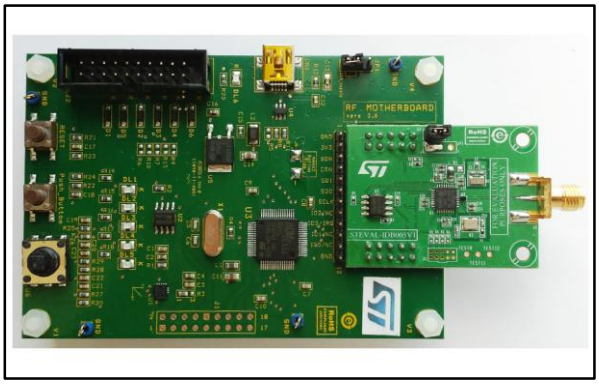
STEVAL-IDB005V1

Bluetooth low energy board based on the BlueNRG-MS network processor

Data brief



Features

- Bluetooth® SMART board based on the BlueNRG-MS low energy network processor
- STM32L external microcontroller
- Associated BlueNRG-MS development kit, including documentation, firmware for STM32L and GUI
- Maximum transmission power +8 dBm
- Excellent receiver sensitivity (-88 dBm)
- Very low power consumption: 7.3 mA RX and 8.3 mA TX at +0 dBm
- Bluetooth® low energy 4.1 compliant, supports both master and slave roles
- iTunes app available (app name: BlueNRG)
- Google Play app available (app name: BlueNRG)
- JTAG debug connector
- USB Interface
- RoHS compliant

Description

The STEVAL-IDB005V1 is an evaluation platform based on BlueNRG-MS, a low power Bluetooth® Smart IC, compliant with the Bluetooth® 4.1 specifications and supporting both master and slave roles. The STEVAL-IDB005V1 is composed of an RF daughterboard and a microcontroller motherboard. The RF daughterboard features the BlueNRG-MS device, an SMA connector for an antenna or measuring instruments and an SPI connector for an external microcontroller. The motherboard is based on the STM32L, acting as external microcontroller driving the BlueNRG-MS device. A JTAG connector allows microcontroller firmware development.

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1 Schematic diagram

Figure 1: STEVAL-IDB005V1 daughterboard

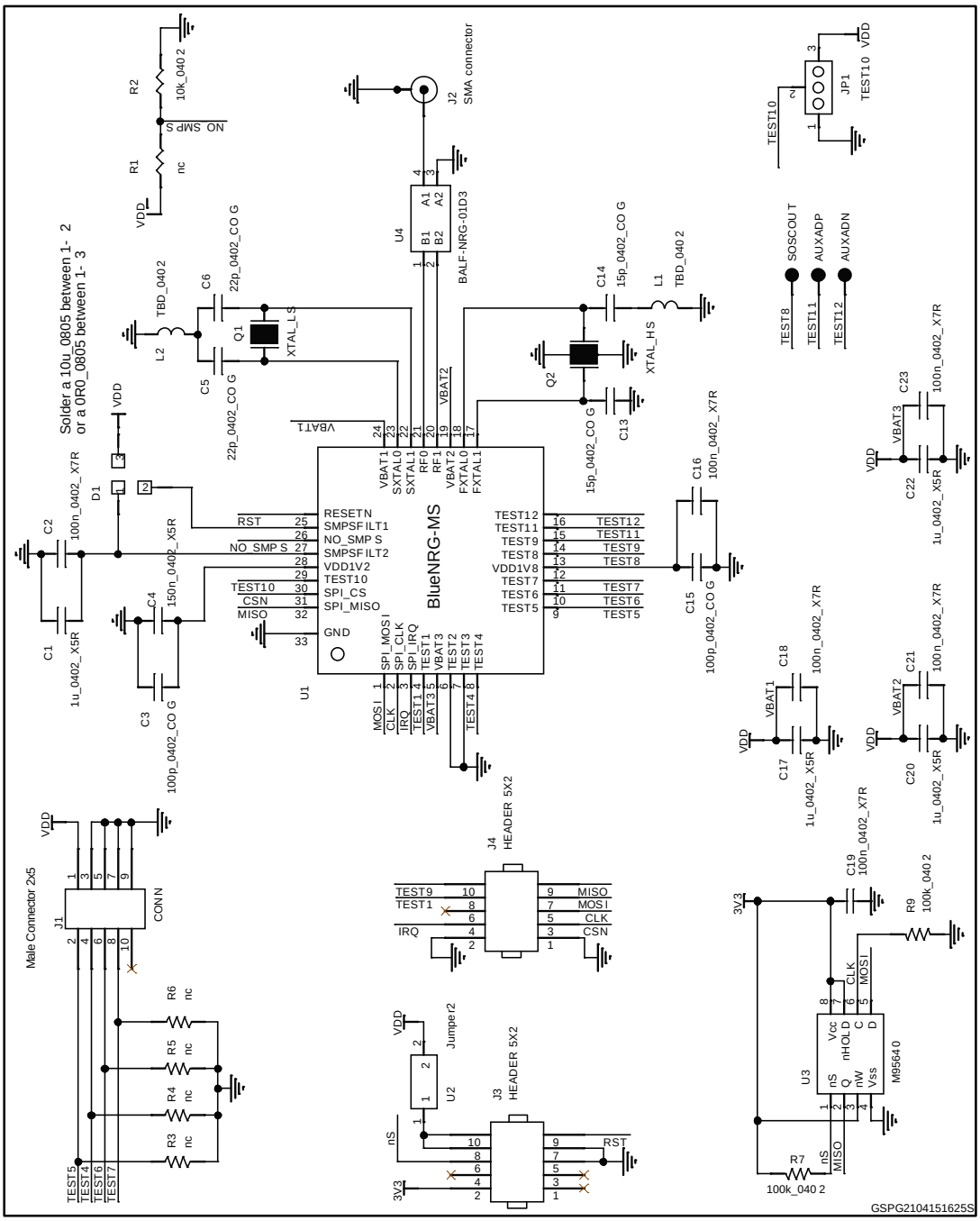


Figure 2: Temperature sensor

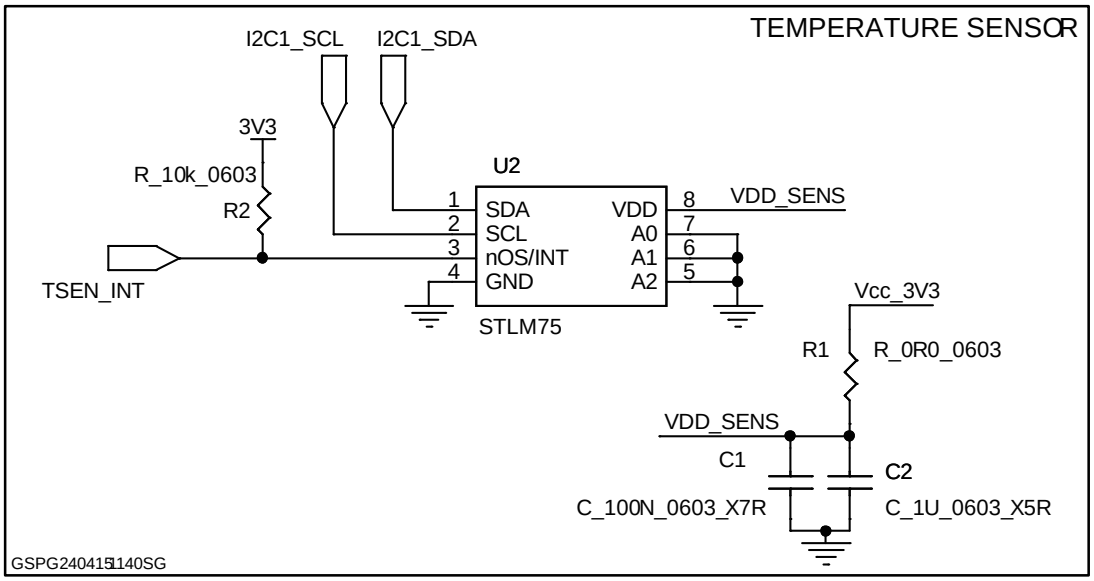


Figure 3: Accelerometer

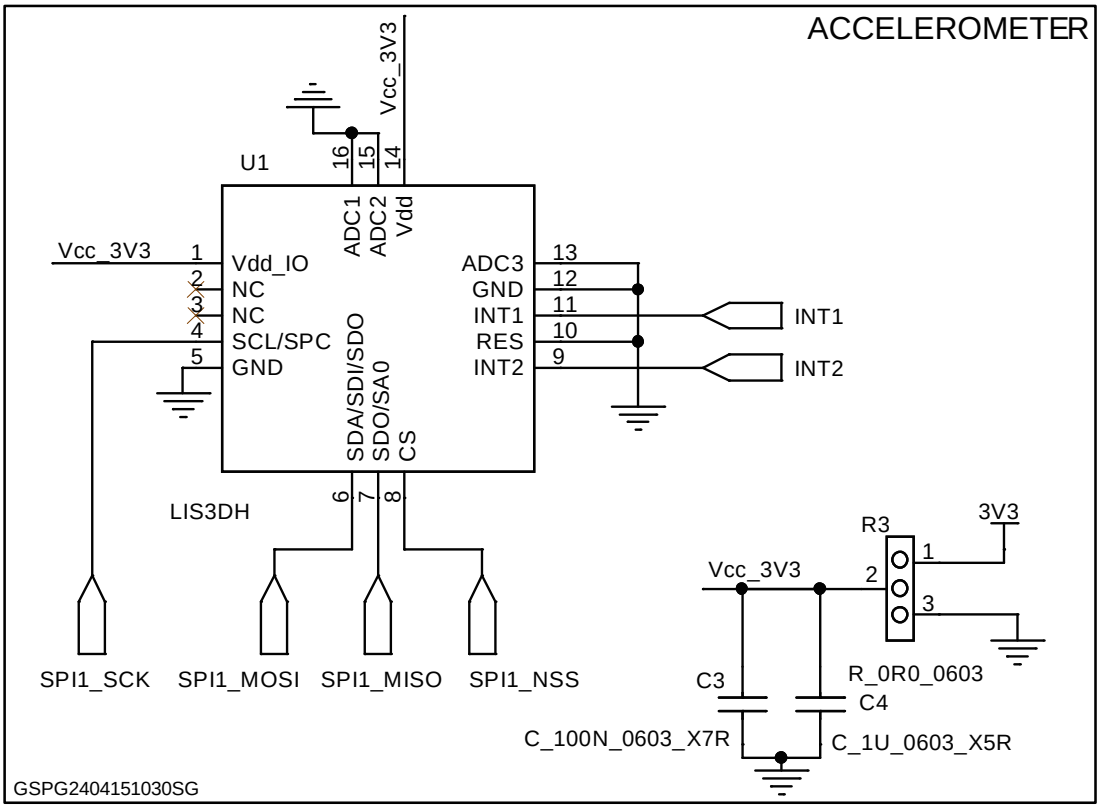


Figure 4: MCU

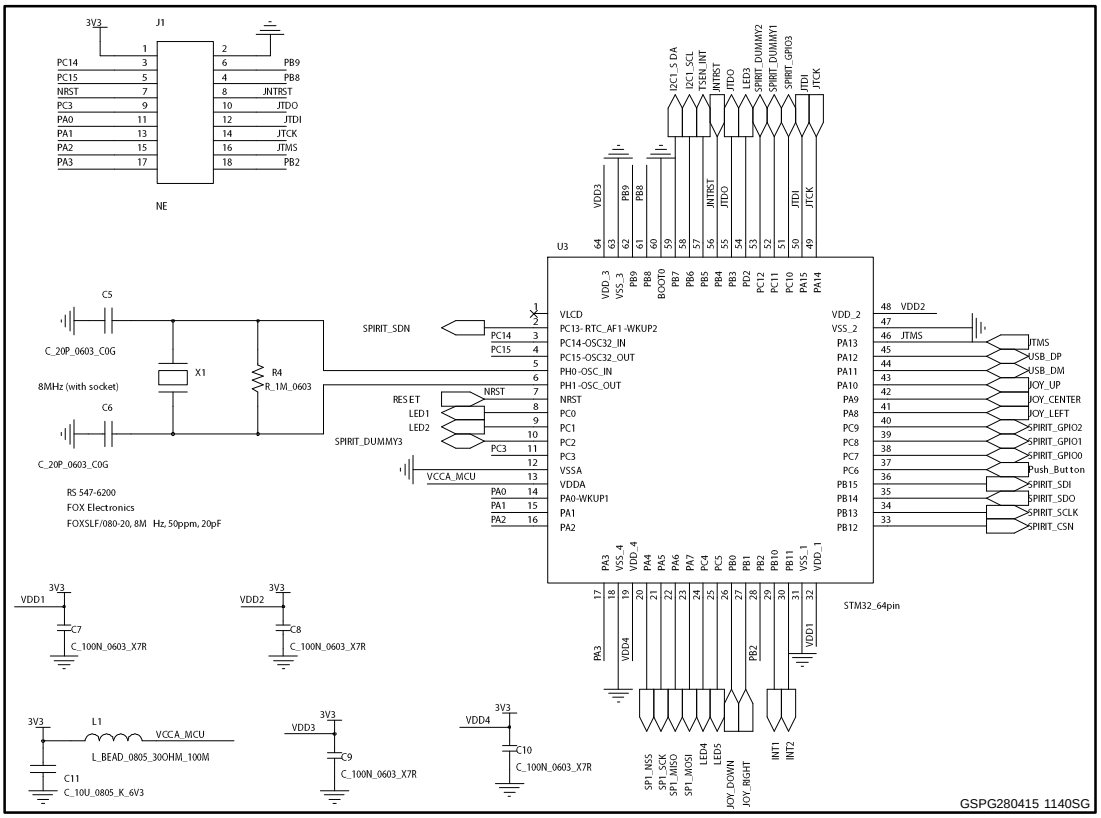

J1
NE
U3
STM32_64pin
C5
C_20P_0603_C0G
X1
8MHz (with socket)
C6
C_20P_0603_C0G
R4
R_1M_0603
RS 547-6200
FOX Electronics
FOXSLF/080-20, 8M Hz, 50ppm, 20pF
SPIRIT_SDN
RESET
LED1
LED2
SPIRIT_DUMMY3
VCCA_MCU
C7
C_100N_0603_X7R
C8
C_100N_0603_X7R
L1
L_BEAD_0805_300HM_100M
C11
C_10U_0805_K_6V3
C9
C_100N_0603_X7R
C10
C_100N_0603_X7R
GSPG280415 1140SG

Figure 5: JTAG / SWD

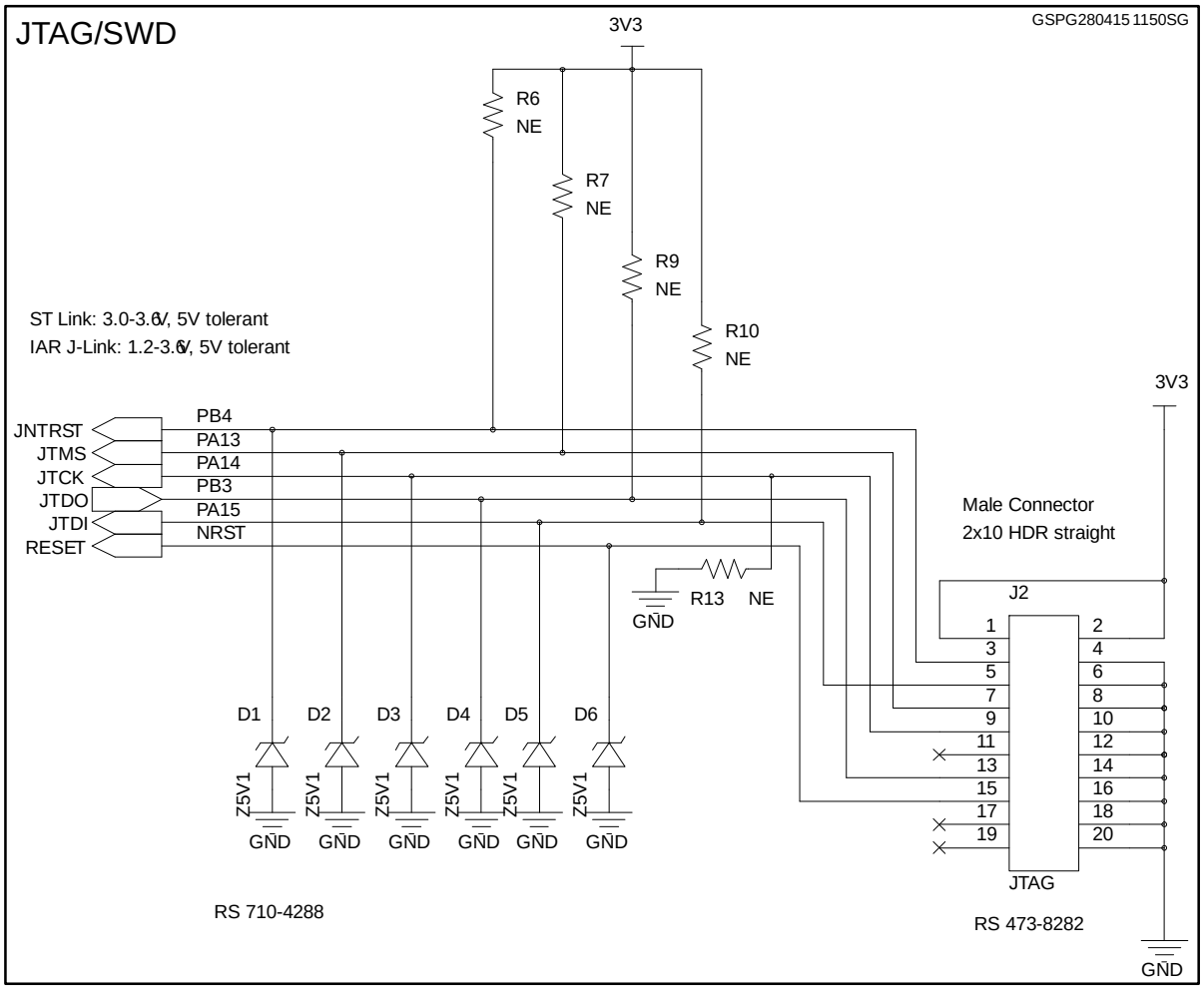


Figure 6: USB

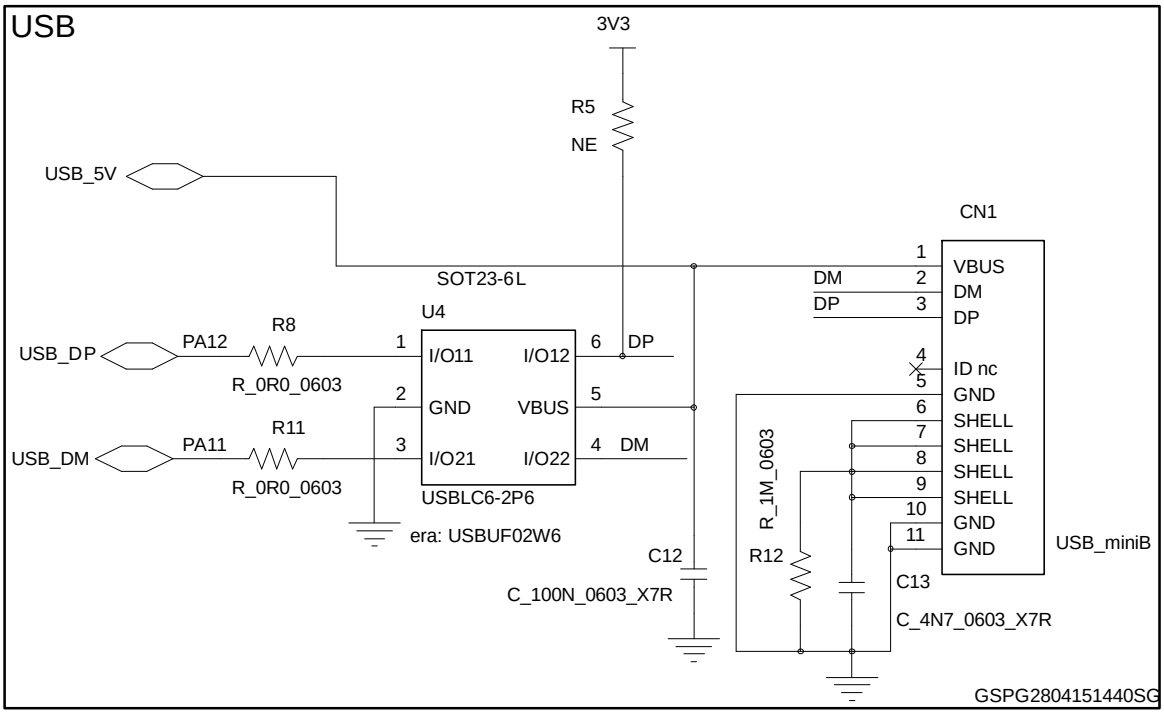


Figure 7: LED

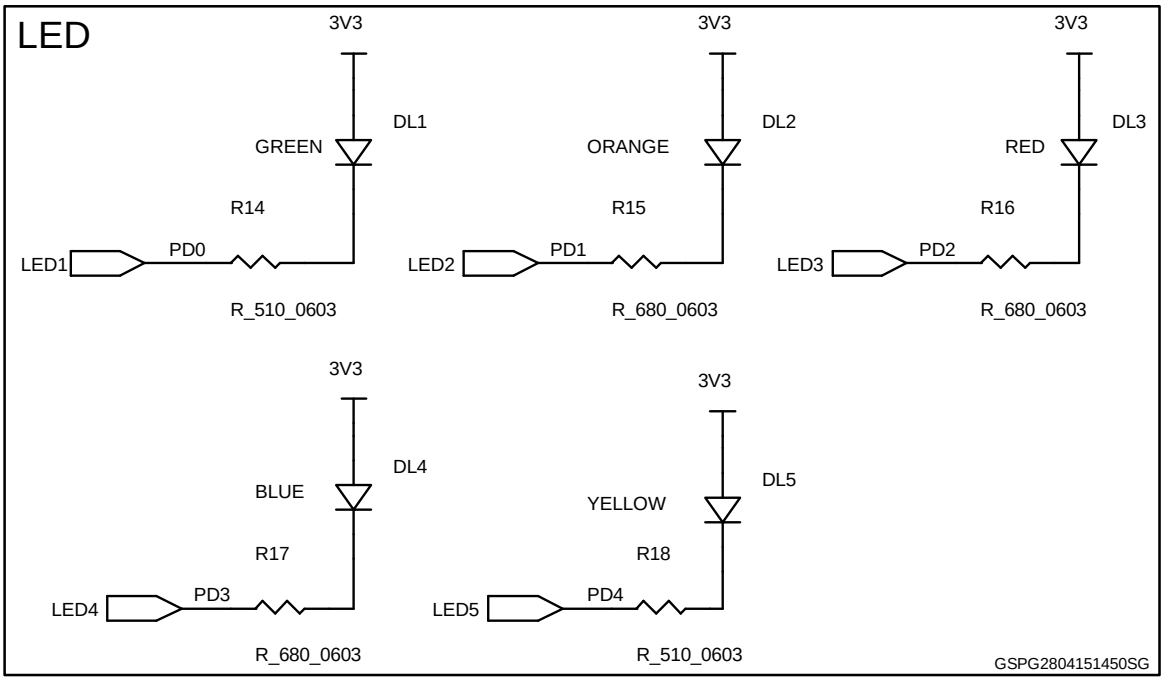


Figure 8: Power supply

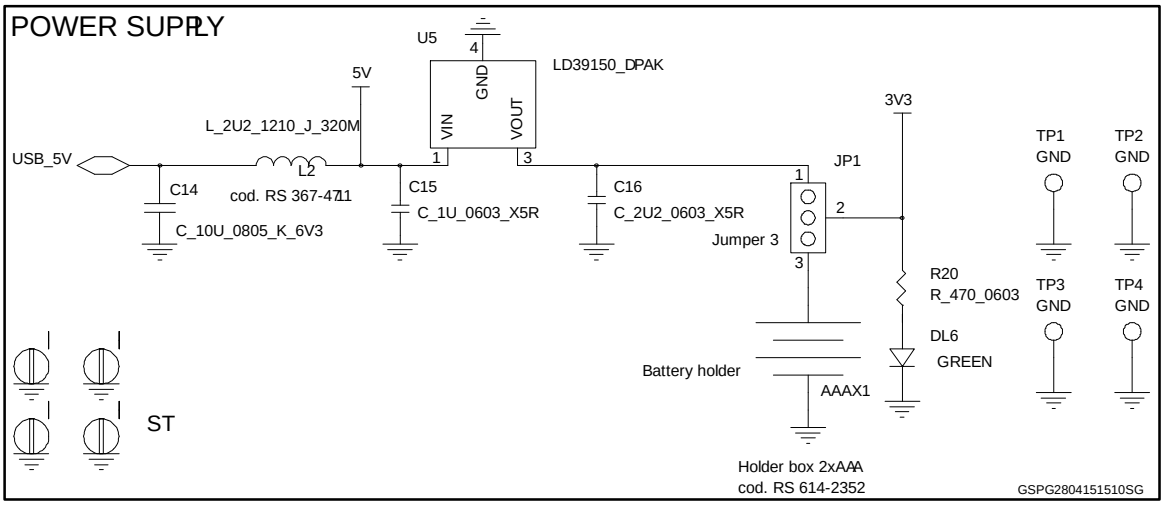


Figure 9: Button and joystick

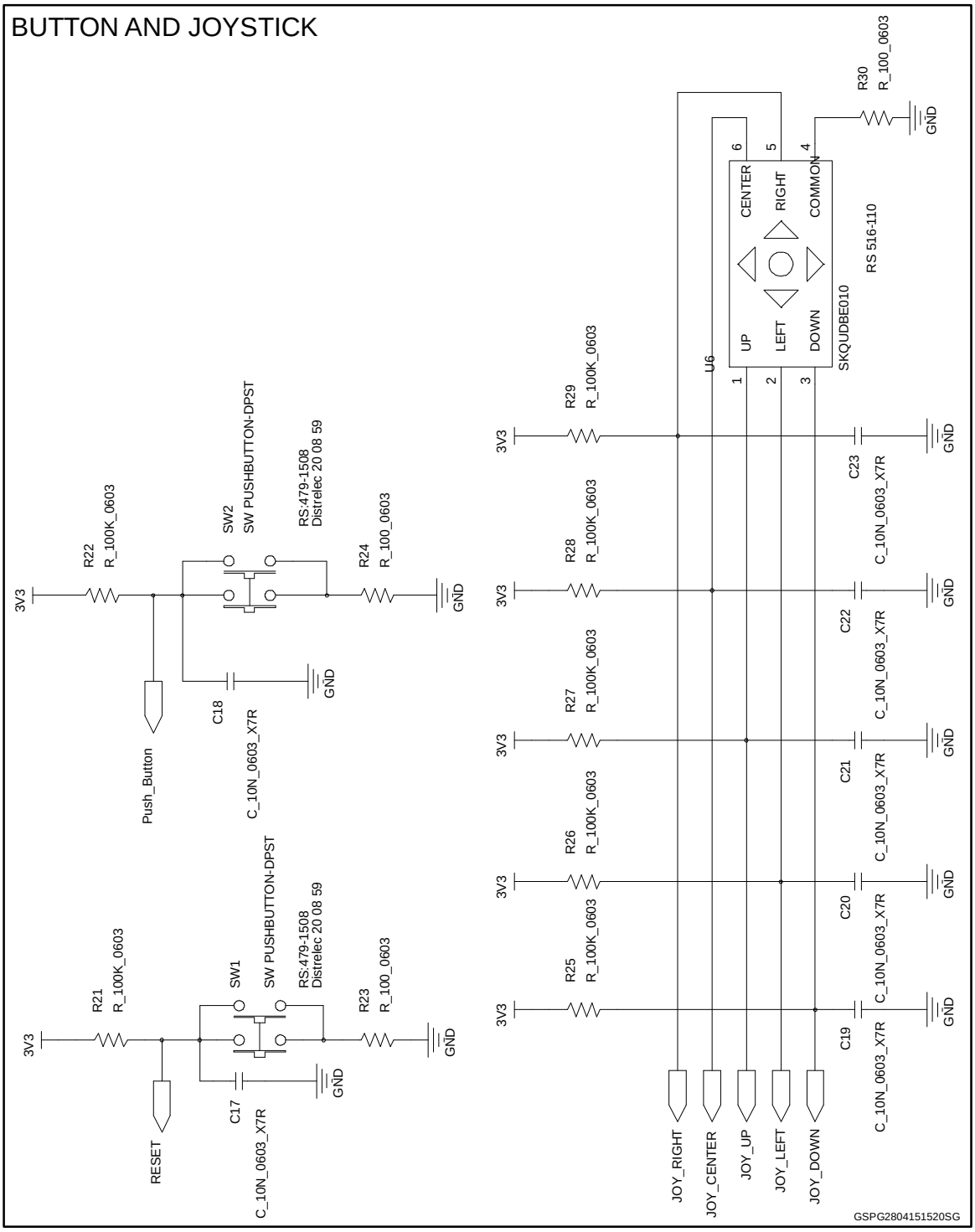
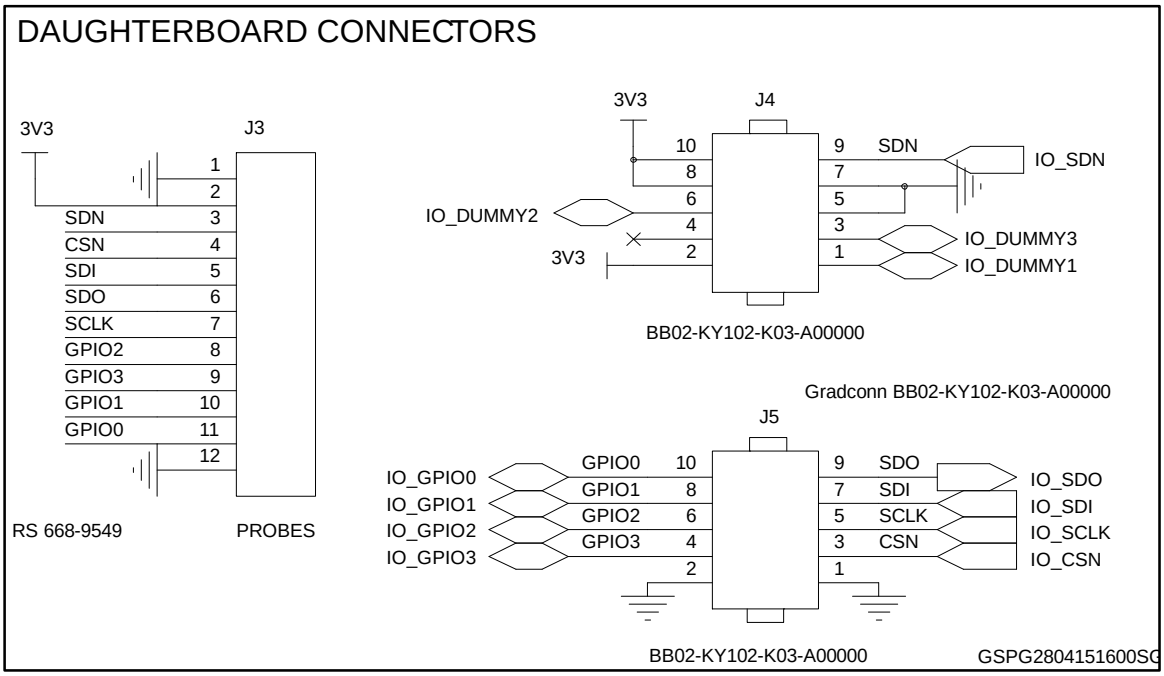


Figure 10: Daughterboard connectors



2 Revision history

Table 1: Document revision history

Date	Version	Changes
29-Apr-2015	1	Initial release.

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