Tang Nano 20K

Revision History

Version	Date	Change Note
3850	2022/12/24	Original edition
3920	2023/02/22	Shorten PCB width to 888mil Changed pin assignment of BL616.
3921	2023/03/27	Fix some Silkscreen issuses First public release version.

GW2AR-18

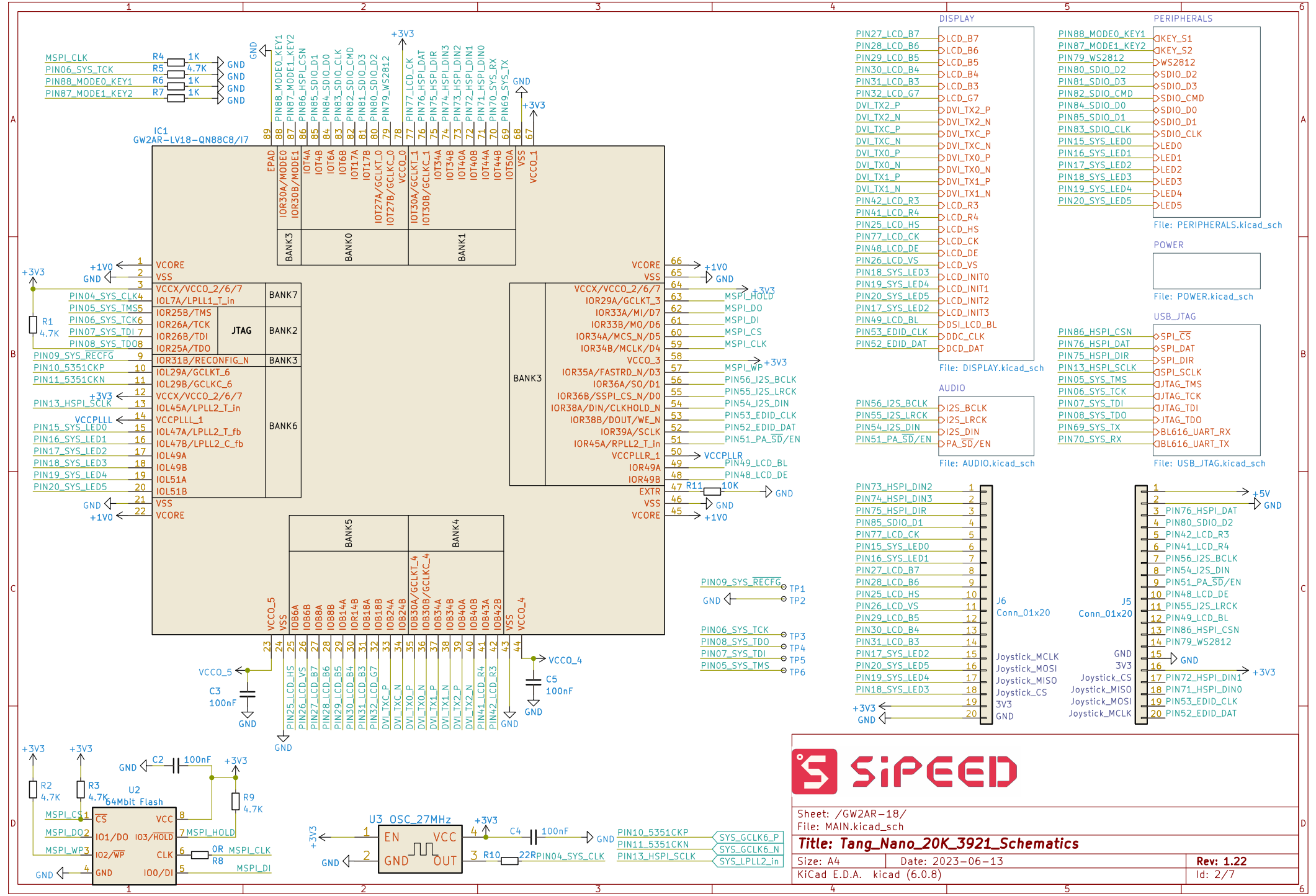
File: MAIN.kicad_sch

SiPEED

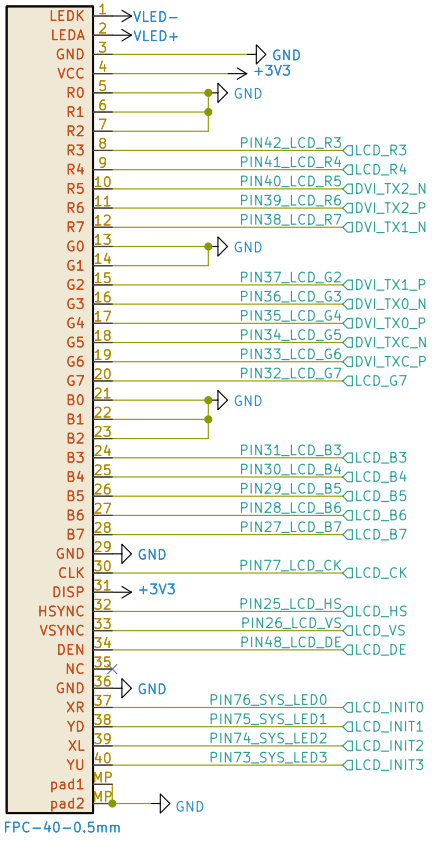
Sheet: /
File: Tang_Nano_20K_3921.kicad_sch

Title: Tang_Nano_20K_3921_Schematics

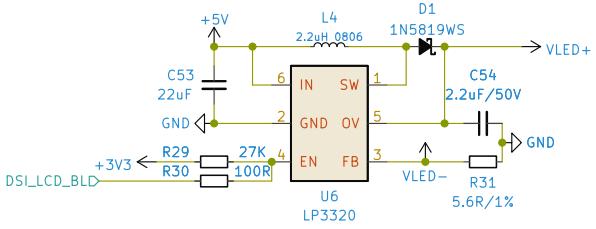
Size: A4	Date: 2023-06-13	**Rev: 1.22**
KiCad E.D.A. kicad (6.0.8)		Id: 1/7


IC1
GW2AR-LV18-QN88C8/I7
BANK0
BANK1
BANK2
BANK3
BANK4
BANK5
BANK6
BANK7
JTAG
DISPLAY
File: DISPLAY.kicad_sch
PERIPHERALS
File: PERIPHERALS.kicad_sch
POWER
File: POWER.kicad_sch
AUDIO
File: AUDIO.kicad_sch
USB_JTAG
File: USB_JTAG.kicad_sch
J5
Conn_01x20
J6
Conn_01x20
U2
64Mbit Flash
U3 OSC_27MHz
SiPEED
Sheet: /GW2AR-18/
File: MAIN.kicad_sch
Title: Tang_Nano_20K_3921_Schematics
Size: A4
Date: 2023-06-13
Rev: 1.22
KiCad E.D.A. kicad (6.0.8)
Id: 2/7

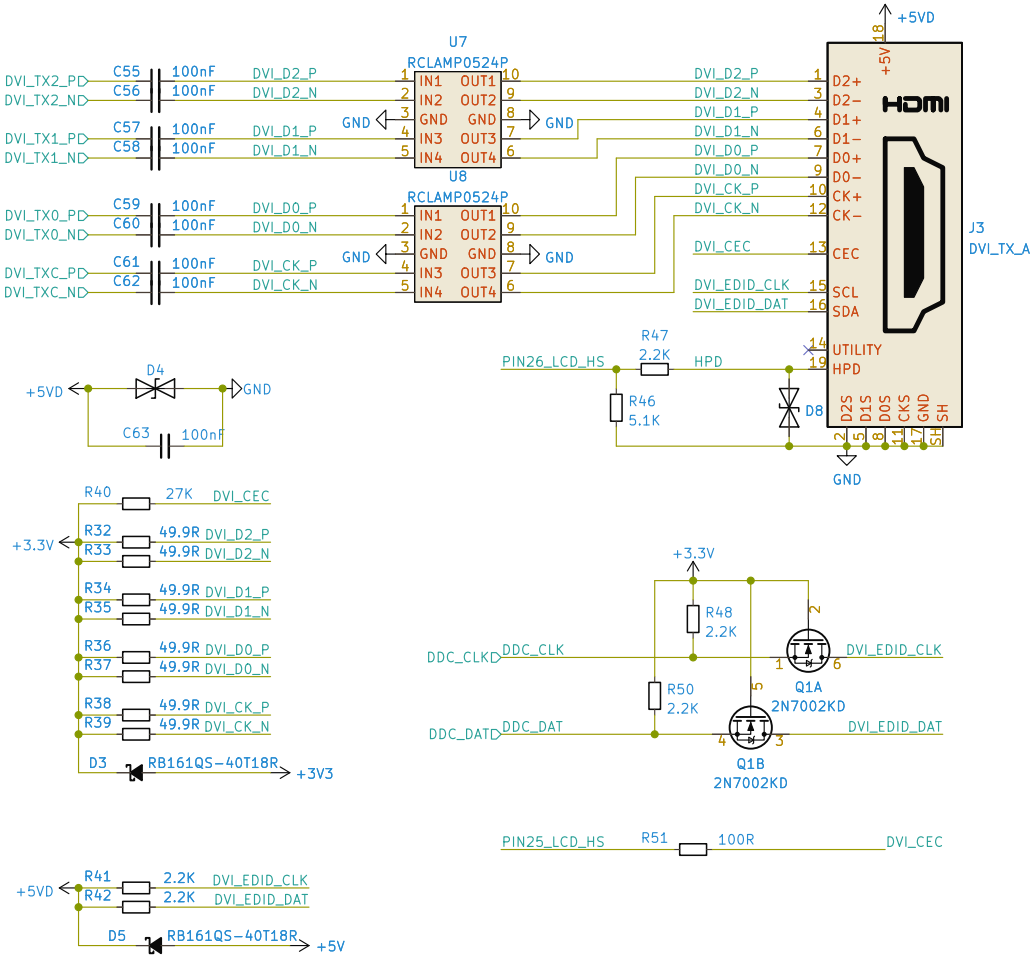
RGB LCD



LCD BACKLIGHT



DVI TX



SiPEED

Sheet: /GW2AR−18/DISPLAY/
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Title: Tang_Nano_20K_3921_Schematics

Size: A4	Date: 2023−06−13	**Rev: 1.22**
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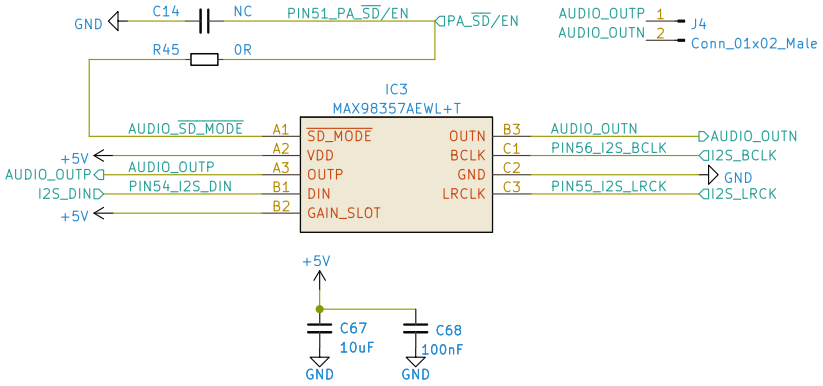
DAC + Audio PA



SiPEED

Sheet: /GW2AR-18/AUDIO/
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Title: Tang_Nano_20K_3921_Schematics

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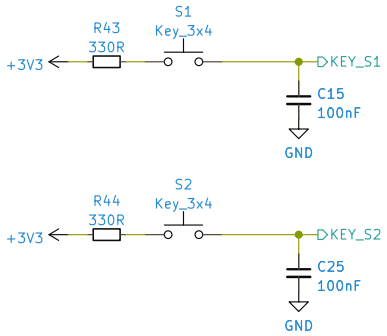
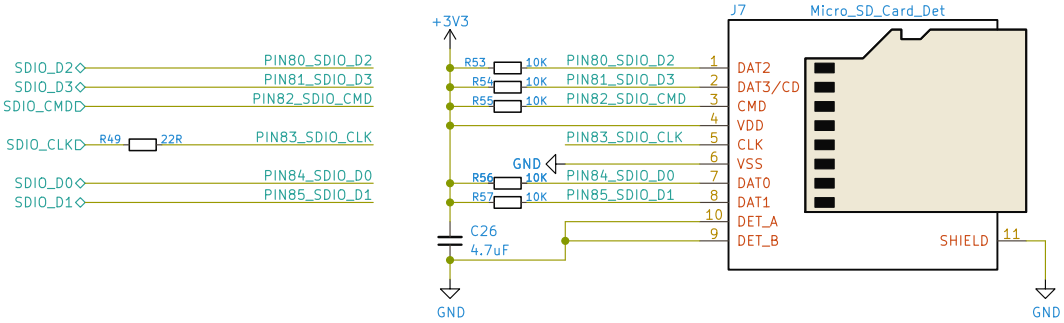
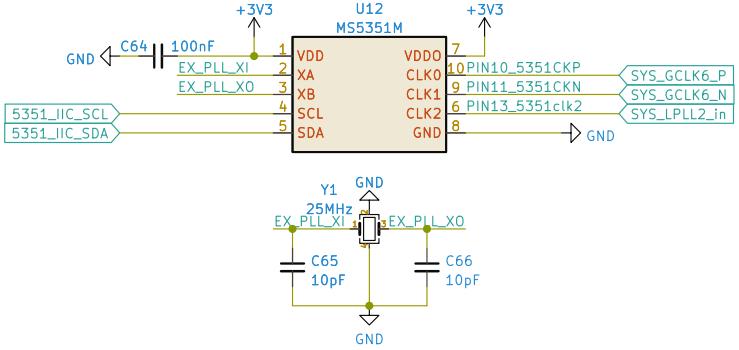
Button x 2



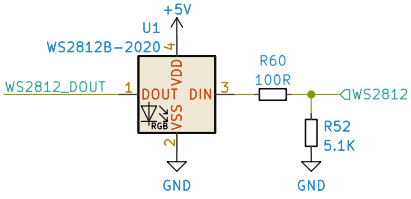
MICRO SD CARD



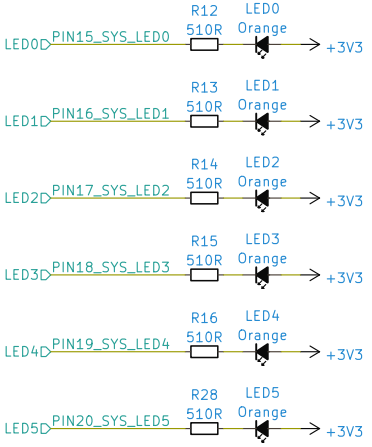
AUX_PLL



WS2812



LED



SiPEED

Sheet: /GW2AR-18/PERIPHERALS/
File: PERIPHERALS.kicad_sch

Title: Tang_Nano_20K_3921_Schematics

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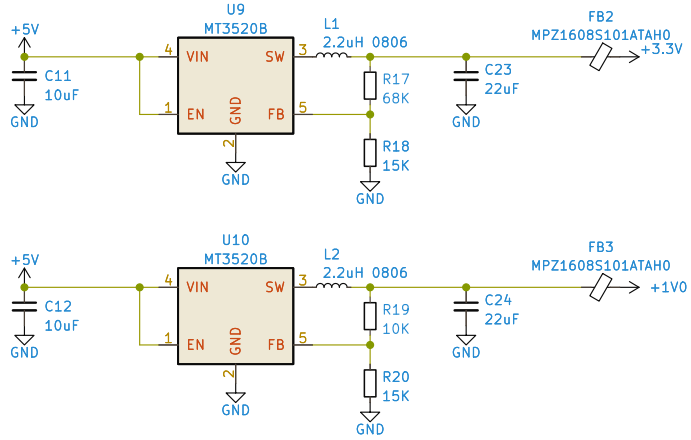

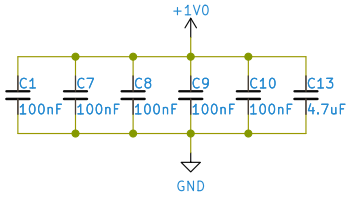

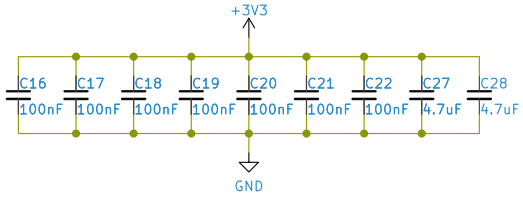

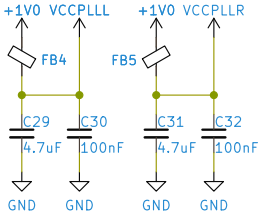

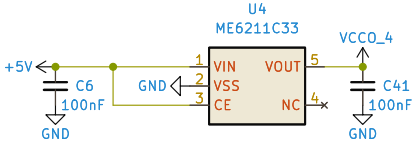

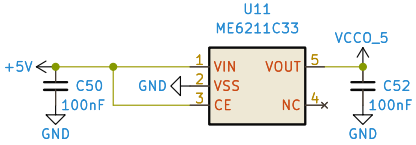

SiPEED

Sheet: /GW2AR-18/POWER/
File: POWER.kicad_sch

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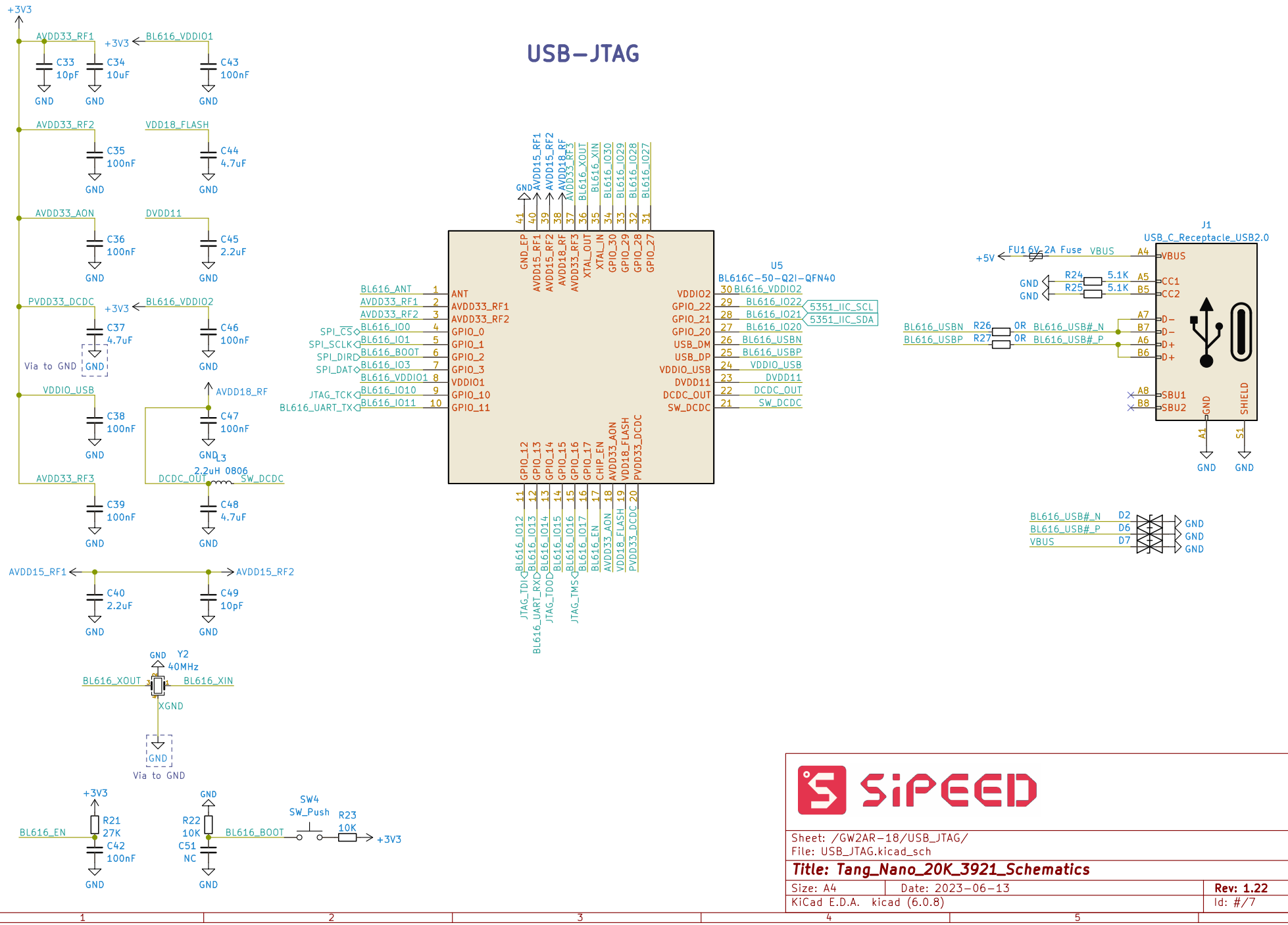
KiCad E.D.A. kicad (6.0.8)		Id: #/7


USB-JTAG
+3V3
AVDD33_RF1
BL616_VDDIO1
C33 10pF
C34 10uF
C43 100nF
GND
AVDD33_RF2
VDD18_FLASH
C35 100nF
C44 4.7uF
AVDD33_AON
DVDD11
C36 100nF
C45 2.2uF
PVDD33_DCDC
BL616_VDDIO2
C37 4.7uF
C46 100nF
Via to GND
VDDIO_USB
AVDD18_RF
C38 100nF
C47 100nF
L3
2.2uH 0806
DCDC_OUT
SW_DCDC
AVDD33_RF3
C39 100nF
C48 4.7uF
AVDD15_RF1
AVDD15_RF2
C40 2.2uF
C49 10pF
Y2
40MHz
BL616_XOUT
BL616_XIN
XGND
R21 27K
C42 100nF
R22 10K
C51 NC
SW4
SW_Push
R23 10K
BL616_EN
BL616_BOOT
U5
BL616C-50-Q2I-QFN40
ANT
AVDD33_RF1
AVDD33_RF2
GPIO_0
GPIO_1
GPIO_2
GPIO_3
VDDIO1
GPIO_10
GPIO_11
GND_EP
XTAL_OUT
XTAL_IN
VDDIO2
GPIO_22
GPIO_21
GPIO_20
USB_DM
USB_DP
VDDIO_USB
DVDD11
DCDC_OUT
SW_DCDC
BL616_ANT
SPI_CS
SPI_SCLK
SPI_DIRD
SPI_DAT
JTAG_TCK
BL616_UART_TX
JTAG_TDI
JTAG_UART_RX
JTAG_TDO
JTAG_TMS
CHIP_EN
5351_IIC_SCL
5351_IIC_SDA
J1
USB_C_Receptacle_USB2.0
+5V
FU1 6V 2A Fuse
VBUS
R24 5.1K
R25 5.1K
CC1
CC2
BL616_USBN
BL616_USBP
R26 0R
R27 0R
BL616_USB#_N
BL616_USB#_P
D-
D+
SBU1
SBU2
SHIELD
D2
D6
D7
Sheet: /GW2AR-18/USB_JTAG/
File: USB_JTAG.kicad_sch
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