EK-ST50 User Guide

AcSiP Technology Corp.

www.acsip.com.tw

EK-ST50 PCB Connector Description
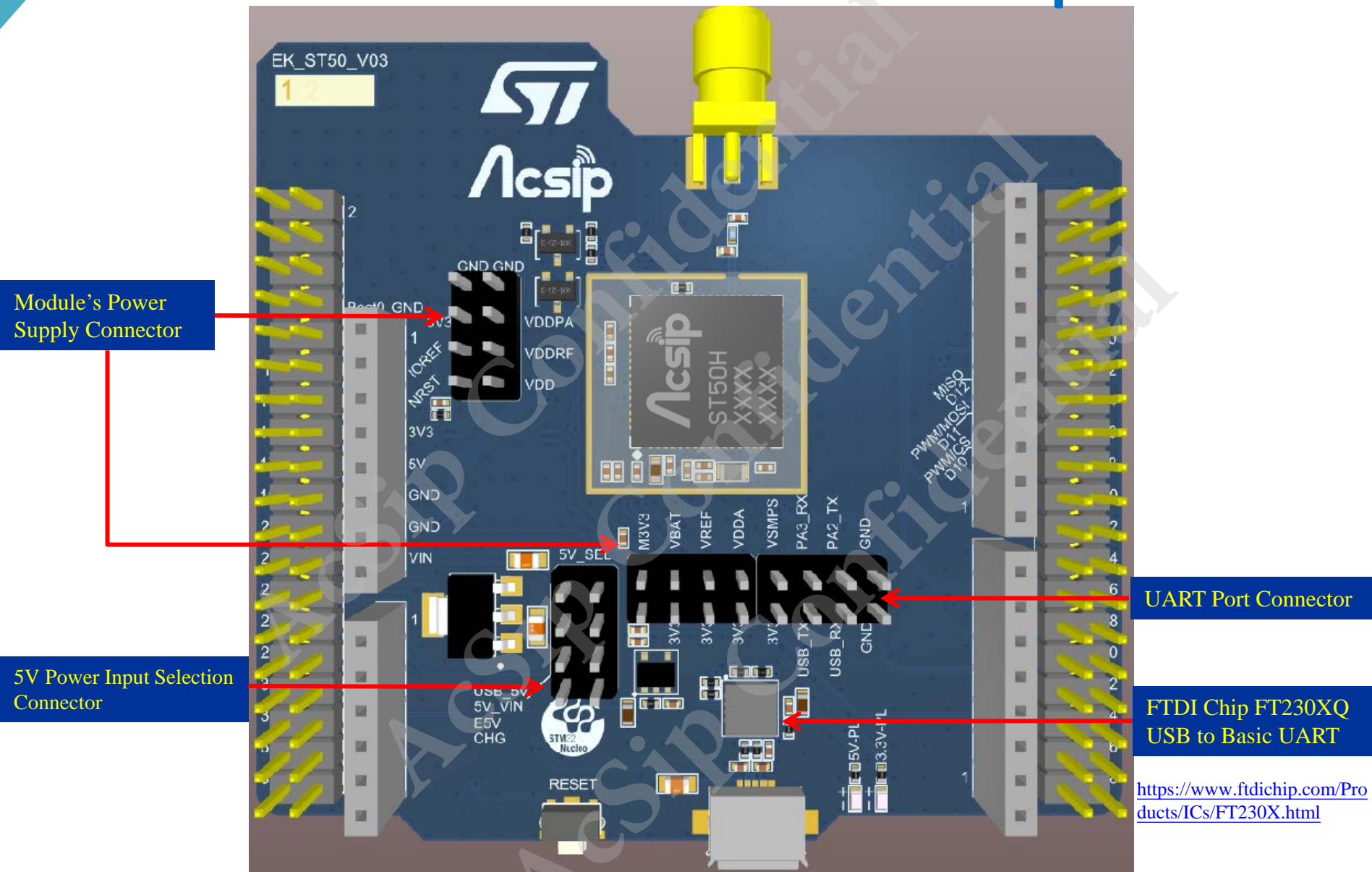
EK-ST50 PCB Connector Description

Module's Power Supply Connector

5V Power Input Selection Connector

UART Port Connector

FTDI Chip FT230XQ USB to Basic UART

https://www.ftdichip.com/Products/ICs/FT230X.html

EK-ST50 PCB Connector Description

GND	GND
3V3	VDDPA
3V3	VDDRF
3V3	VDD

1	NC	NC	2
3	NC	NC	
5	VDD_MCU	E5V	
7	BOOT0	GND	
9	NC	NC	
11	NC	IOREF	
13	PA13_SWDIO	NRST	
15	PA14_SWCLK	3V3	
17	PA15	5V	
19	GND	GND	
21	NC	GND	
23	PC13	VIN	
25	NC	NC	
27	NC	PB1	
29	NC	PB2	
31	NC	PA10	
33	VBAT	PB4	
35	NC	PB14	
37	NC	PB13	

5V_VIN	1
IOREF	
NRST	
3V3	
5V	
GND	
GND	
VIN	

PB1	1
PB2	
PA10	
PB4	
PB14	
PB13	

1	NC	PC4	2
	PA12	PC5	4
	PA11	NC	6
	AVDD	5V_USB_CHGR	8
	GND	NC	10
	PA5	PC6	12
	PA6	PC0	14
	PA7	PA8	16
	PA4	NC	18
	PA9	GND	20
1	PC2	NC	22
	PC1	NC	24
	PB10	PB9	26
	PB8	PB15	28
	PB5	PB11	30
	PB3	GND	32
	PB12	NC	34
	PB6	NC	36
	PB7	PC3	38

PC1
PB10
PB8
PB5
PB3
PB12
PB6
PB7

USB_5V	5V
5V_VIN	5V
E5V	5V
5V_CHG	5V

M3V3	VBAT	VREF	VDDA	VSMPS	PA3_RX	PA2_TX	GND
3V3	3V3	3V3	3V3	3V3	FT230-TX	FT230-RX	GND

Reset Button

EK-ST50 Schematic Diagram
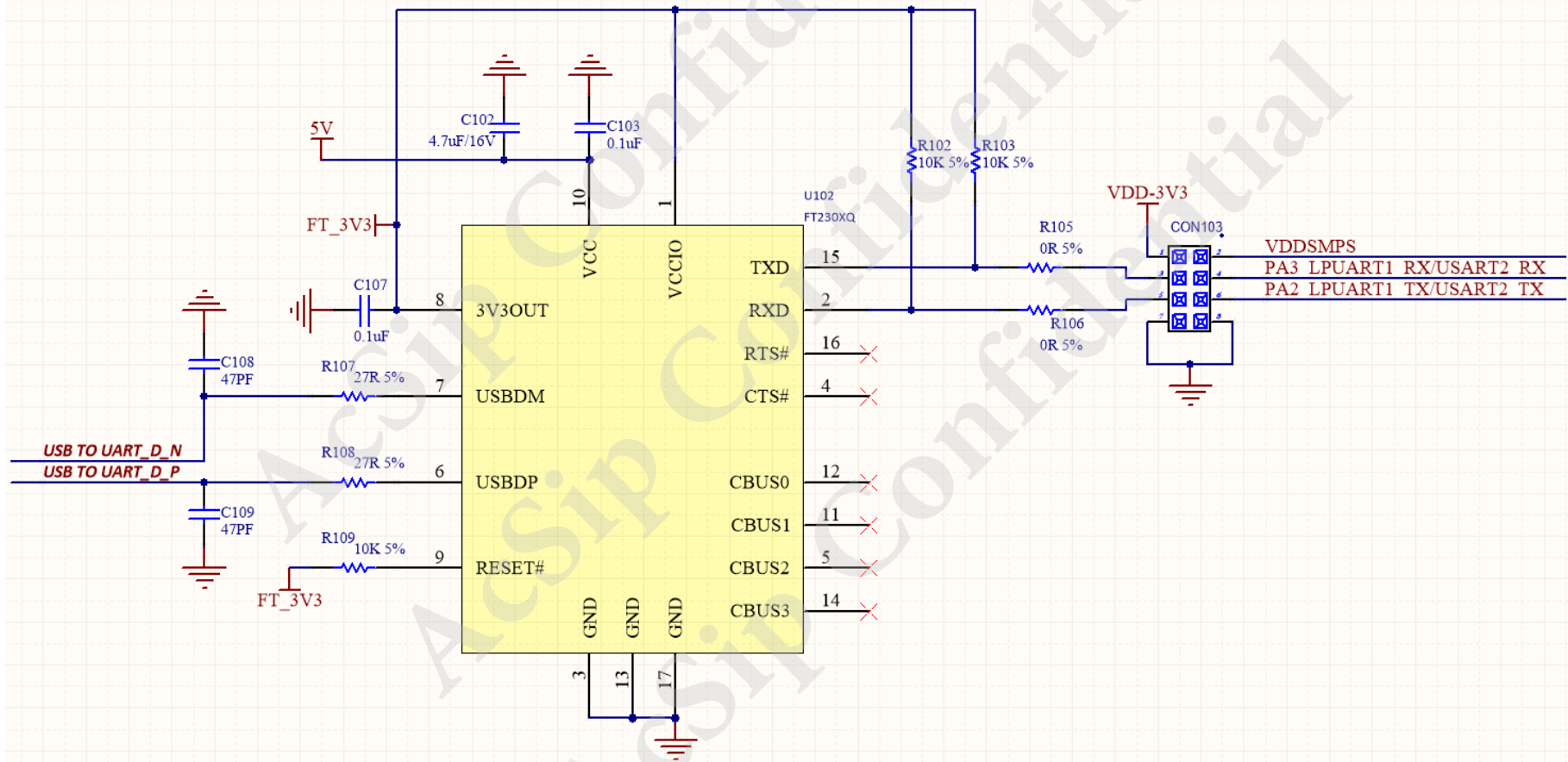
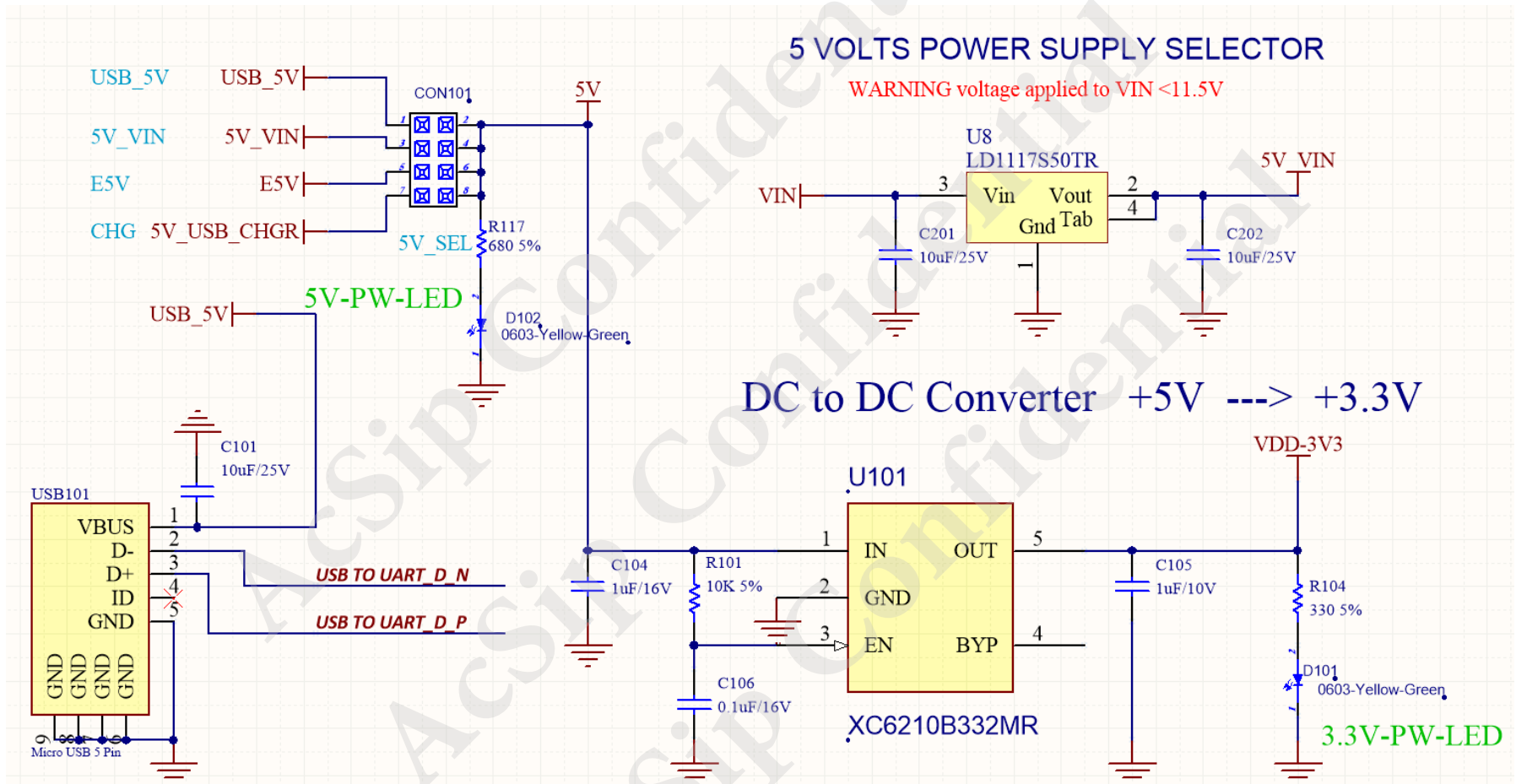Module peripheral circuit Diagram

EK-ST50 Schematic Diagram

USB to UART Circuit Diagram

EK-ST50 Schematic Diagram

Power Supply Circuit Diagram

EK-ST50 Schematic Diagram

VDDPA Switching Circuit Diagram
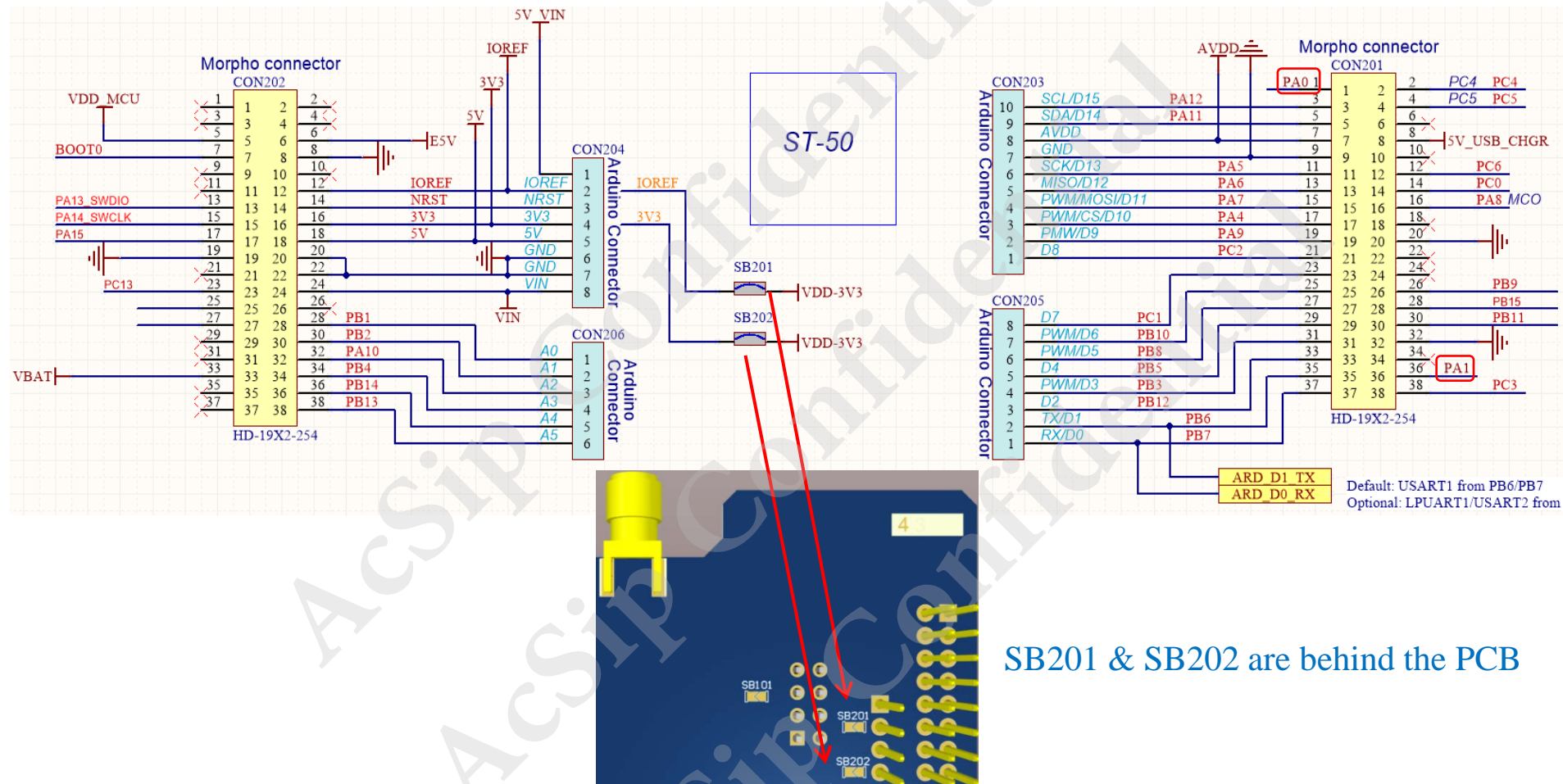

VDDPA 3V3 / 1V5 Switching Circuit
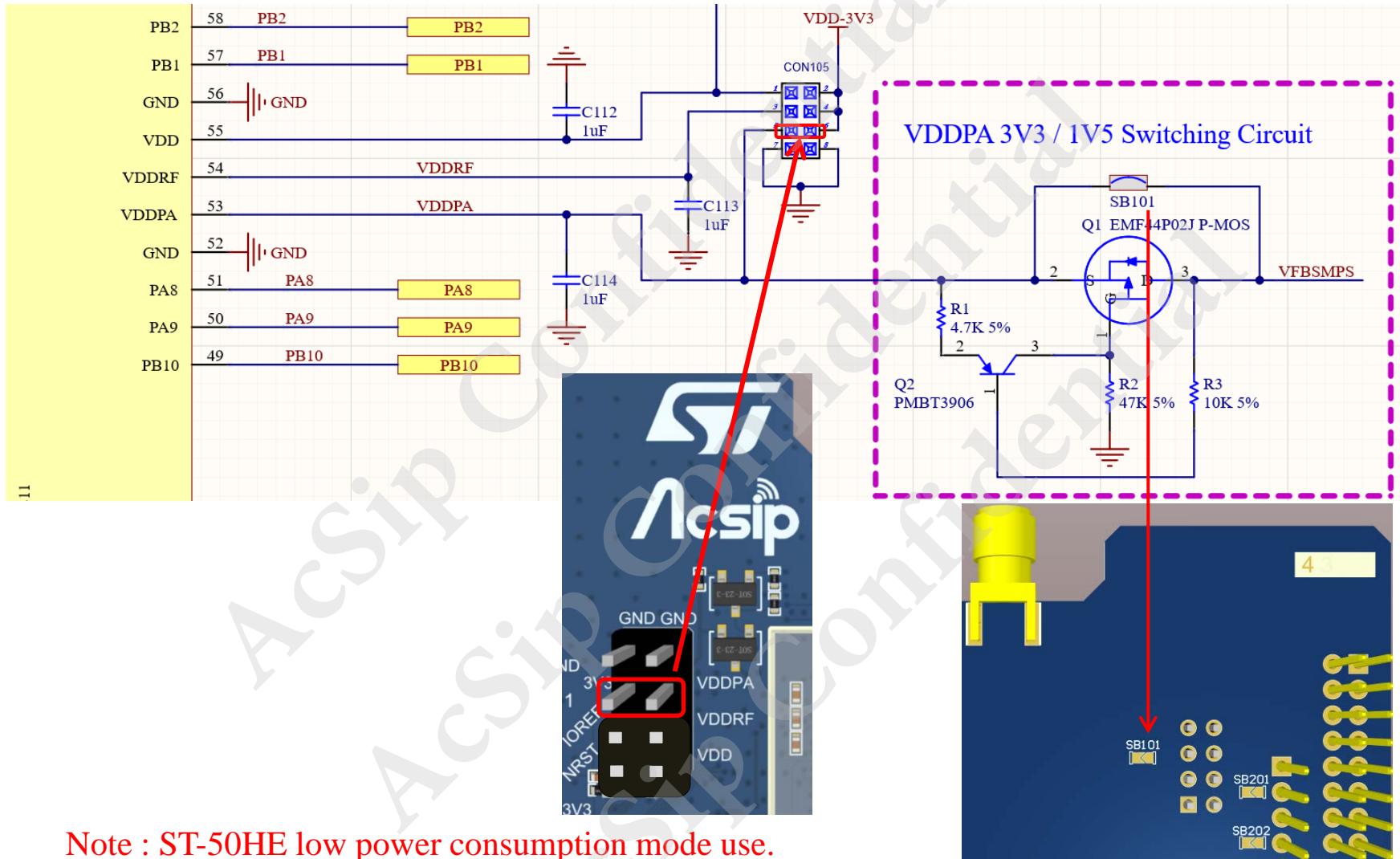
Note : ST-50HE low power consumption mode use.
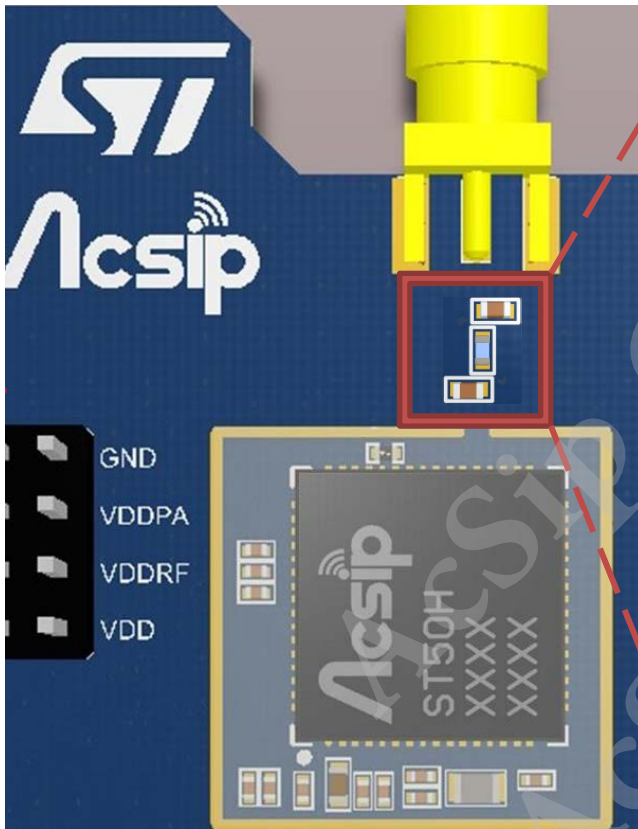(Jumper must be remove)

SB101 is behind the PCB

EK-ST50 Schematic Diagram

Pin definition Circuit Diagram

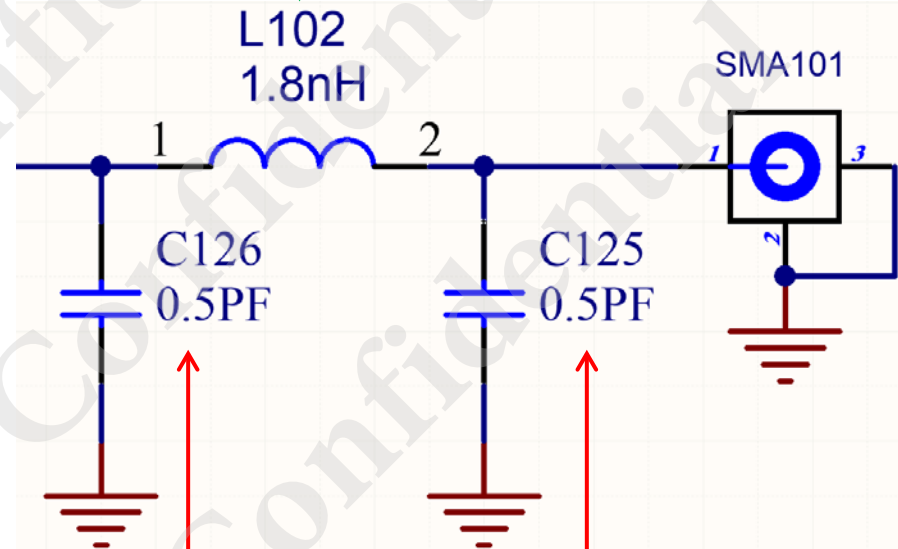

SB201 & SB202 are behind the PCB

Note : The PA0 and PA1 pins in ST50H have been controlled by Acsip's software
, So these two pins on the PCB are NC pins.

Low-Pass Filter Circuit for EMI Test

Inductor : Murata LQG15HS1N8S02D

L102
1.8nH

SMA101

C126
0.5PF

C125
0.5PF

Capacitor : Murata GRM1555C1HR50BA01D