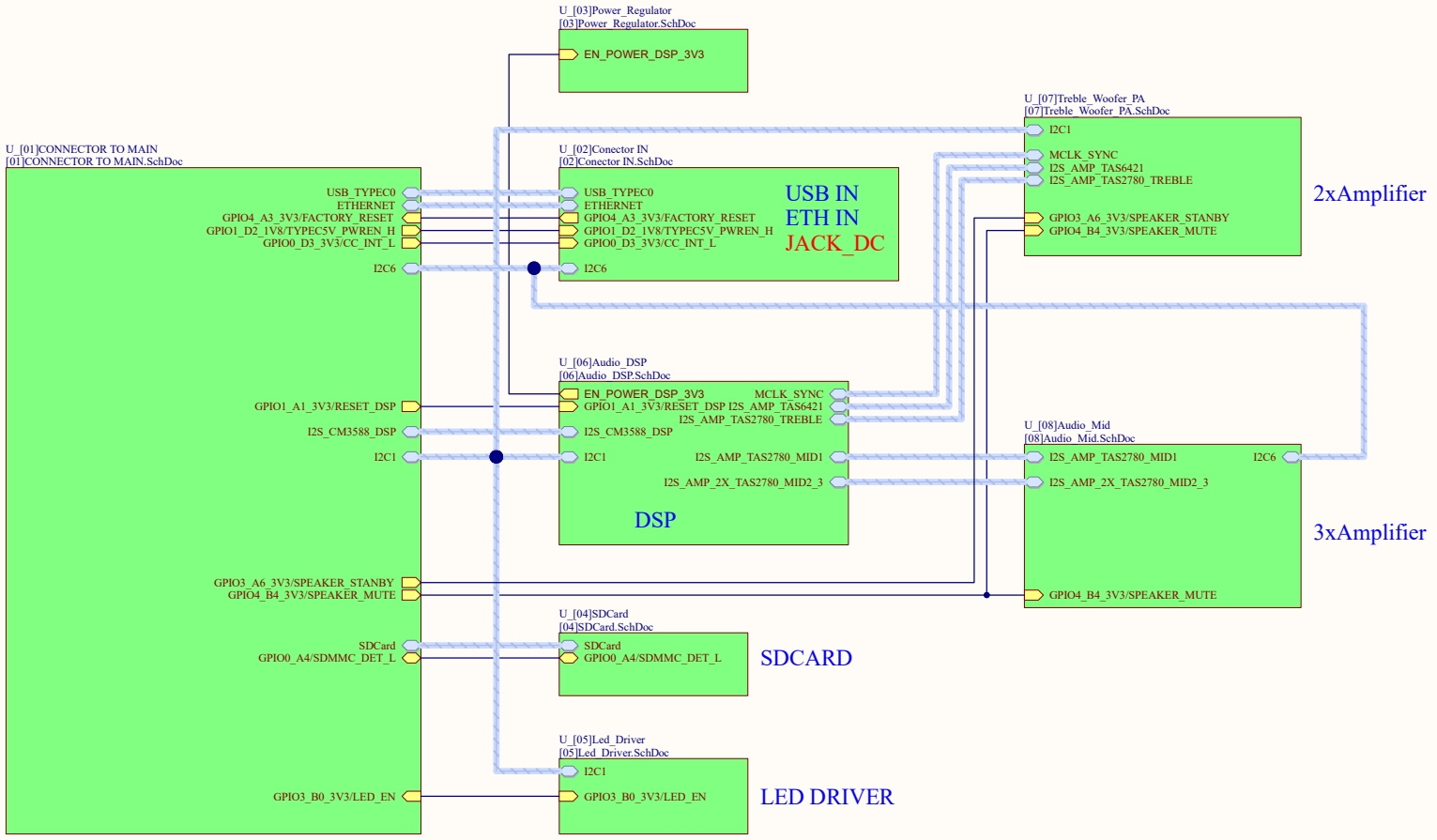
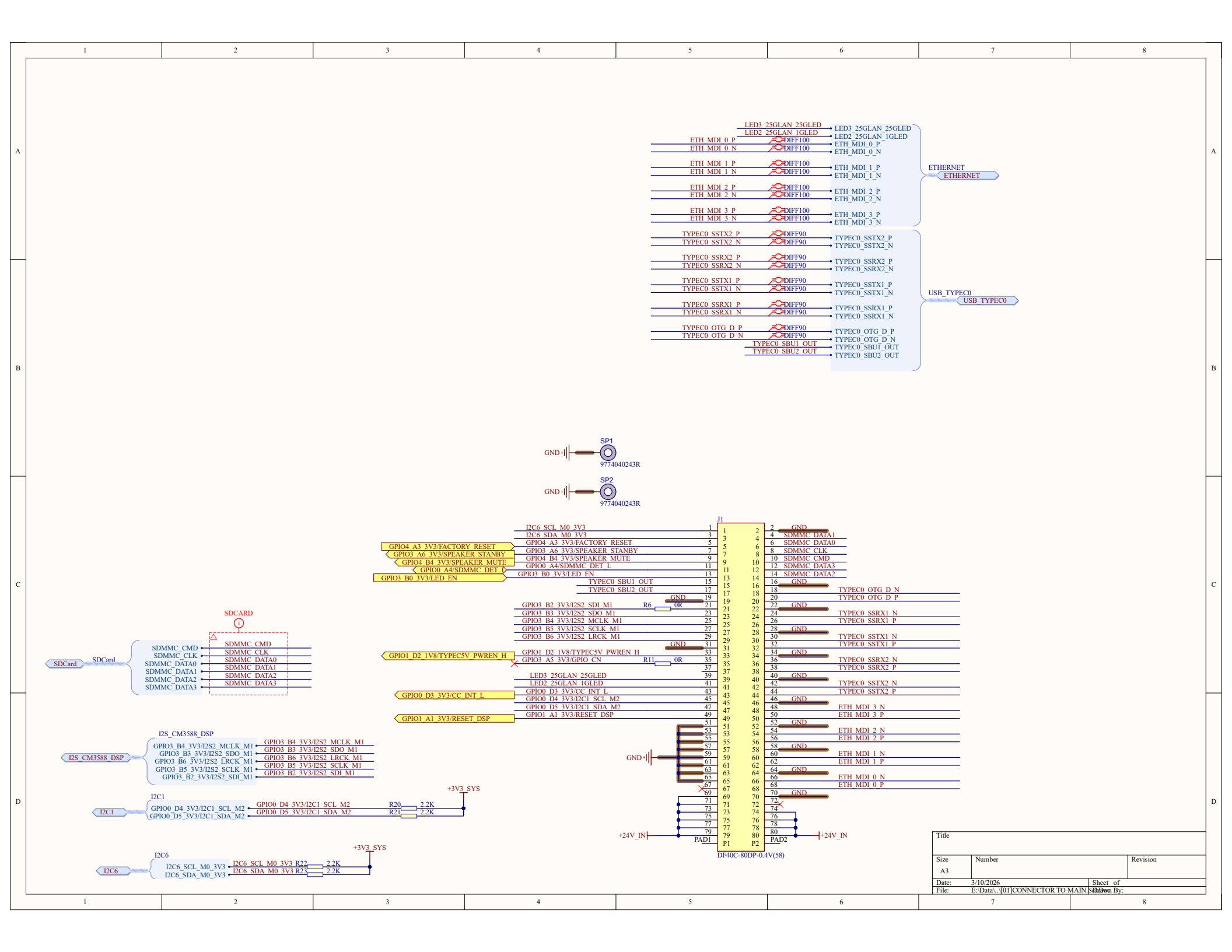
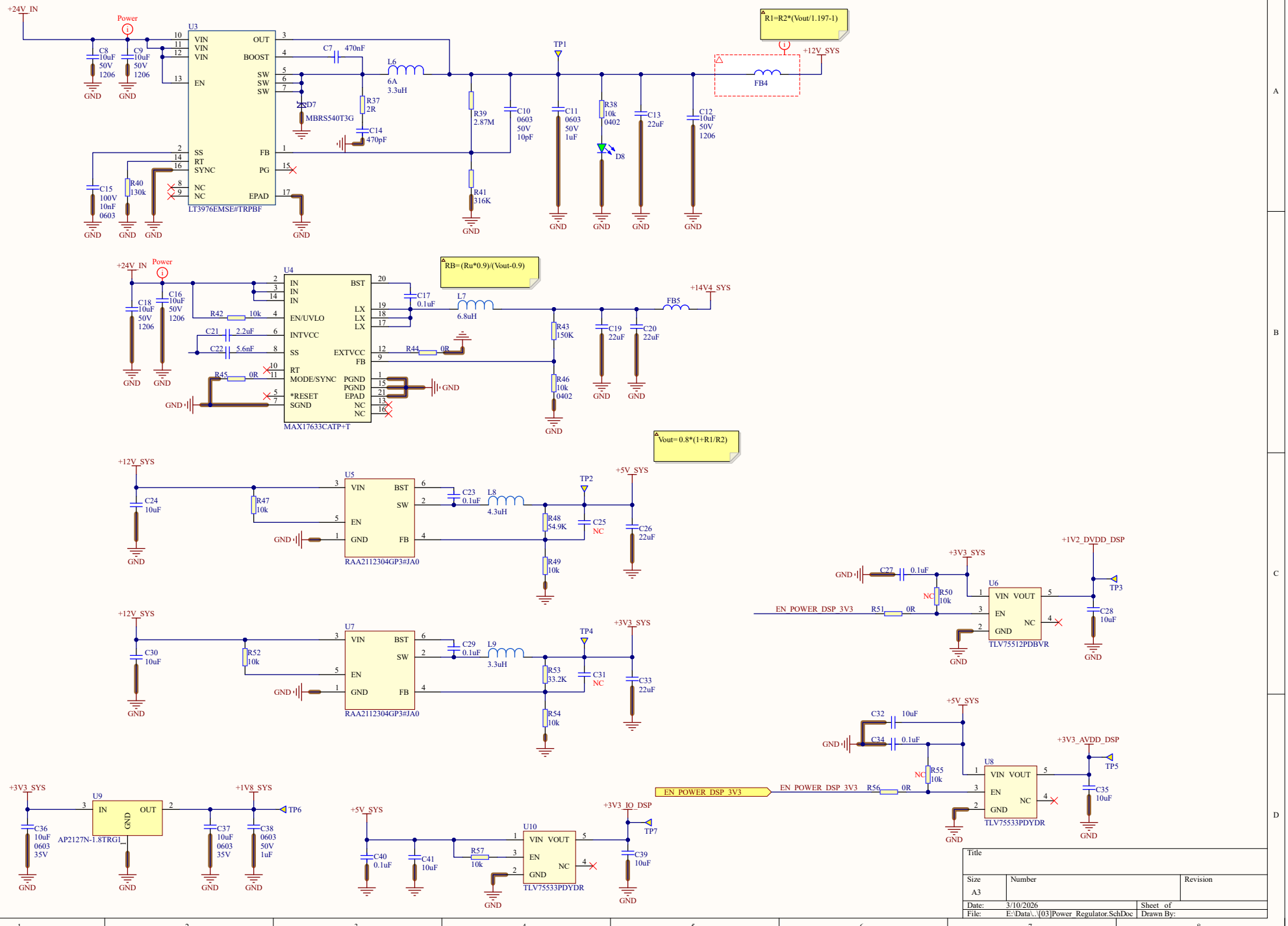
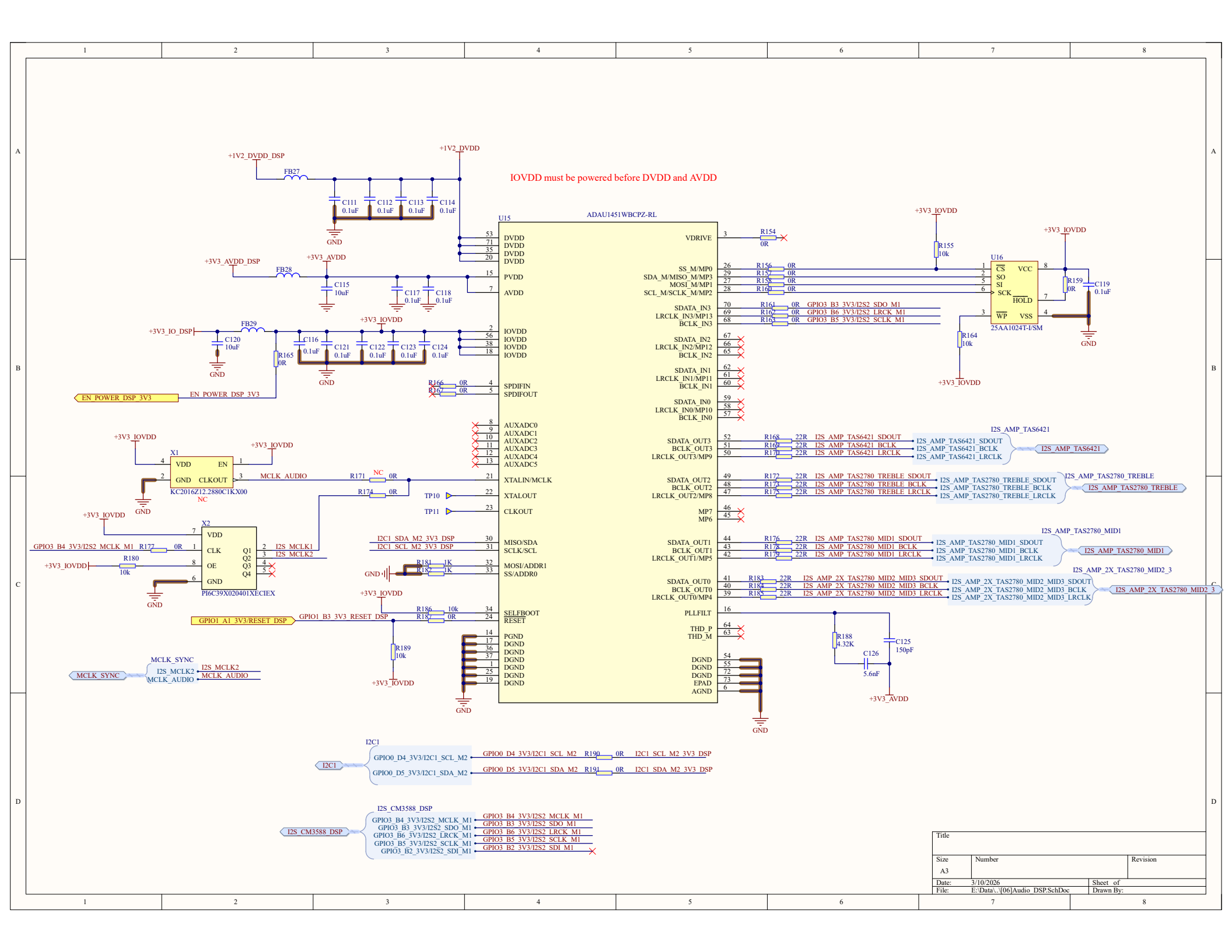
Block Diagram

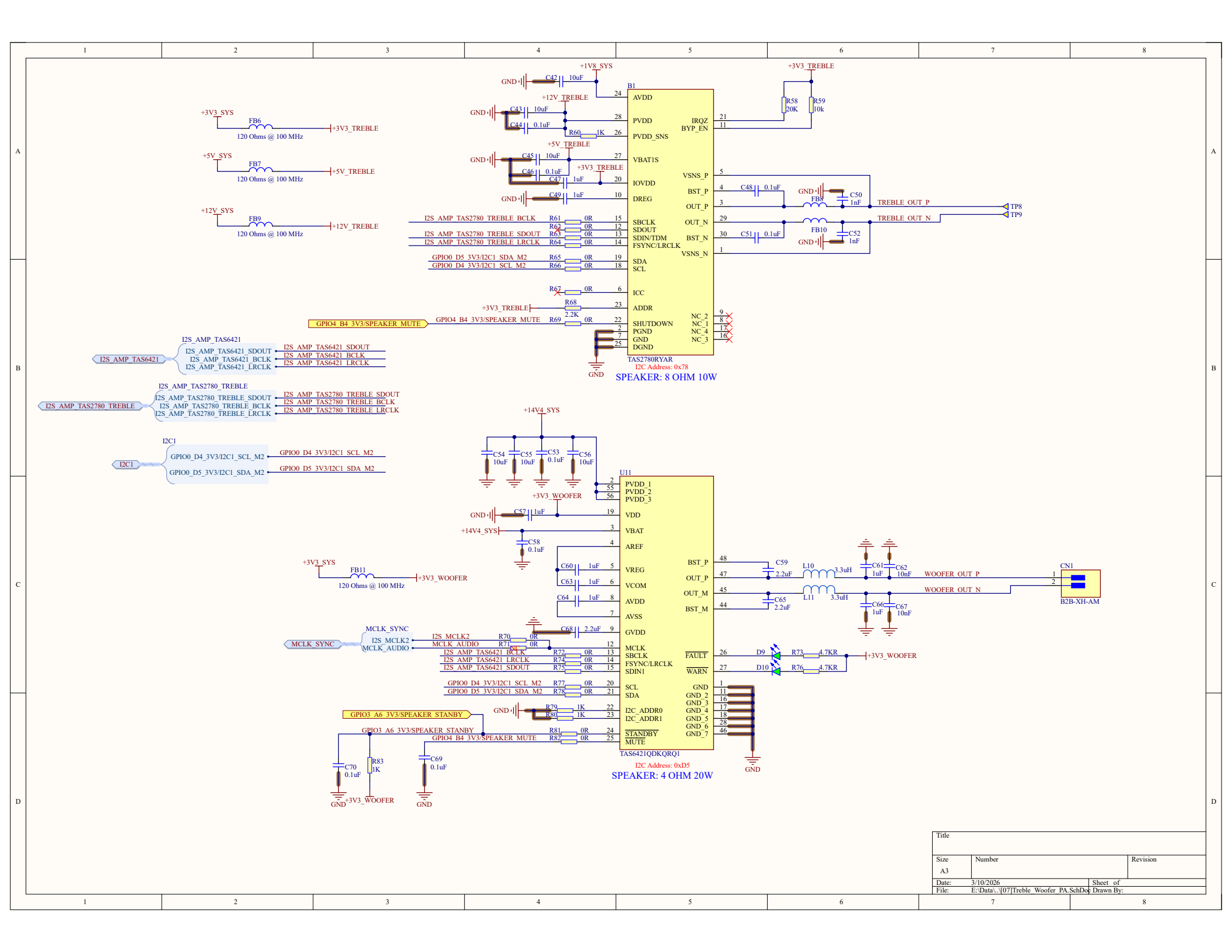


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File: E:\Data\..\BLOCK DIAGRAM.SchDoc		Drawn By:


LED3_25GLAN_25GLED
LED2_25GLAN_1GLED
ETH_MDI_0_P
ETH_MDI_0_N
ETH_MDI_1_P
ETH_MDI_1_N
ETH_MDI_2_P
ETH_MDI_2_N
ETH_MDI_3_P
ETH_MDI_3_N
DIFF100
ETHERNET
TYPEC0_SSTX2_P
TYPEC0_SSTX2_N
TYPEC0_SSRX2_P
TYPEC0_SSRX2_N
TYPEC0_SSTX1_P
TYPEC0_SSTX1_N
TYPEC0_SSRX1_P
TYPEC0_SSRX1_N
TYPEC0_OTG_D_P
TYPEC0_OTG_D_N
TYPEC0_SBU1_OUT
TYPEC0_SBU2_OUT
DIFF90
USB_TYPEC0
SP1
SP2
9774040243R
GND
J1
I2C6_SCL_M0_3V3
I2C6_SDA_M0_3V3
GPIO4_A3_3V3/FACTORY_RESET
GPIO3_A6_3V3/SPEAKER_STANBY
GPIO4_B4_3V3/SPEAKER_MUTE
GPIO0_A4/SDMMC_DET
GPIO3_B0_3V3/LED_EN
GPIO3_B2_3V3/I2S2_SDI_M1
GPIO3_B3_3V3/I2S2_SDO_M1
GPIO3_B4_3V3/I2S2_MCLK_M1
GPIO3_B5_3V3/I2S2_SCLK_M1
GPIO3_B6_3V3/I2S2_LRCK_M1
GPIO1_D2_1V8/TYPEC5V_PWREN_H
GPIO3_A5_3V3/GPIO_CN
R6
R11
0R
LED3_25GLAN_25GLED
LED2_25GLAN_1GLED
GPIO0_D3_3V3/CC_INT_L
GPIO0_D4_3V3/I2C1_SCL_M2
GPIO0_D5_3V3/I2C1_SDA_M2
GPIO1_A1_3V3/RESET_DSP
SDMMC_DATA1
SDMMC_DATA0
SDMMC_CLK
SDMMC_CMD
SDMMC_DATA3
SDMMC_DATA2
+24V_IN
PAD1
PAD2
P1
P2
DF40C-80DP-0.4V(58)
SDCARD
SDCard
I2S_CM3588_DSP
I2C1
I2C6
+3V3_SYS
R20
R21
2.2K
I2C6_SCL_M0_3V3_R22
I2C6_SDA_M0_3V3_R23
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Size
A3
Number
Revision
Date:
3/10/2026
Sheet of
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E:\Data\..\[01]CONNECTOR TO MAIN_SCH.SchDoc
Drawn By:


+24V_IN
Power
U3
C8 10uF 50V 1206
C9 10uF 50V 1206
C7 470nF
L6 6A 3.3uH
D7 MBRS540T3G
R37 2R
C14 470pF
R39 2.87M
C10 0603 50V 10pF
R41 316K
TP1
C11 0603 50V 1uF
R38 10k 0402
D8
C13 22uF
C12 10uF 50V 1206
R1=R2*(Vout/1.197-1)
+12V_SYS
FB4
C15 100V 10nF 0603
R40 130k
LT3976EMSE#TRPBF
U4
RB=(Ru*0.9)/(Vout-0.9)
C18 10uF 50V 1206
C16 10uF 50V 1206
R42 10k
C21 2.2uF
C22 5.6nF
R45 0R
C17 0.1uF
L7 6.8uH
+14V4_SYS
FB5
R43 150K
C19 22uF
C20 22uF
R44 0R
R46 10k 0402
MAX17633CATP+T
Vout= 0.8*(1+R1/R2)
U5
C24 10uF
R47 10k
C23 0.1uF
L8 4.3uH
TP2
+5V_SYS
R48 54.9K
C25 NC
C26 22uF
R49 10k
RAA2112304GP3#JA0
U7
C30 10uF
R52 10k
C29 0.1uF
L9 3.3uH
TP4
+3V3_SYS
R53 33.2K
C31 NC
C33 22uF
R54 10k
U6
C27 0.1uF
R50 10k
R51 0R
EN_POWER_DSP_3V3
+1V2_DVDD_DSP
TP3
C28 10uF
TLV75512PDBVR
U8
C32 10uF
C34 0.1uF
R55 10k
R56 0R
+3V3_AVDD_DSP
TP5
C35 10uF
TLV75533PDYDR
U9
C36 10uF 0603 35V
AP2127N-1.8TRG1
+1V8_SYS
TP6
C37 10uF 0603 35V
C38 0603 50V 1uF
U10
C40 0.1uF
C41 10uF
R57 10k
+3V3_IO_DSP
TP7
C39 10uF
GND
Title
Size A3
Number
Revision
Date: 3/10/2026
Sheet of
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Drawn By:


IOVDD must be powered before DVDD and AVDD
U15
ADAU1451WBCPZ-RL
+1V2_DVDD_DSP
+1V2_DVDD
FB27
C111 0.1uF
C112 0.1uF
C113 0.1uF
C114 0.1uF
GND
DVDD
DVDD
DVDD
DVDD
+3V3_AVDD_DSP
+3V3_AVDD
FB28
C115 10uF
C117 0.1uF
C118 0.1uF
PVDD
AVDD
+3V3_IO_DSP
+3V3_IOVDD
FB29
C120 10uF
C116 0.1uF
C121 0.1uF
C122 0.1uF
C123 0.1uF
C124 0.1uF
R165 0R
IOVDD
IOVDD
IOVDD
IOVDD
EN_POWER_DSP_3V3
R166 0R
R167 0R
SPDIFIN
SPDIFOUT
AUXADC0
AUXADC1
AUXADC2
AUXADC3
AUXADC4
AUXADC5
X1
KC2016Z12.2880C1KX00
NC
MCLK_AUDIO
R171 NC 0R
R174 0R
TP10
TP11
XTALIN/MCLK
XTALOUT
CLKOUT
X2
PI6C39X020401XECIEX
GPIO3_B4_3V3/I2S2_MCLK_M1
R177 0R
I2S_MCLK1
I2S_MCLK2
R180 10k
I2C1_SDA_M2_3V3_DSP
I2C1_SCL_M2_3V3_DSP
R181 1K
R182 1K
MISO/SDA
SCLK/SCL
MOSI/ADDR1
SS/ADDR0
R186 10k
R187 0R
GPIO1_A1_3V3/RESET_DSP
GPIO1_B3_3V3_RESET_DSP
SELFBOOT
RESET
R189 10k
PGND
DGND
DGND
D


+1V8_SYS
+3V3_TREBLE
B1
AVDD
PVDD
PVDD_SNS
VBAT1S
IOVDD
DREG
ICC
ADDR
SHUTDOWN
PGND
GND
DGND
IRQZ
BYP_EN
VSNS_P
BST_P
OUT_P
OUT_N
BST_N
VSNS_N
SBCLK
SDOUT
SDIN/TDM
FSYNC/LRCLK
SDA
SCL
NC_2
NC_1
NC_4
NC_3
TAS2780RVAR
I2C Address: 0x78
SPEAKER: 8 OHM 10W
+3V3_SYS
+5V_SYS
+12V_SYS
FB6
FB7
FB9
120 Ohms @ 100 MHz
+5V_TREBLE
+12V_TREBLE
TREBLE_OUT_P
TREBLE_OUT_N
TP8
TP9
I2S_AMP_TAS6421
I2S_AMP_TAS6421_SDOUT
I2S_AMP_TAS6421_BCLK
I2S_AMP_TAS6421_LRCLK
I2S_AMP_TAS2780_TREBLE
I2S_AMP_TAS2780_TREBLE_SDOUT
I2S_AMP_TAS2780_TREBLE_BCLK
I2S_AMP_TAS2780_TREBLE_LRCLK
I2C1
GPIO0_D4_3V3/I2C1_SCL_M2
GPIO0_D5_3V3/I2C1_SDA_M2
GPIO4_B4_3V3/SPEAKER_MUTE
+14V4_SYS
U11
PVDD_1
PVDD_2
PVDD_3
VDD
VBAT
AREF
VREG
VCOM
AVDD
AVSS
GVDD
MCLK
SBCLK
FSYNC/LRCLK
SDIN1
SCL
SDA
I2C_ADDR0
I2C_ADDR1
STANDBY
MUTE
FAULT
WARN
GND
GND_2
GND_3
GND_4
GND_5
GND_6
GND_7
TAS6421QDKQRQ1
I2C Address: 0xD5
SPEAKER: 4 OHM 20W
+3V3_WOOFER
FB11
MCLK_SYNC
I2S_MCLK2
MCLK_AUDIO
GPIO3_A6_3V3/SPEAKER_STANBY
WOOFER_OUT_P
WOOFER_OUT_N
CN1
B2B-XH-AM
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Size
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Number
Revision
Date: 3/10/2026
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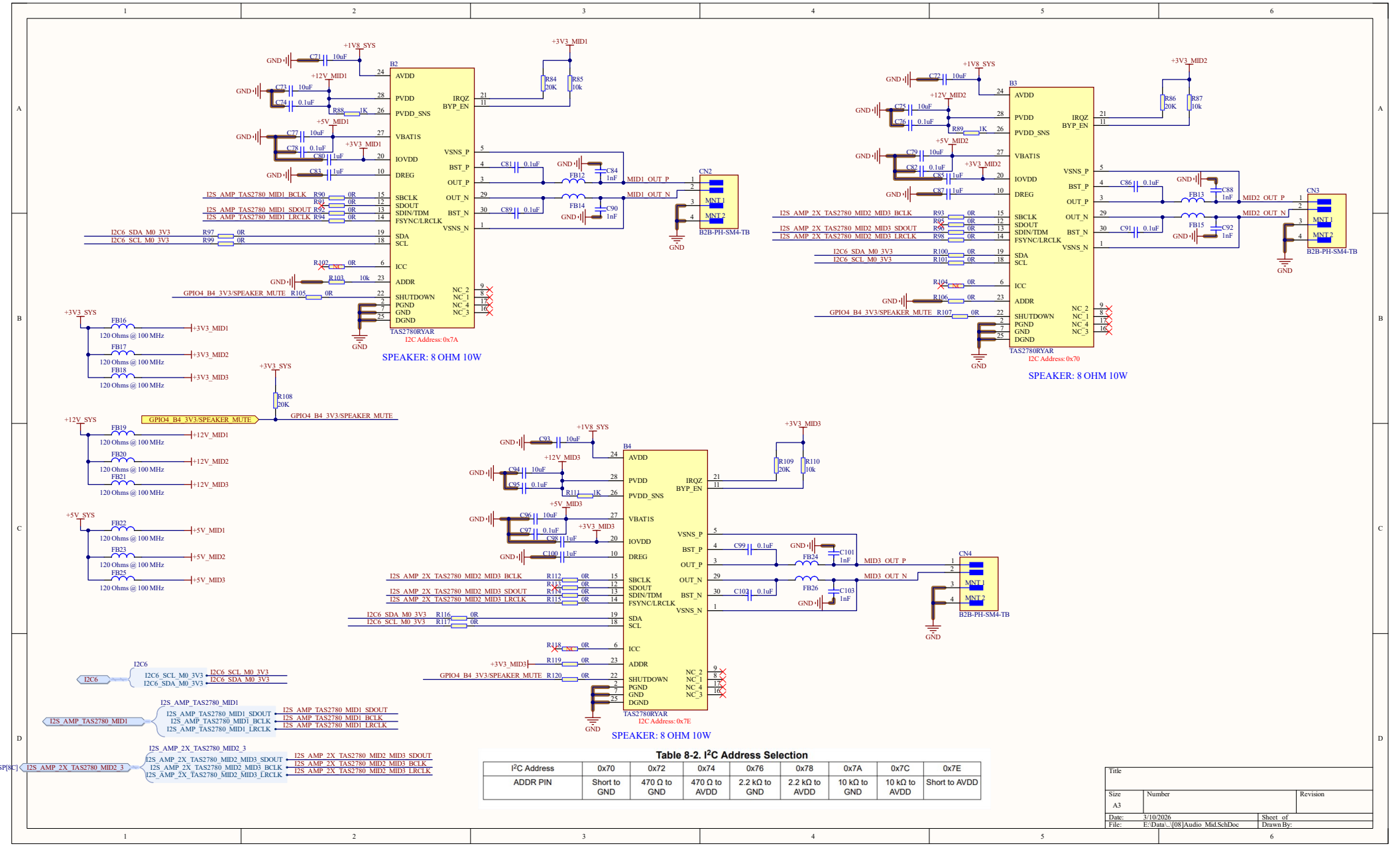


Table 8-2. I²C Address Selection

I²C Address	0x70	0x72	0x74	0x76	0x78	0x7A	0x7C	0x7E
ADDR PIN	Short to GND	470 Ω to GND	470 Ω to AVDD	2.2 kΩ to GND	2.2 kΩ to AVDD	10 kΩ to GND	10 kΩ to AVDD	Short to AVDD

Title			
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Date: 3/10/2026		Sheet of	
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