STM32F469I-DISCO

MB1189

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Legend

General comment such as function title, configuration, ...

Text to be added to silkscreen.

Warning text.

Notes to generate the board layout.

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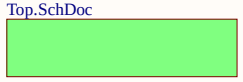
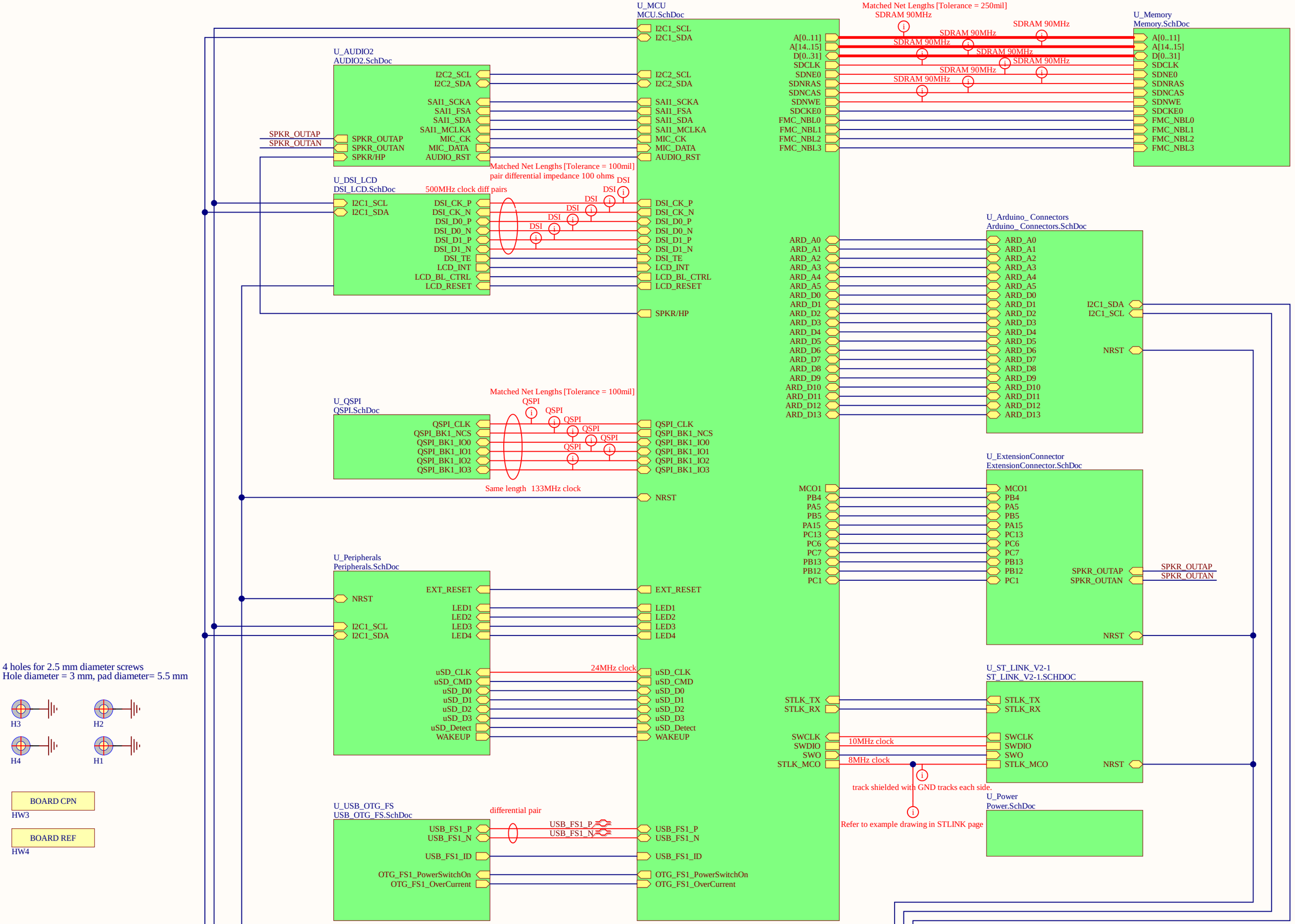
U_Top
Top.SchDoc



Title: **Project overview**			
Project: **STM32F469I-DISCO**			
Variant: F469NIH6			
Revision: B-08		Reference: MB1189	
Size: A4	Date: 22/02/2022	Sheet: 1 of 13	



Title: **MB1189**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A3	Date: 22/02/2022	Sheet: 2 of 13

WAKEUP
ARD_D3
ARD_D5
ARD_A5
ARD_D6
ARD_D9
MCO1
LCD_BL_CTRL
PA5
VBUS_FS1
USB_FS1_ID
USB_FS1_N
USB_FS1_P
SWDIO
SWCLK
PA15
EXT_RESET
ARD_A0
OTG_FS1_PowerSwitchOn
I2S3_CK
SB6
Closed by default
SWO
SB7
Open by default
QSPI_BK1_NCS
OTG_FS1_OverCurrent
I2C1_SCL
I2C1_SDA
+3V3
R1401K5
R142 1K5
STLK_RX
STLK_TX
PB12
PB13
ARD_D12
ARD_D11
C93 3.0pF
R132 0
X3
NX3215SA-32.768K
C94 3.0pF
R133 0
R131 0
C85 8.2pF
X2
NX3225GD-8.00M
C83 8.2pF close to MCU
NRST
BOOT0
R143 510
R150 [N/A]
+3V3
SB15
Closed by default
R149 10K
R144 [N/A]
STLK_MCO
SB19
Open by default
PH0
SDNWE
ARD_A1
ARD_A2
ARD_A3
ARD_A4
PC1
PC6
PC7
uSD_D0
uSD_D1
uSD_D2
uSD_D3
uSD_CLK
PC13
R135 0
LCD_INT
DSI_TE
LED4
DSI_CK_P
DSI_CK_N
DSI_D0_P
DSI_D0_N
DSI_D1_P
DSI_D1_N

U14A
STM32F469NIH6

PA0-WKUP
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PA8
PA9
PA10
PA11
PA12
PA13
PA14
PA15
PC13-ANTI_TAMP
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
PB8
PB9
PB10
PB11
PB12
PB13
PB14
PB15
PC14-OSC32_IN
PC15-OSC32_OUT
PH0-OSC_IN
PH1-OSC_OUT
NRST
BOOT0
PC0
PC1
PC2
PC3
PC4
PC5
PC6
PC7
PC8
PC9
PC10
PC11
PC12
PC13
PC14
PC15
PH0
PH1
PDR_ON
PJ0
PJ1
PJ2
PJ3
PJ4
PJ5
PJ12
PJ13
PJ14
PJ15
PK3
PK4
PK5
PK6
PK7
DSI_CK_P
DSI_CK_N
DSI_D0_P
DSI_D0_N
DSI_D1_P
DSI_D1_N

R87 and R135 are for reserved use

U14B
STM32F469NIH6

PD0
PD1
PD2
PD3
PD4
PD5
PD6
PD7
PD8
PD9
PD10
PD11
PD12
PD13
PD14
PD15
PE0
PE1
PE2
PE3
PE4
PE5
PE6
PE7
PE8
PE9
PE10
PE11
PE12
PE13
PE14
PE15
PF0
PF1
PF2
PF3
PF4
PF5
PF6
PF7
PF8
PF9
PF10
PF11
PF12
PF13
PF14
PF15
PG0
PG1
PG2
PG3
PG4
PG5
PG6
PG7
PG8
PG9
PG10
PG11
PG12
PG13
PG14
PG15
PH2
PH3
PH4
PH5
PH6
PH7
PH8
PH9
PH10
PH11
PH12
PH13
PH14
PH15
PI0
PI1
PI2
PI3
PI4
PI5
PI6
PI7
PI8-ANTI_TAMP2
PI9
PI10
PI11
PI12
PI13
PI14
PI15

uSD_CMD
ARD_D13
LED2
LED3
MIC_DATA
I2S3_CK
MIC_CK
R87 0
TP1
Close to MCU
FMC_NBL0
FMC_NBL1
AUDIO_RST
SPKR/HP
SAI1_FSA
SAI1_SCKA
SAI1_SDA
QSPI_BK1_IO3
QSPI_BK1_IO2
QSPI_BK1_IO0
QSPI_BK1_IO1
QSPI_CLK
SDNRAS
uSD_Detect
LED1
SAI1_MCLKA
SDCLK
ARD_D0
ARD_D8
ARD_D7
ARD_D4
ARD_D2
ARD_D1
ARDUINO USART6_RX
ARDUINO USART6_TX
SDNCAS
SDNE0
SDCKE0
R121 2K2
R124 2K2
+3V3
I2C2_SCL
I2C2_SDA
I2C2 to codec: <100kHz
ARD_D10
LCD_RESET
FMC_NBL2
FMC_NBL3

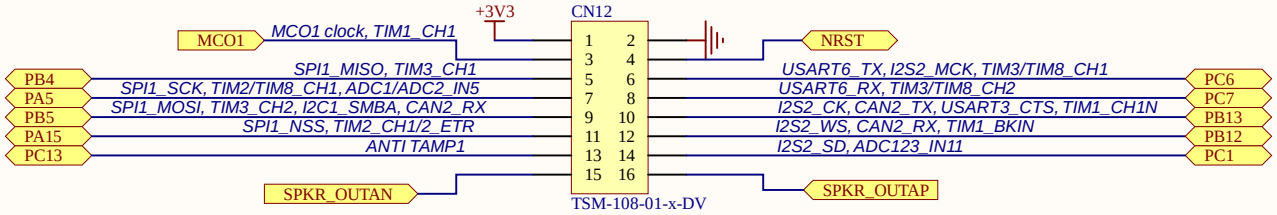
U14C
STM32F469NIH6

VDD_MCU
L5 BEAD(FCM1608KF-601T03)
VDDA
R123 0
VREF+
DSI_VDD12
SB14
Closed by default
C81 2.2uF
VDD1
VDD2
VDD3
VDD4
VDD5
VDD6
VDD7
VDD8
VDD_USB33
VDD10
VDD11
VDD12
VDD13
VDD14
VDD15
VDD17
VDD18
VDD19
VDDA
VREF+
VDD_VREGDSI
DSI_VDD12
DSI_VCAP
DSI_VSS
VSS1
VSS2
VSS3
VSS4
VSS5
VSS6
VSS7
VSS8
VSS9
VSS10
VSS11
VSS12
VSS13_VSS18
VSS14
VSS15
VSS17
VSS19
VSS20
VSSA
VREF-
VBAT
BYPASS-REG
VCAP1
VCAP2
R122 10K
C96 2.2uF
C76 2.2uF
Ceramic capacitor (Low ESR)
Ceramic capacitor (Low ESR)

D[0..31]
A[0..11]
A[14..15]

C67 100nF
C72 100nF
C88 100nF
C90 100nF
C54 100nF
C84 100nF
C53 100nF
C71 100nF
C75 100nF
C60 4.7uF
C98 4.7uF
C65 1uF
C77 100nF
C74 100nF
C69 100nF
C95 100nF
C68 100nF
C91 100nF
C73 100nF
C89 100nF
C92 100nF
C70 100nF
C80 1uF
C78 100nF
C86 1uF
C87 100nF

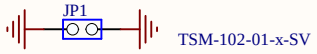
Title: **MCU**			
Project: **STM32F469I-DISCO**			
Variant: F469NIH6			
Revision: B-08		Reference: MB1189	
Size: A3	Date: 22/02/2022	Sheet: 3 of 13	

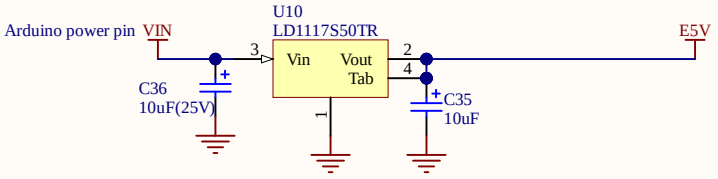


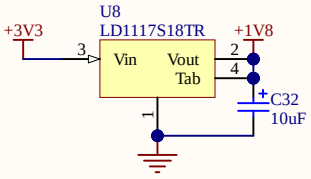
post heigth: 5.84mm

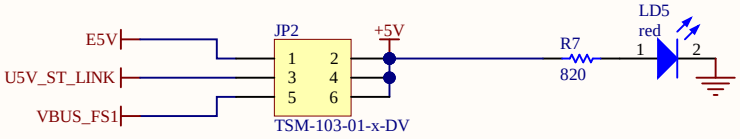
Extension connector interfaces

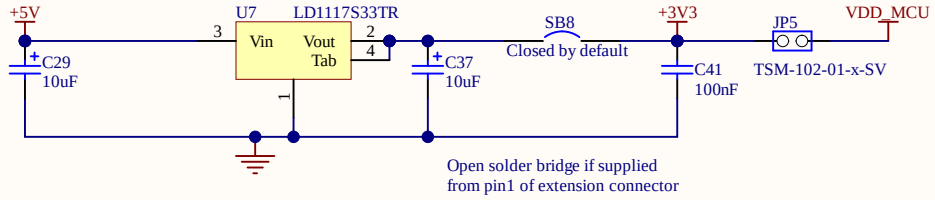
Title: **Extension Connectors**			
Project: **STM32F469I-DISCO**			
Variant: F469NIH6			
Revision: B-08		Reference: MB1189	
Size: A4	Date: 22/02/2022	Sheet: 4 of 13	





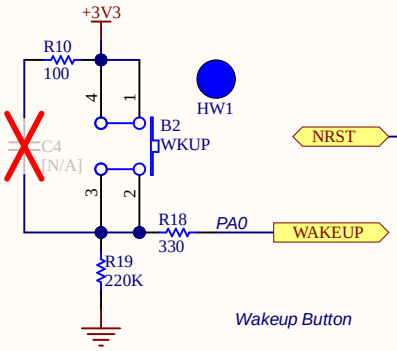




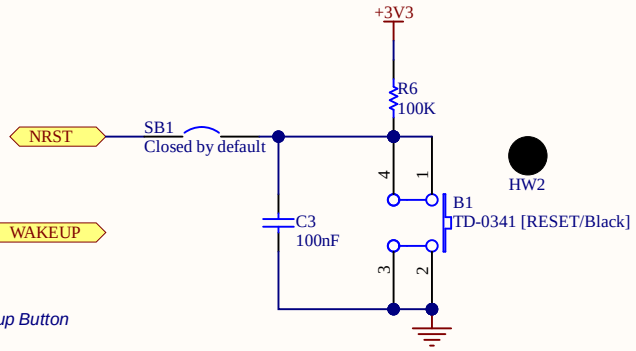


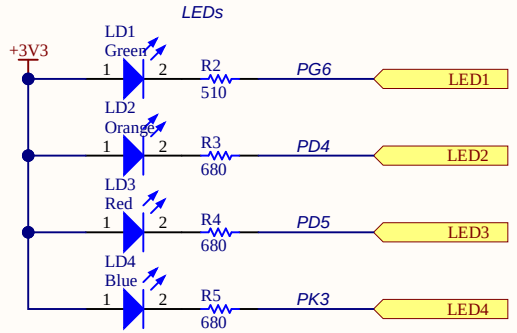
Title: **Power**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 5 of 13

Button



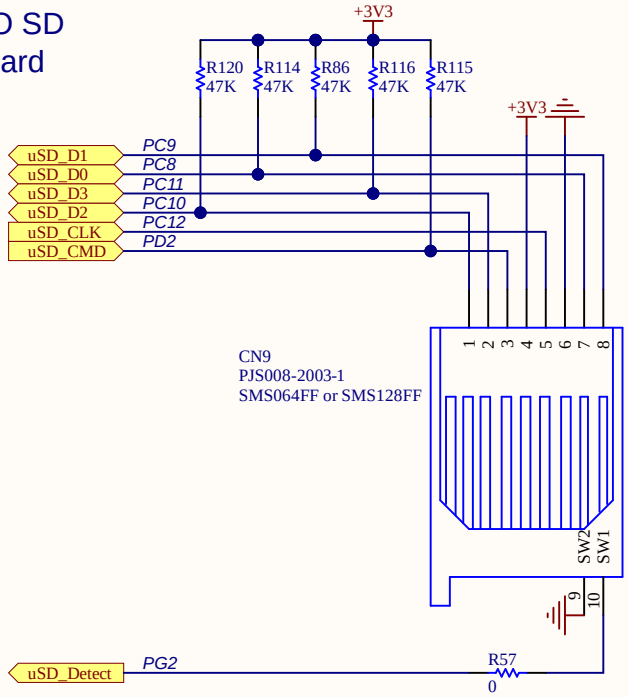
Reset Button



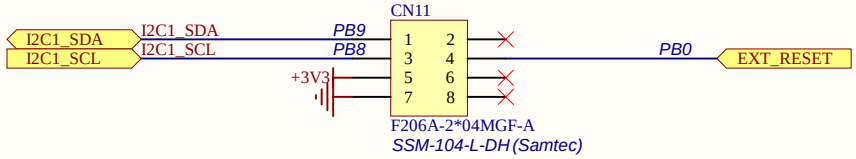


The 4 LEDs are top side

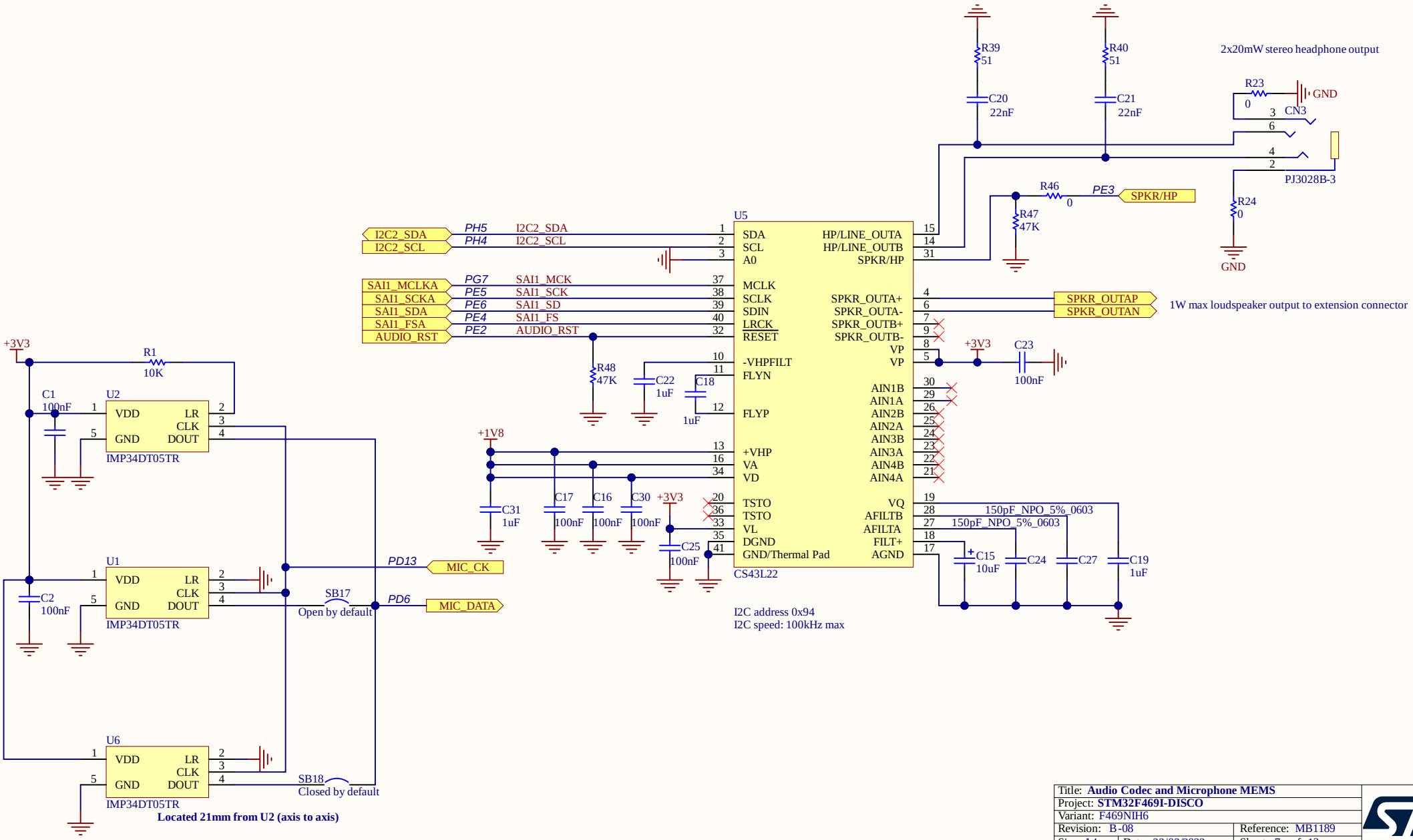
MICRO SD (TF) Card



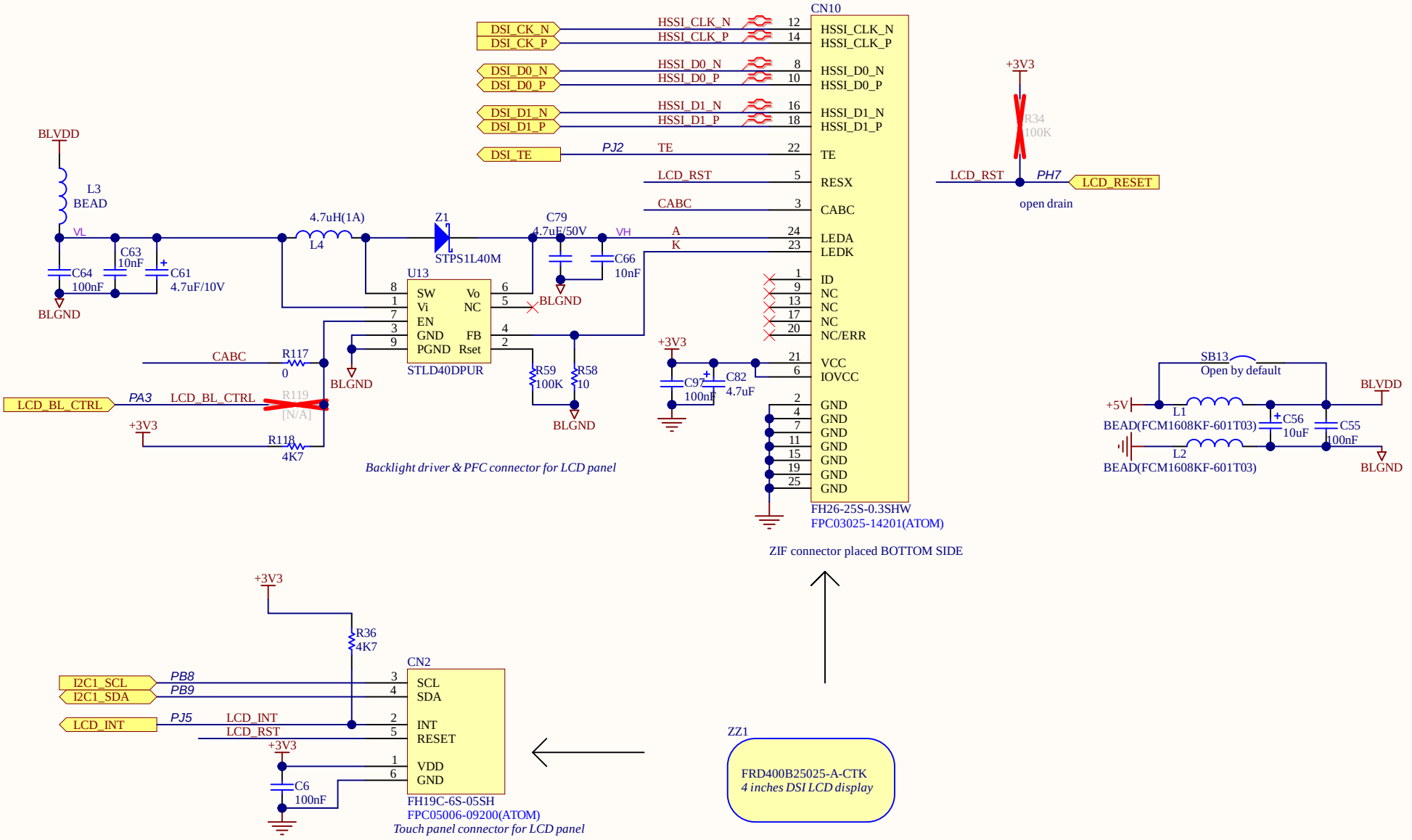
EXT/RF E2P Connector



Title: **Peripherals**			
Project: **STM32F469I-DISCO**			
Variant: F469NIH6			
Revision: B-08		Reference: MB1189	
Size: A4	Date: 22/02/2022	Sheet: 6 of 13	



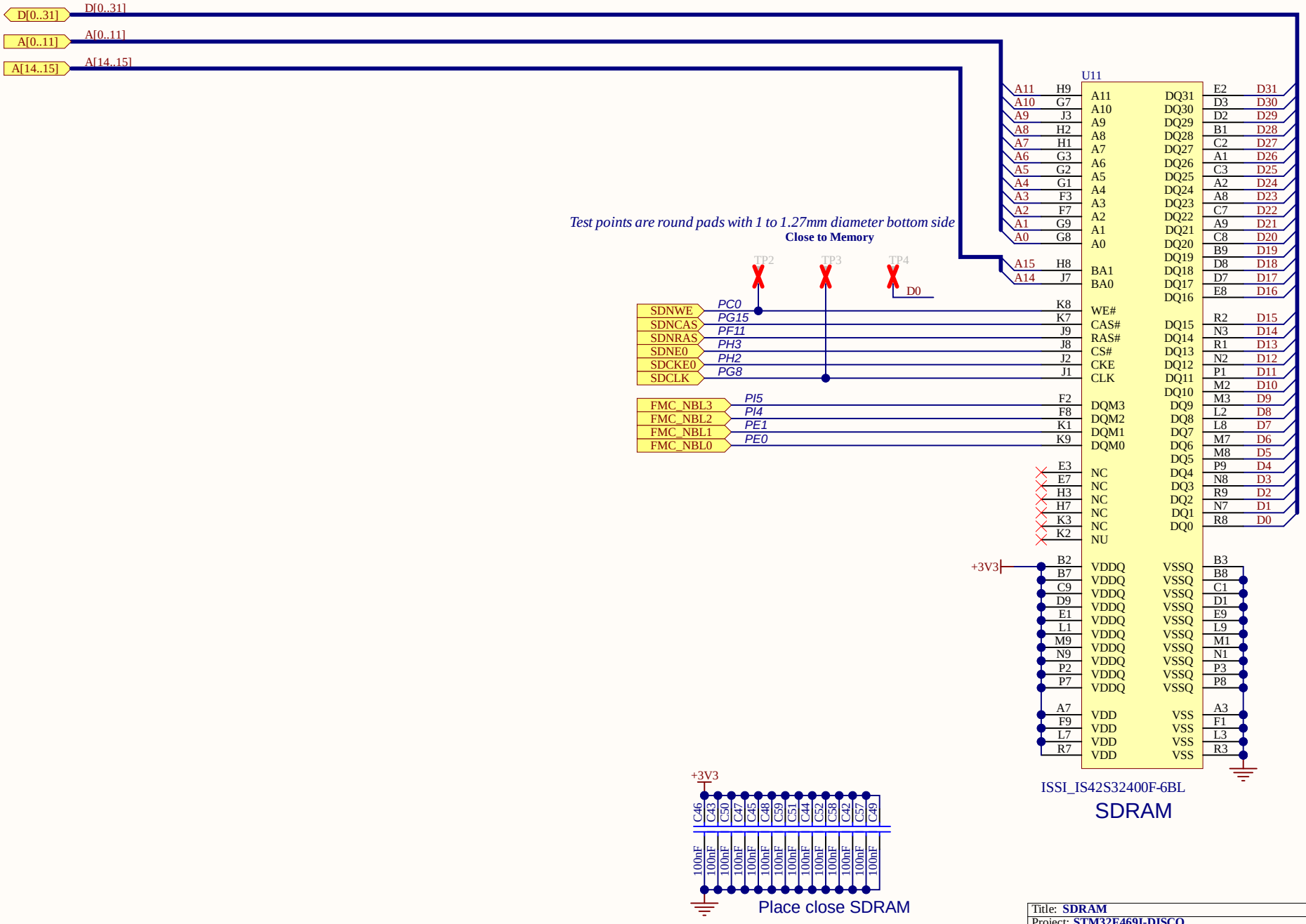
Title: **Audio Codec and Microphone MEMS**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 7 of 13



I2C Address:0x54

Mechanical: 2 Slots in PCB for the 2 flex from LCD

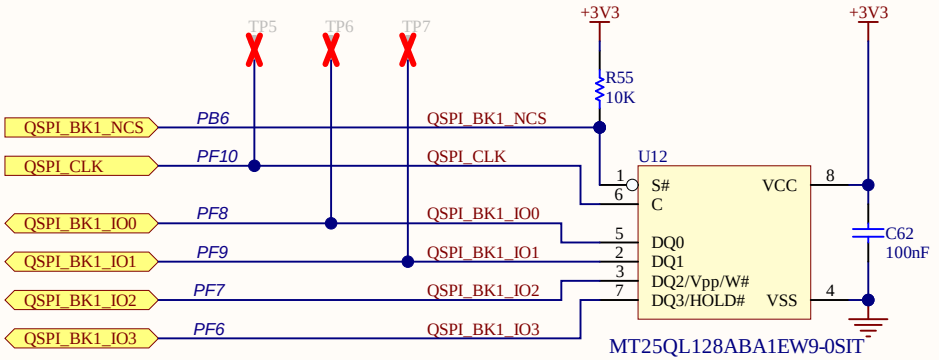
Title: **4 inch DSI LCD board**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 8 of 13



Title: **SDRAM**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 9 of 13

Test points are round pads with 1 to 1.27mm diameter bottom side

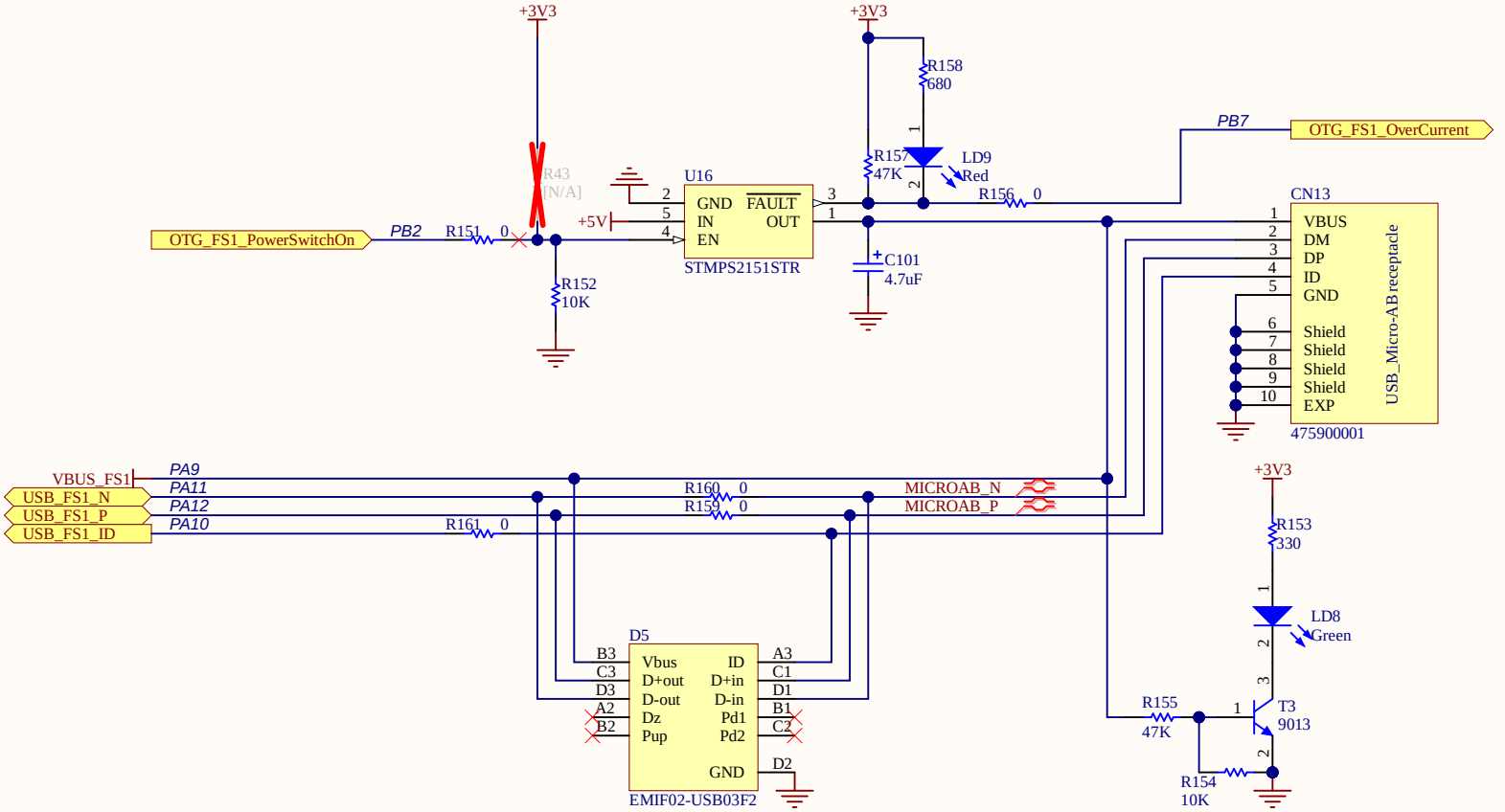
Close to QSPI memory



MT25QL128ABA1EW9-0SIT

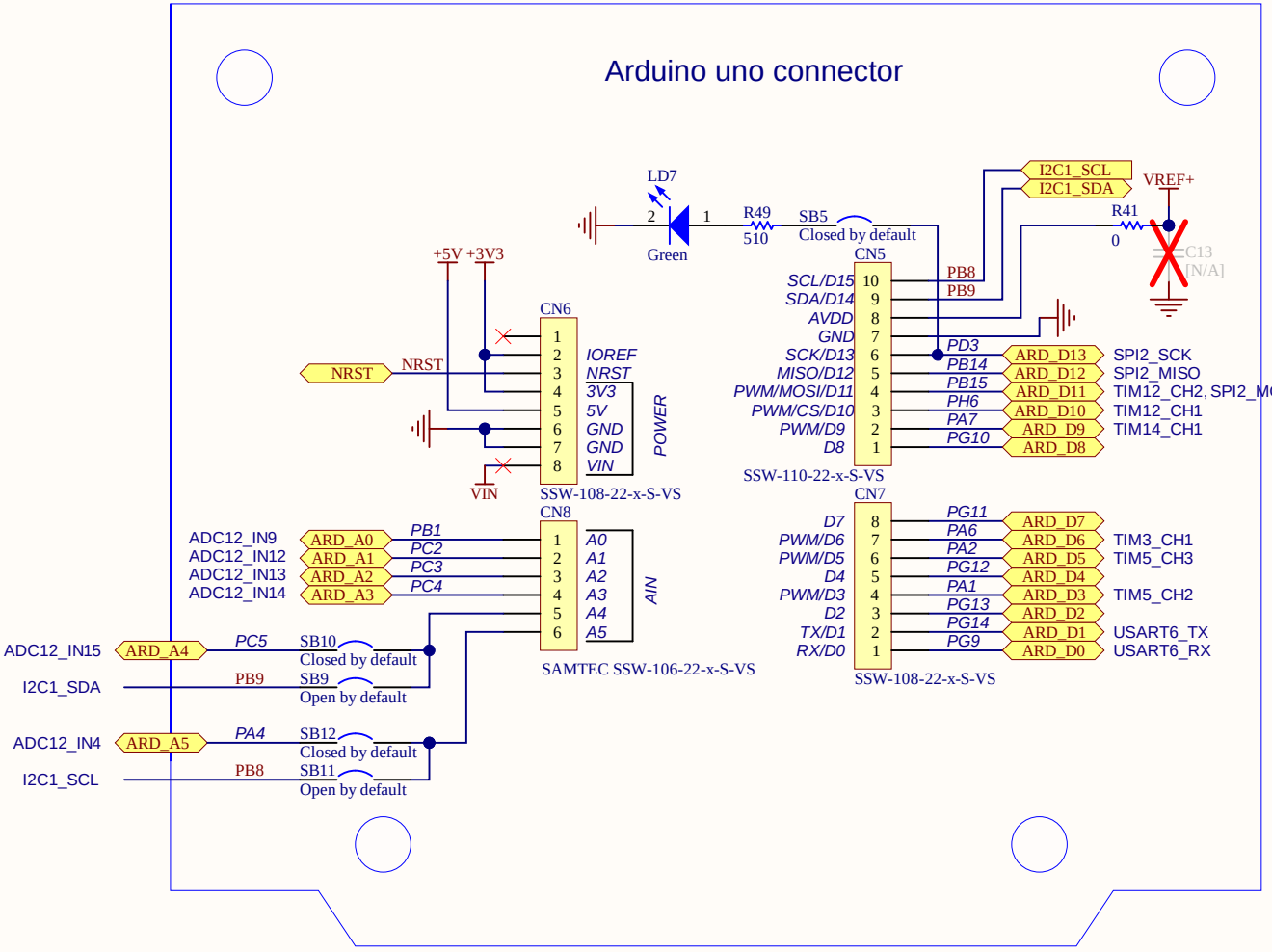
Exposed central pad should not be connected to any voltage on PCB

Title: **QSPI**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 10 of 13

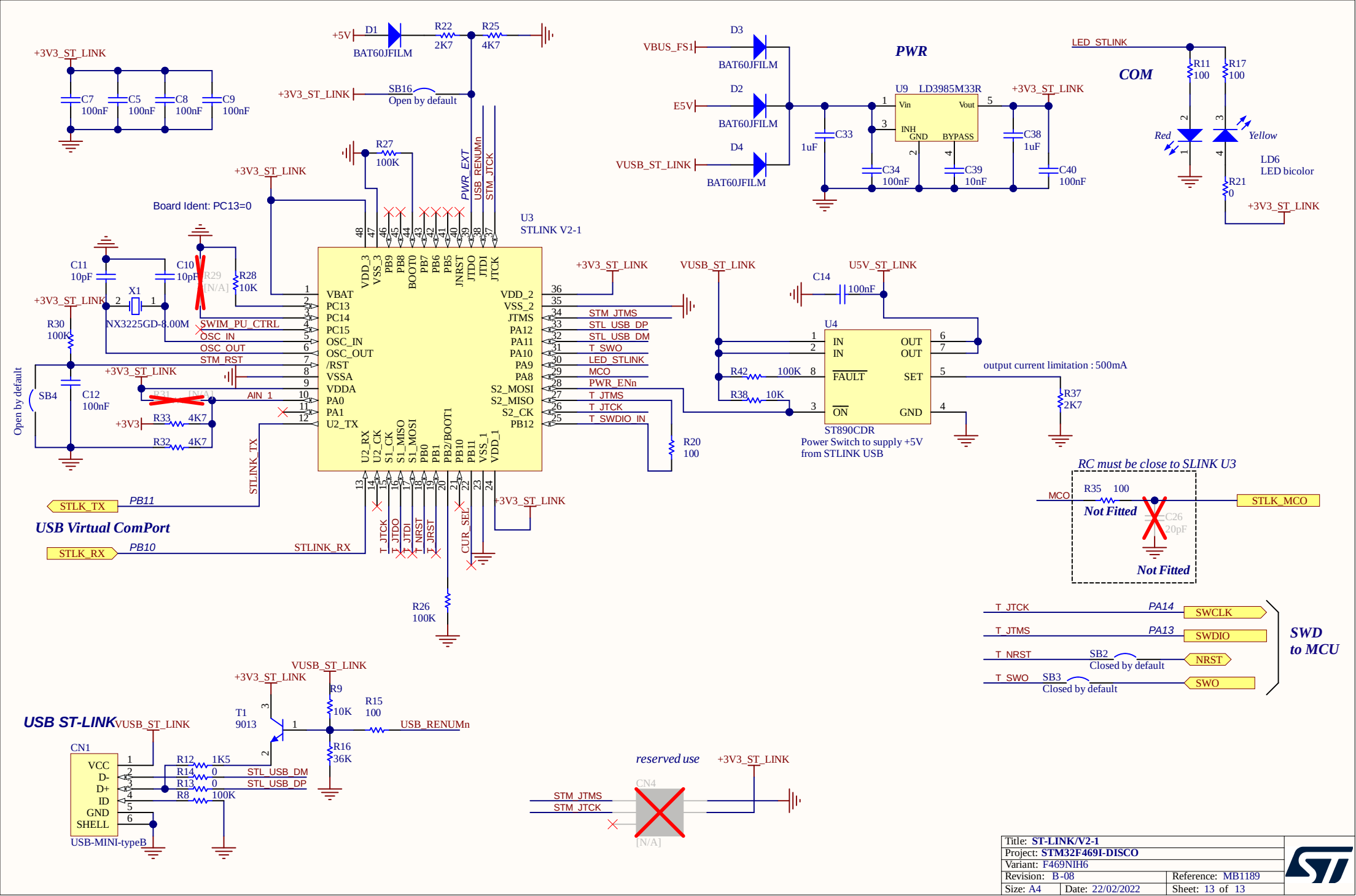


USB Full Speed operating range voltage: 3.0V<VDDUSB<3.6V

Title: **USB_OTG_FS**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 11 of 13



Title: **Arduino Uno connector**		
Project: **STM32F469I-DISCO**		
Variant: F469NIH6		
Revision: B-08		Reference: MB1189
Size: A4	Date: 22/02/2022	Sheet: 12 of 13


+3V3_ST_LINK
C7 100nF
C5 100nF
C8 100nF
C9 100nF
+5V
D1 BAT60JFILM
R22 2K7
R25 4K7
SB16 Open by default
R27 100K
PWR_EXT
USB_RENUMn
STM_JTCK
Board Ident: PC13=0
U3
STLINK V2-1
C11 10pF
C10 10pF
R29 [N/A]
R28 10K
X1 NX3225GD-8.00M
R30 100K
C12 100nF
SB4 Open by default
R31 [N/A]
R33 4K7
R32 4K7
SWIM_PU_CTRL
OSC_IN
OSC_OUT
STM_RST
AIN_1
STLINK_TX
STLINK_RX
VBAT
PC13
PC14
PC15
OSC_IN
OSC_OUT
/RST
VSSA
VDDA
PA0
PA1
U2_TX
VDD_2
VSS_2
JTMS
PA12
PA11
PA10
PA9
PA8
S2_MOSI
S2_MISO
S2_CK
PB12
STM_JTMS
STL_USB_DP
STL_USB_DM
T_SWO
LED_STLINK
MCO
PWR_ENn
T_JTMS
T_JTCK
T_SWDIO_IN
R20 100
STLK_TX
PB11
USB Virtual ComPort
STLK_RX
PB10
R26 100K
CUR_SEL
T_JTCK
T_JTDO
T_JTDI
T_NRST
T_JRST
VUSB_ST_LINK
D3 BAT60JFILM
D2 BAT60JFILM
D4 BAT60JFILM
VBUS_FS1
E5V
VUSB_ST_LINK
PWR
U9 LD3985M33R
Vin
Vout
INH
GND
BYPASS
C33 1uF
C34 100nF
C39 10nF
C38 1uF
C40 100nF
U5V_ST_LINK
C14 100nF
U4
IN
IN
FAULT
ON
OUT
OUT
SET
GND
R42 100K
R38 10K
ST890CDR
Power Switch to supply +5V from STLINK USB
output current limitation : 500mA
R37 2K7
LED_STLINK
COM
R11 100
R17 100
Red
Yellow
LD6 LED bicolor
R21 0
RC must be close to SLINK U3
MCO
R35 100
Not Fitted
C26 20pF
Not Fitted
STLK_MCO
T_JTCK
PA14
SWCLK
T_JTMS
PA13
SWDIO
T_NRST
SB2 Closed by default
NRST
T_SWO
SB3 Closed by default
SWO
SWD to MCU
USB ST-LINK
VUSB_ST_LINK
CN1
VCC
D-
D+
ID
GND
SHELL
USB-MINI-typeB
R12 1K5
R14 0
R13 0
R8 100K
STL_USB_DM
STL_USB_DP
T1 9013
R9 10K
R15 100
R16 36K
USB_RENUMn
reserved use
CN4
STM_JMS
STM_JTCK
[N/A]
Title: ST-LINK/V2-1
Project: STM32F469I-DISCO
Variant: F469NIH6
Revision: B-08
Reference: MB1189
Size: A4
Date: 22/02/2022
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