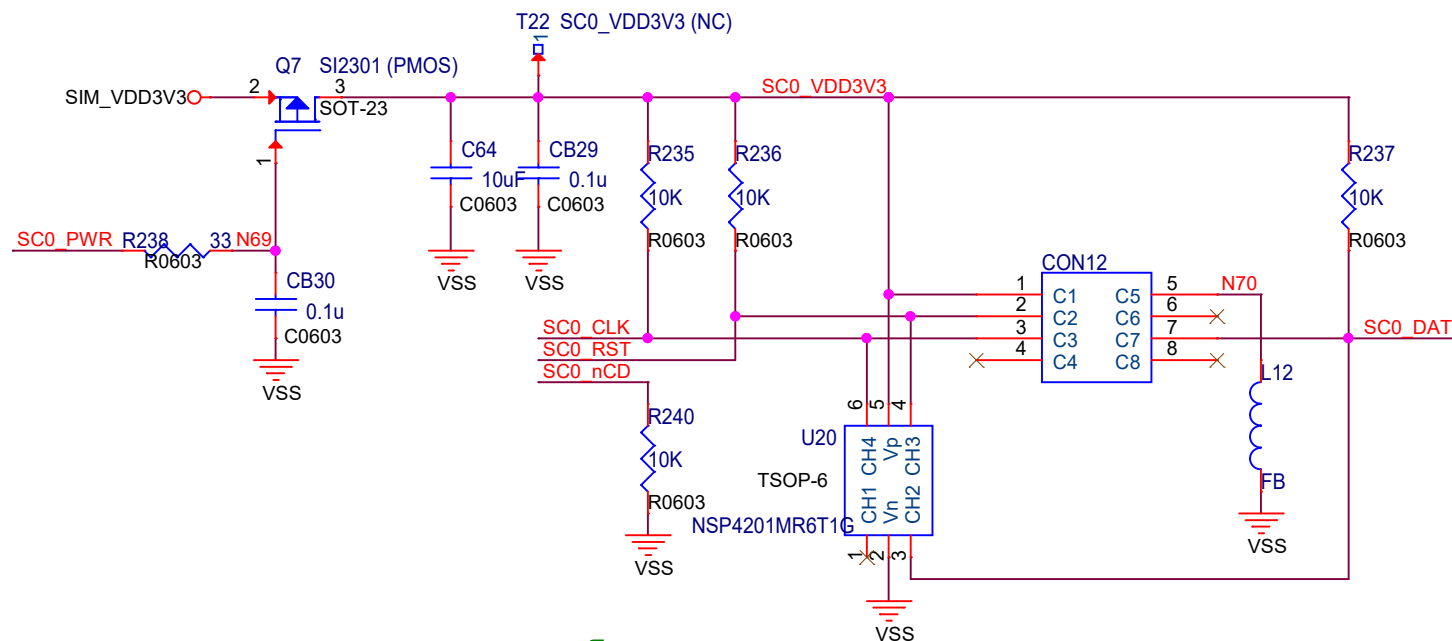
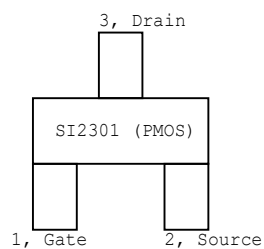
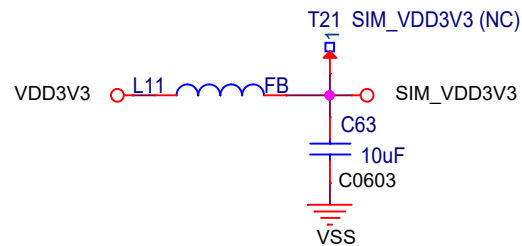
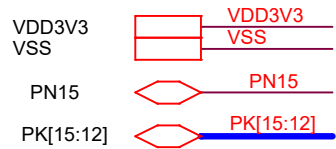
## SPK OUT



# Earphone

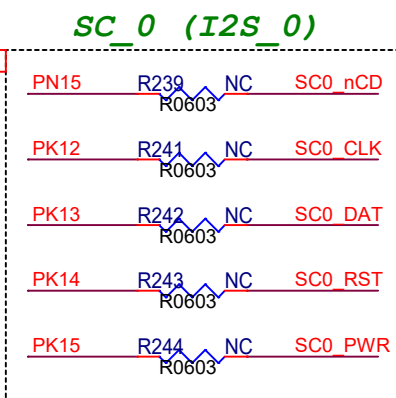
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*SIM Card*

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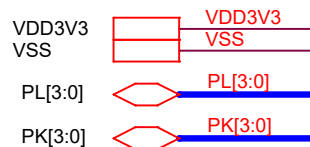
Size  
A

Document Number  
**SIM Card**

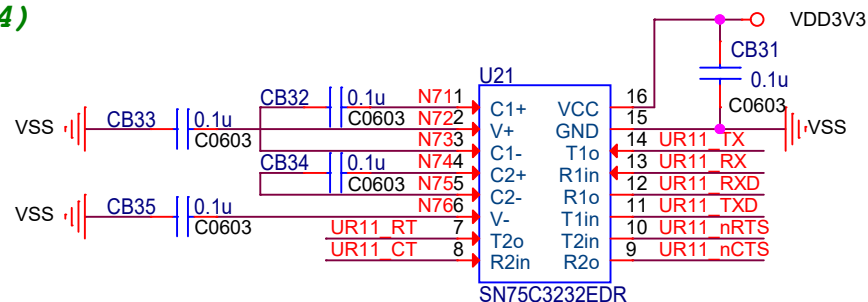
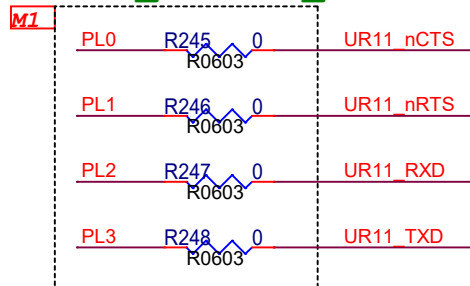
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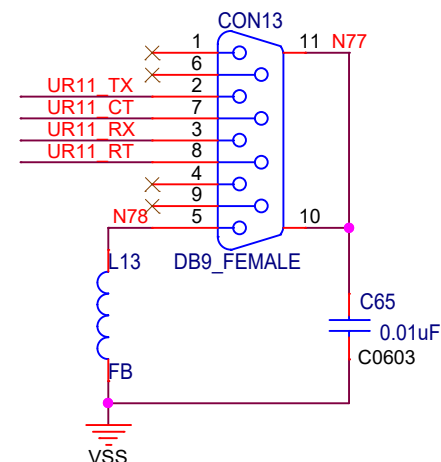
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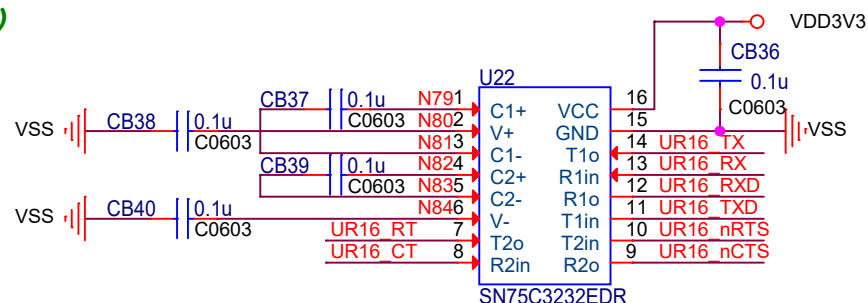
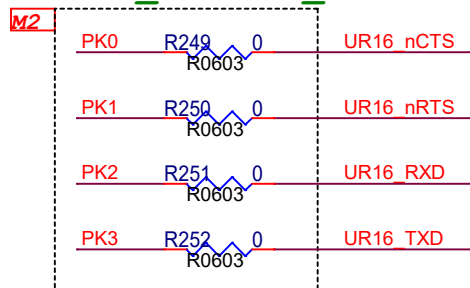
## UART\_11 (EBI\_AD11/12/13/14)



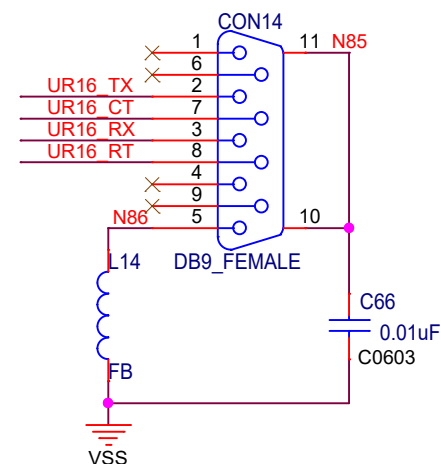
## RS232\_11



## UART\_16 (EBI\_ADR8/9/10/11)



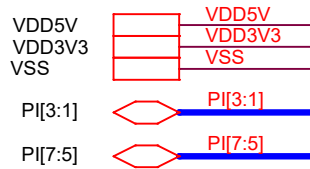
## RS232\_16



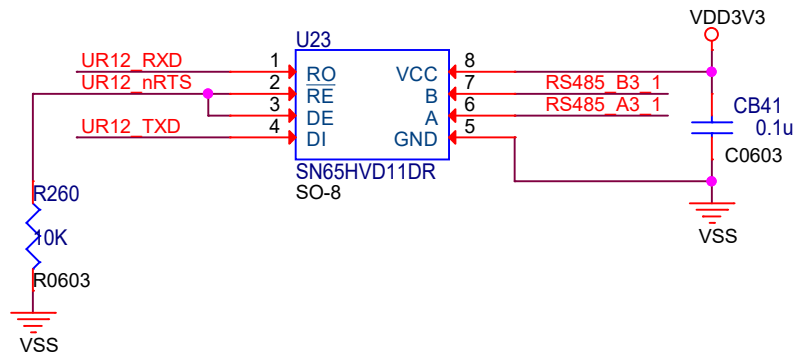
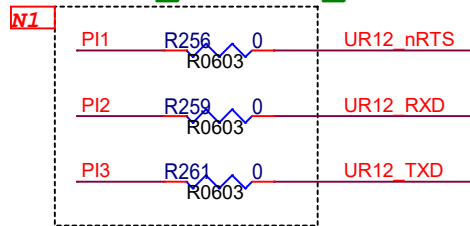
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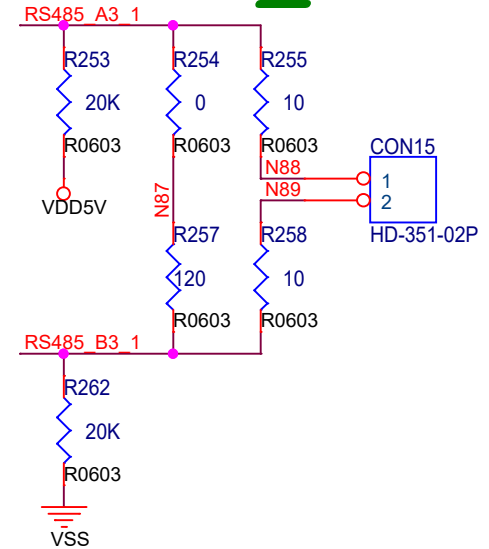




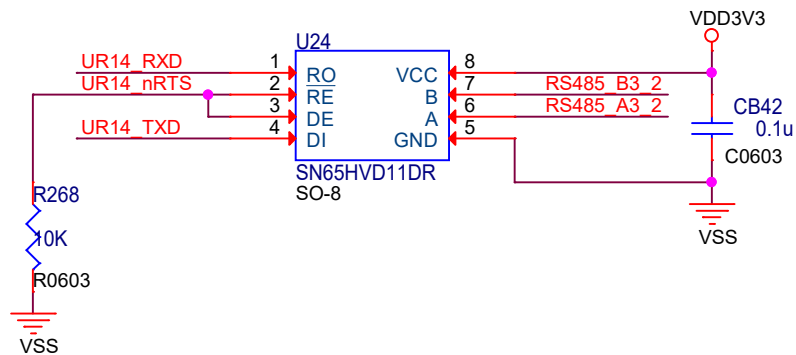
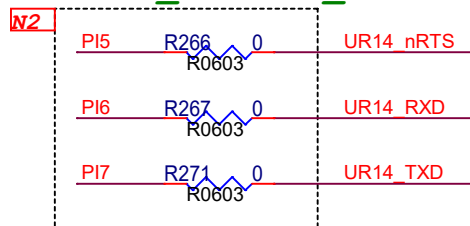
## RS485\_12 (EBI\_ADR1/2/3)



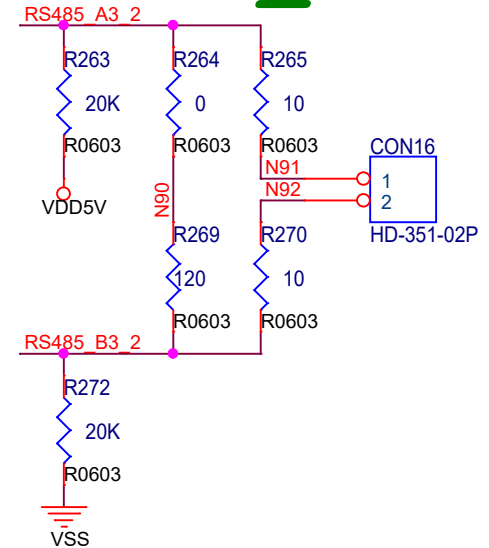
## RS485\_12



## RS485\_14 (EBI\_ADR5/6/7)



## RS485\_14



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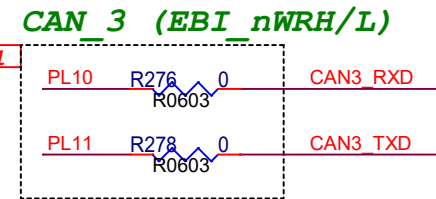
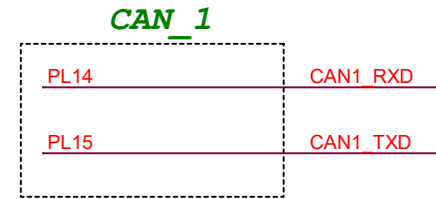
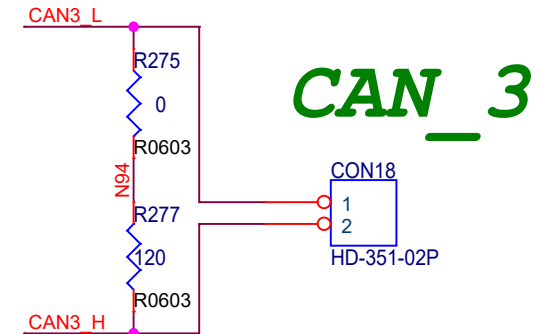
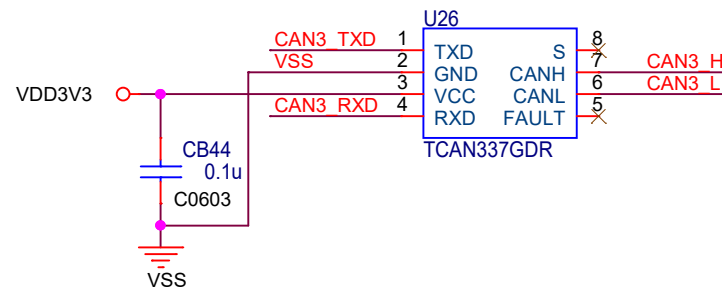
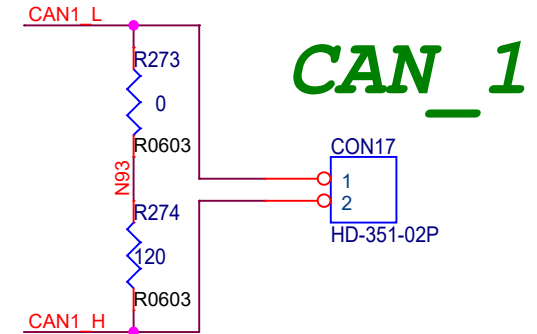
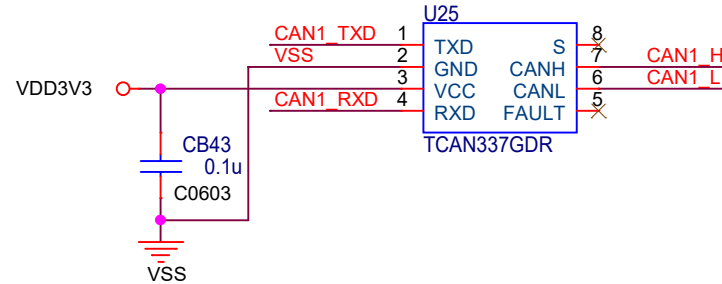
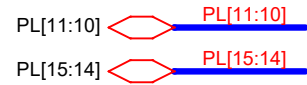
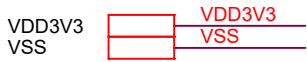
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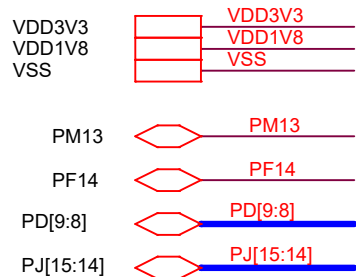
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CAN FD

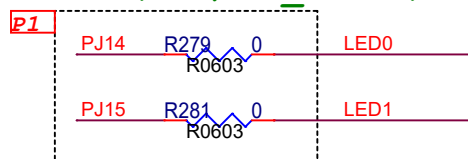
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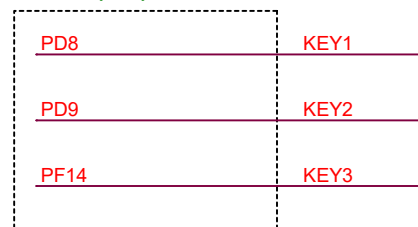
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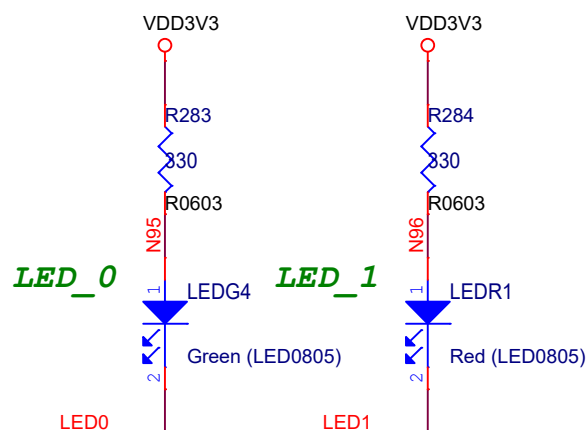
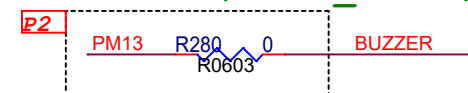
## LED0/1 (EBI\_ADR14/15)



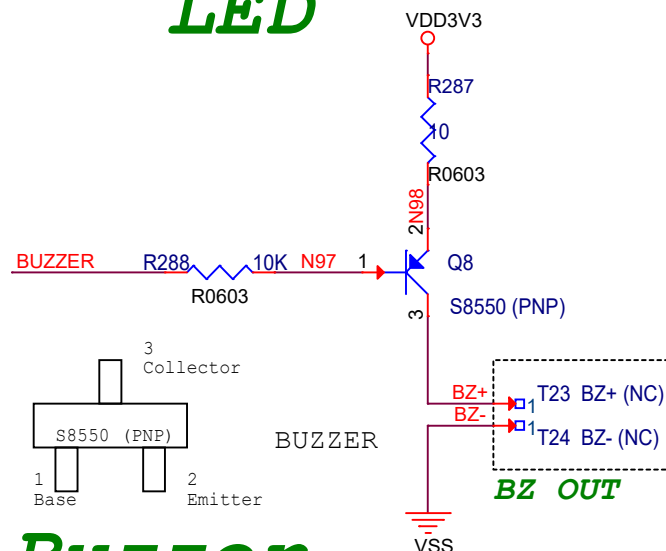
## KEY1/2/3



## Buzzer (TRACE\_DATA1)

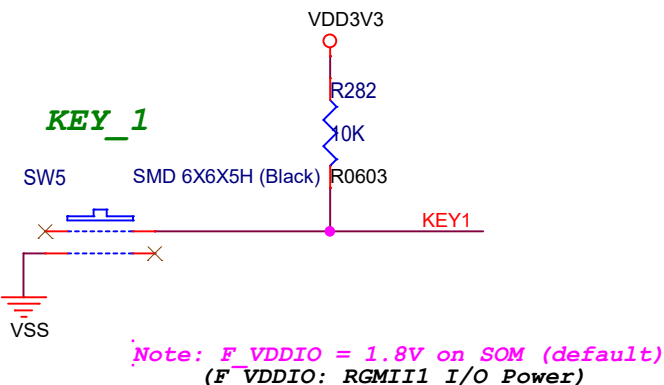


## LED

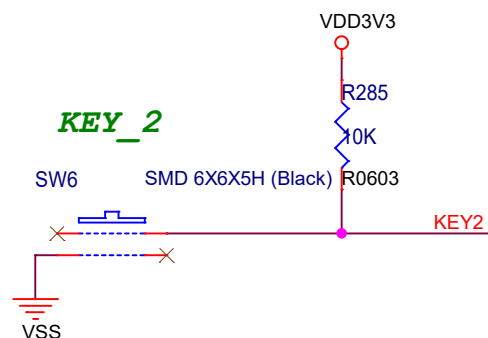


## Buzzer

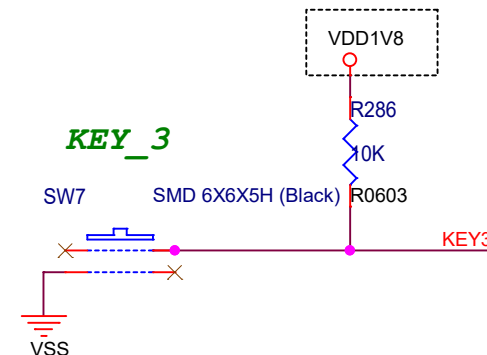
## KEY\_1



## KEY\_2



## KEY\_3



## Key Buttons

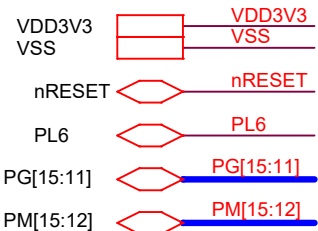
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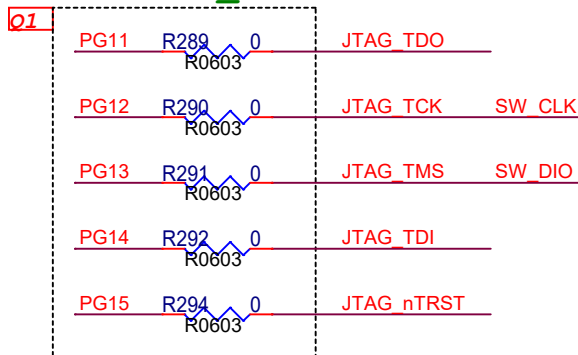
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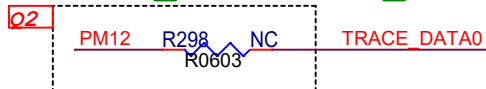
J7 HEADER 2x1 (2.54mm, male)

nRESET SWJ nRESET

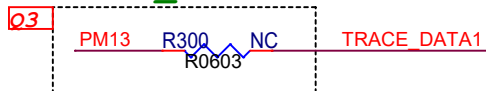
**SWJ (EBI\_AD0/1/2/3/4)**



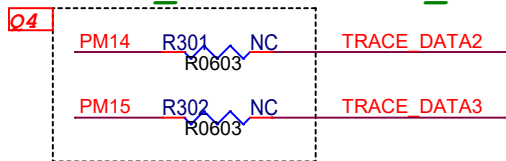
**TRACE\_DATA0 (LCM\_RST)**



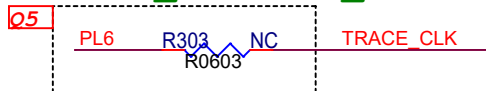
**TRACE\_DATA1 (Buzzer)**



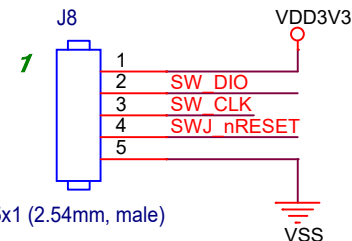
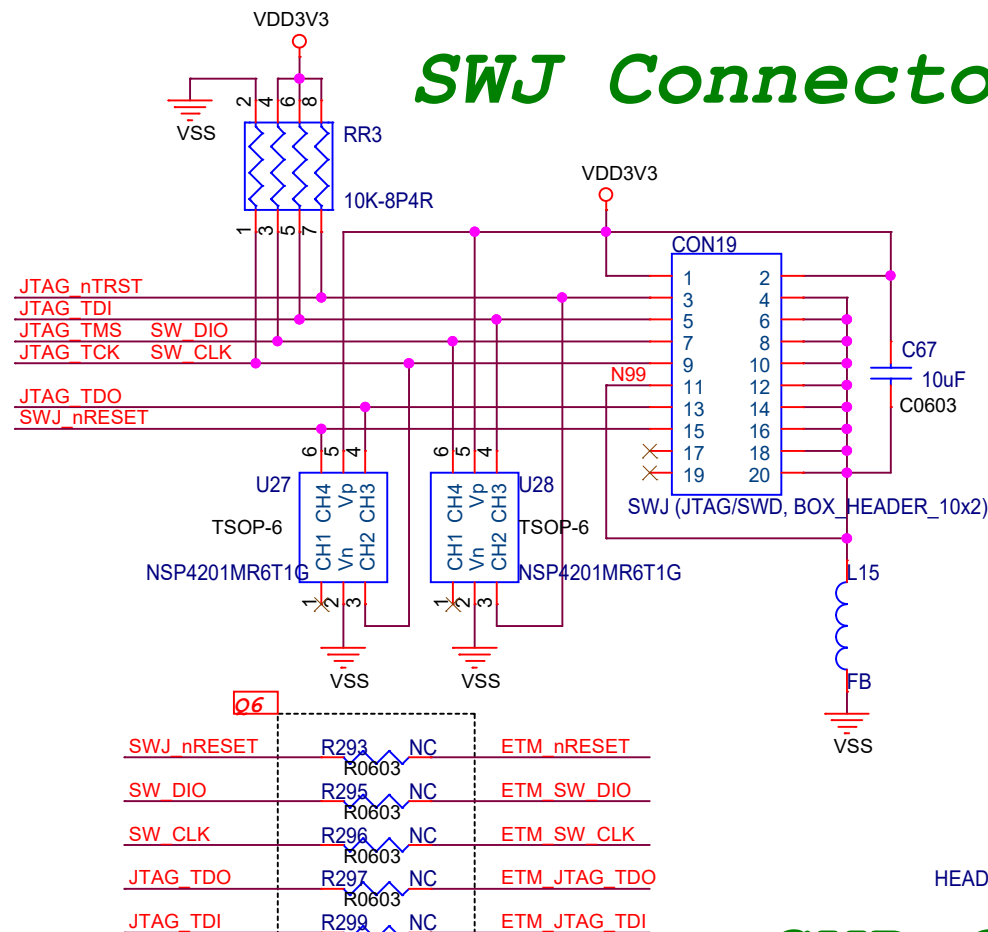
**TRACE\_DATA2/3 (I2C\_3)**



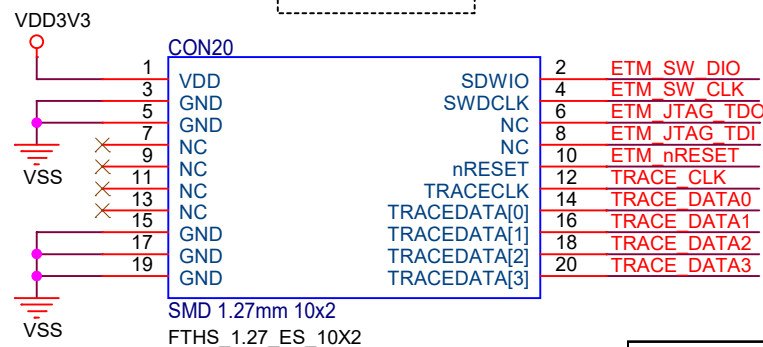
**TRACE\_CLK (EBI\_AD5)**



# SWJ Connector



# SWD Connector

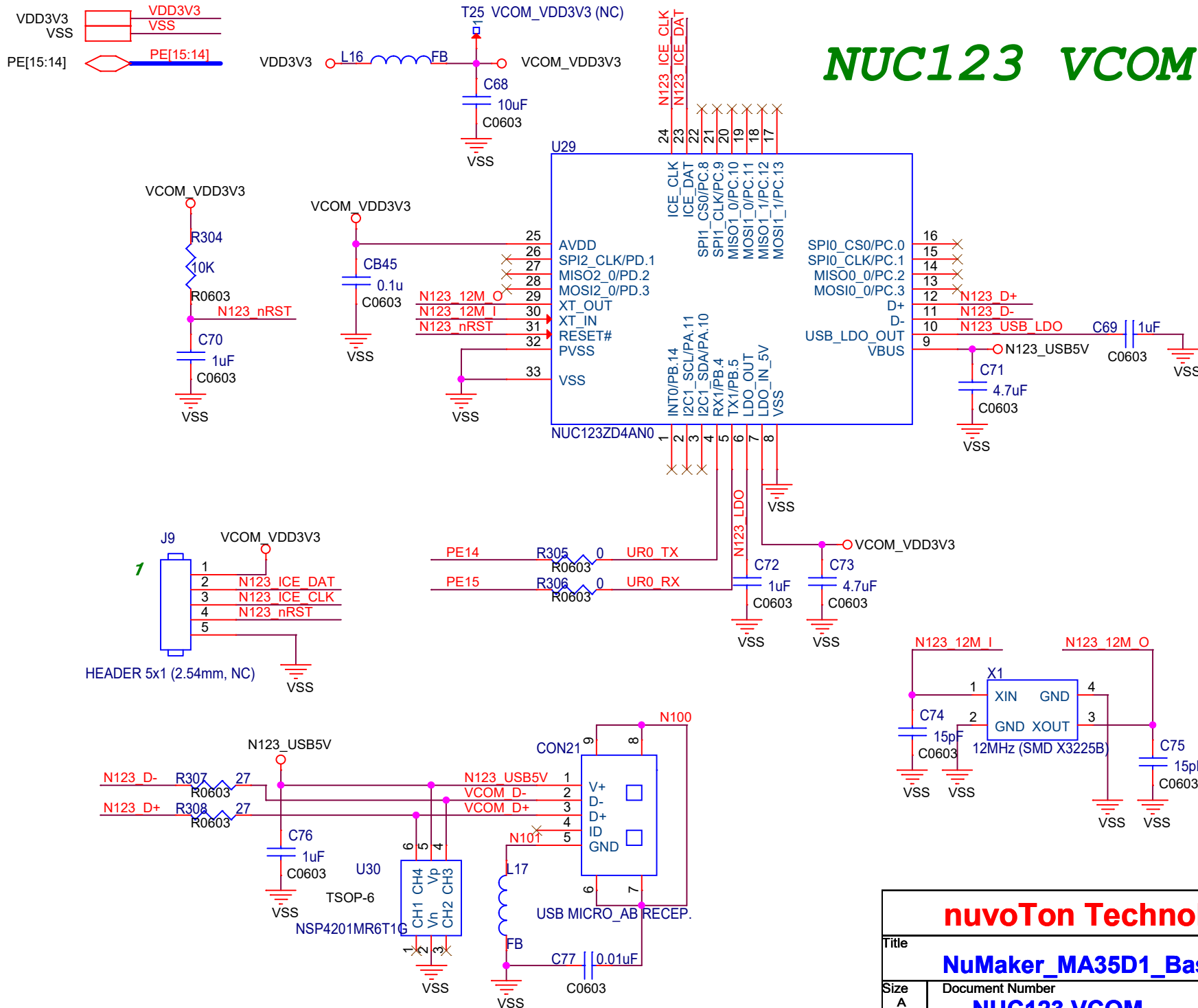


# ETM Connector

**nuvoTon Technology Corp.**

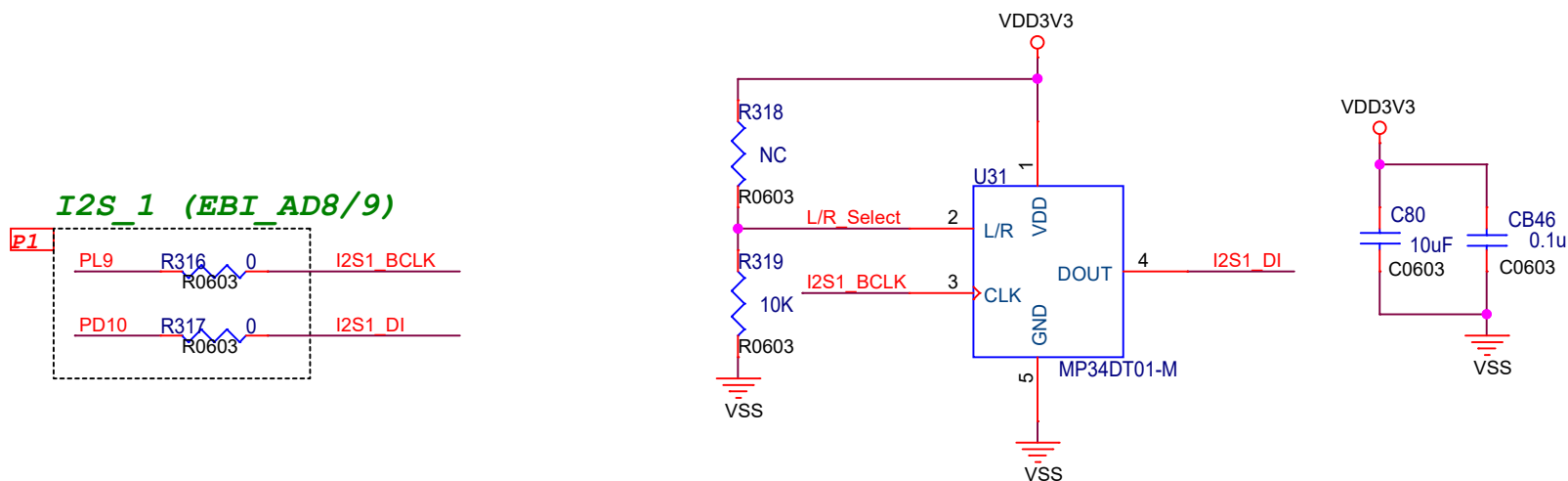
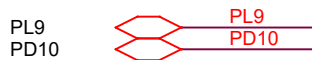
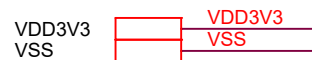
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# NUC123 VCOM



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# MEMS Digital MIC

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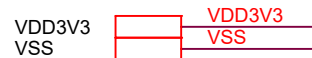
Title  
**NuMaker\_MA35D1\_Base**

Size A Document Number  
**MEMS Digital MIC (MP34DT01-M)**

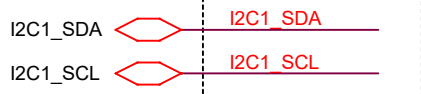
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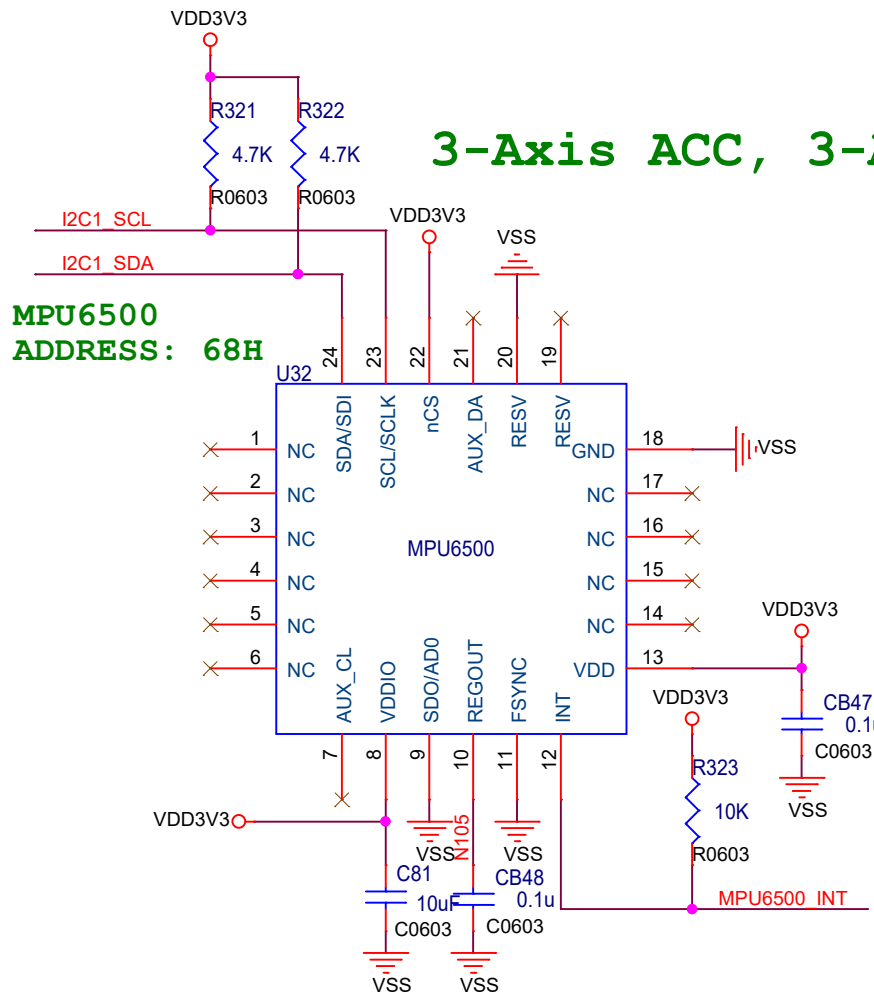
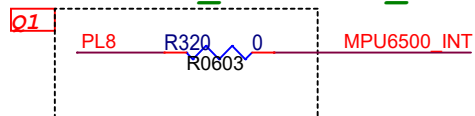
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**I2C1\_SDA/SCL (LCM\_I2C1\_SDA/SCL)**



**MPU6500\_INT (EBI\_AD7)**



**3-Axis ACC, 3-Axis Gyro**

**MEMS G-Sensor**

**nuvoTon Technology Corp.**

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