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**915 MHz RF USB dongle based on the SPIRIT1 SPSGRF-915 module**

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Data brief

**Description**

The STEVAL-IDS001V5M evaluation board is for the SPSGRF-915 FCC certified module based on the low-power, low-rate, sub-1GHz SPIRIT1 transceiver. The SPSGRF-915 module integrates the Balun (BALF-SPI-01D3) and a chip antenna, and operates in the 915 MHz ISM band. The board is equipped with an STM32L1 low-power microcontroller to control the SPIRIT1 and it also features a USB connector for PC GUI interaction and firmware updates, like the one available for SPIRIT1 evaluation kit. An SWD connector allows the development of specific firmware on the microcontroller.

**Features**

- RF SPIRIT1 USB dongle based on SPSGRF-915 for 915 MHz
- SPSGRF-915 module is based on:
  - SPIRIT1 RF Sub-GHz
  - Integrated Filter/Balun
  - Chip antenna
- On board STM32L1 low power 32-bit ARM® Cortex-M3™ microcontroller
- Modulation schemes: 2-FSK, GFSK, MSK, GMSK, OOK and ASK
- Air data rate: from 1 to 500 kbps
- Fully compliant in terms of firmware and GUI with the SPIRIT1 development kits
- Debug connector
- USB interface
- Contains FCC ID: S9NSPSGRF
- RoHS compliant

# 1 Schematic diagrams

Figure 1: STEVAL-IDS001V5M part 1

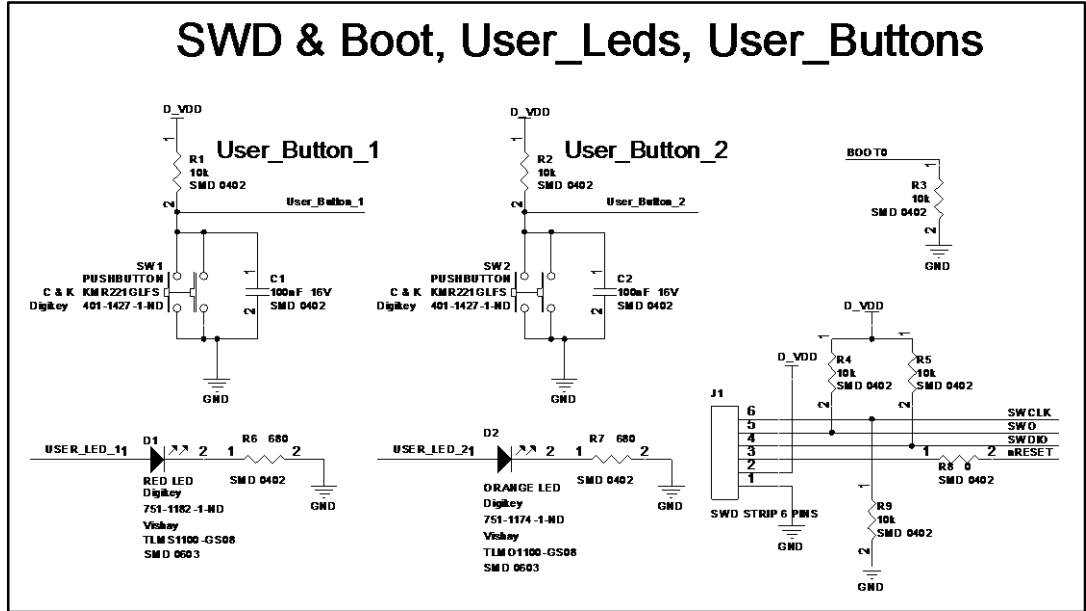


Figure 2: STEVAL-IDS001V5M part 2

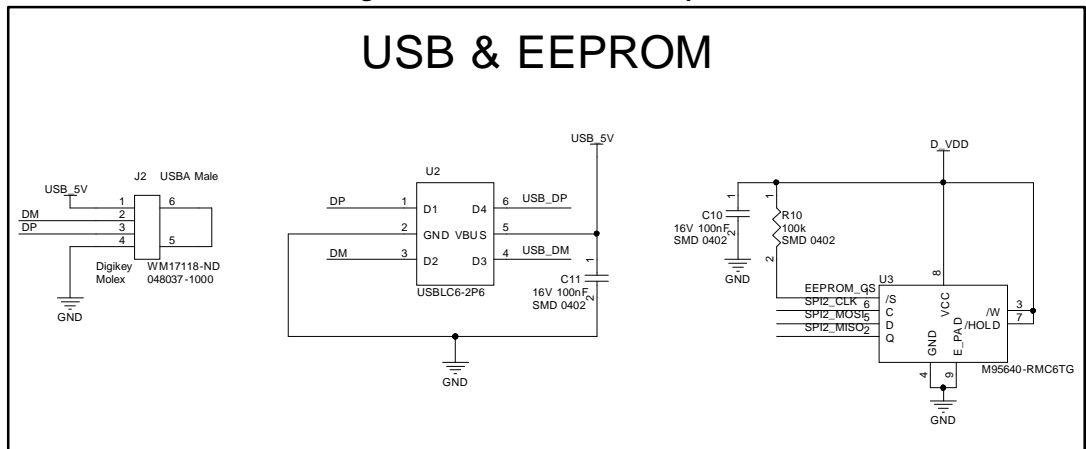


Figure 3: STEVAL-IDS001V5M part 3

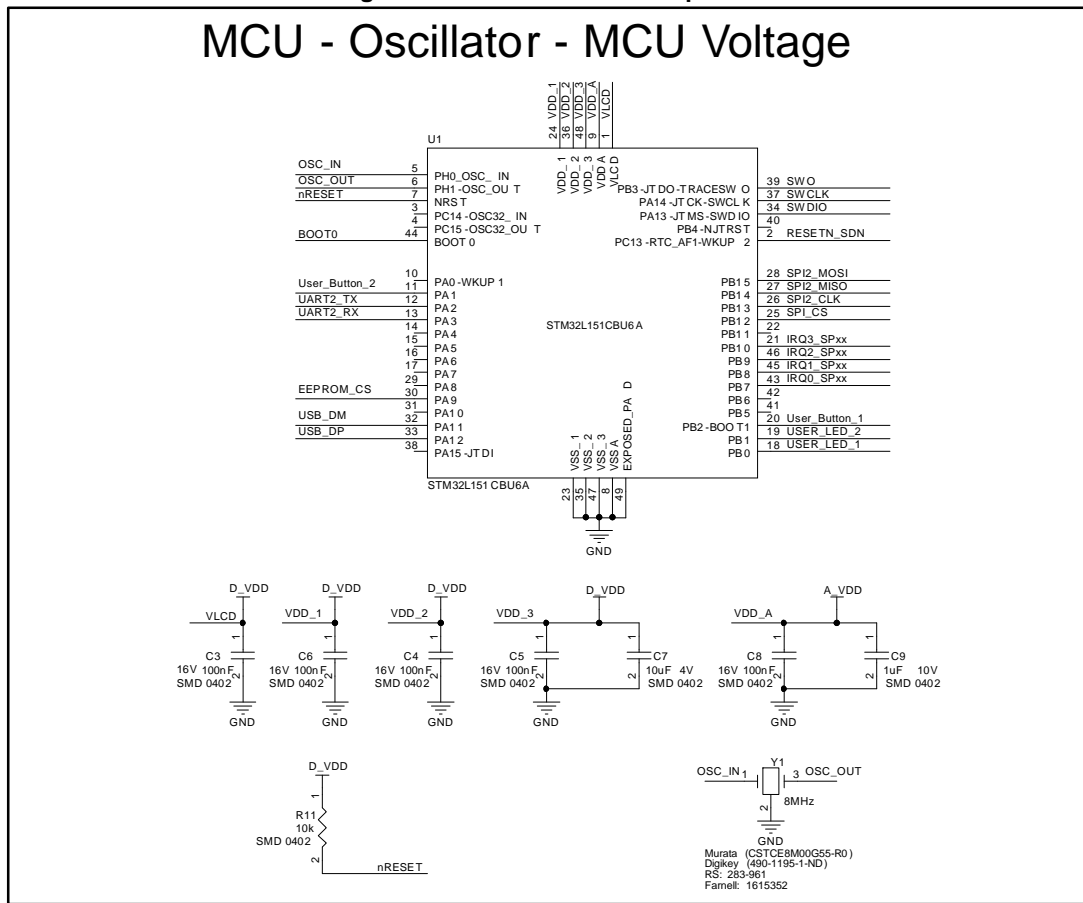


Figure 4: STEVAL-IDS001V5M part 4

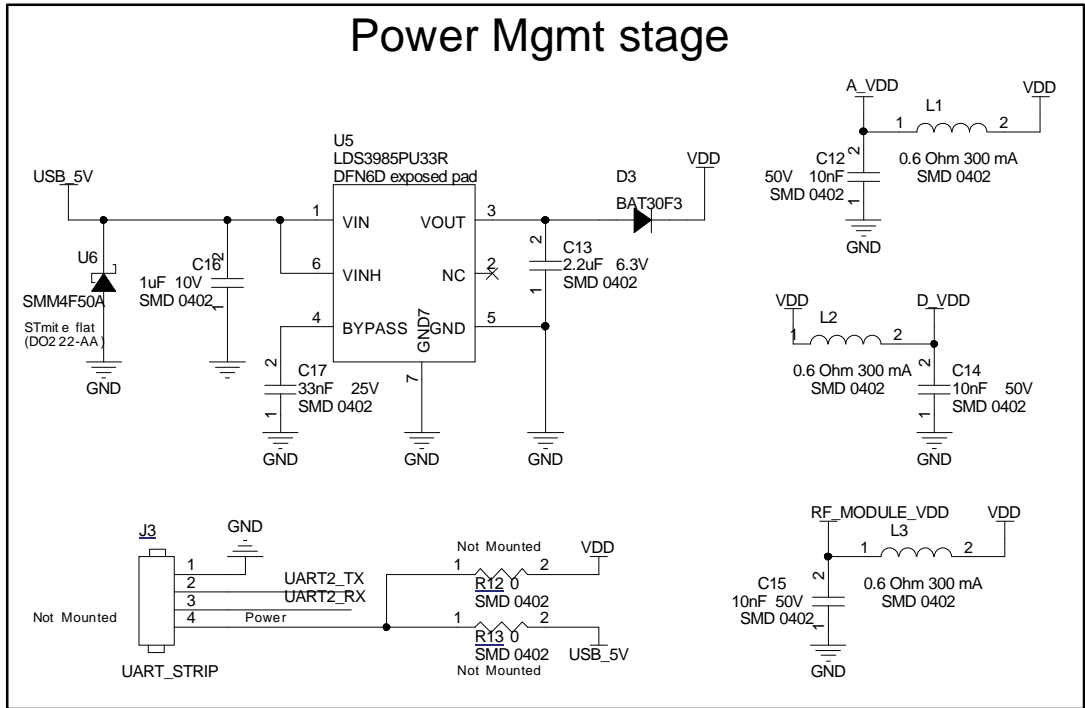
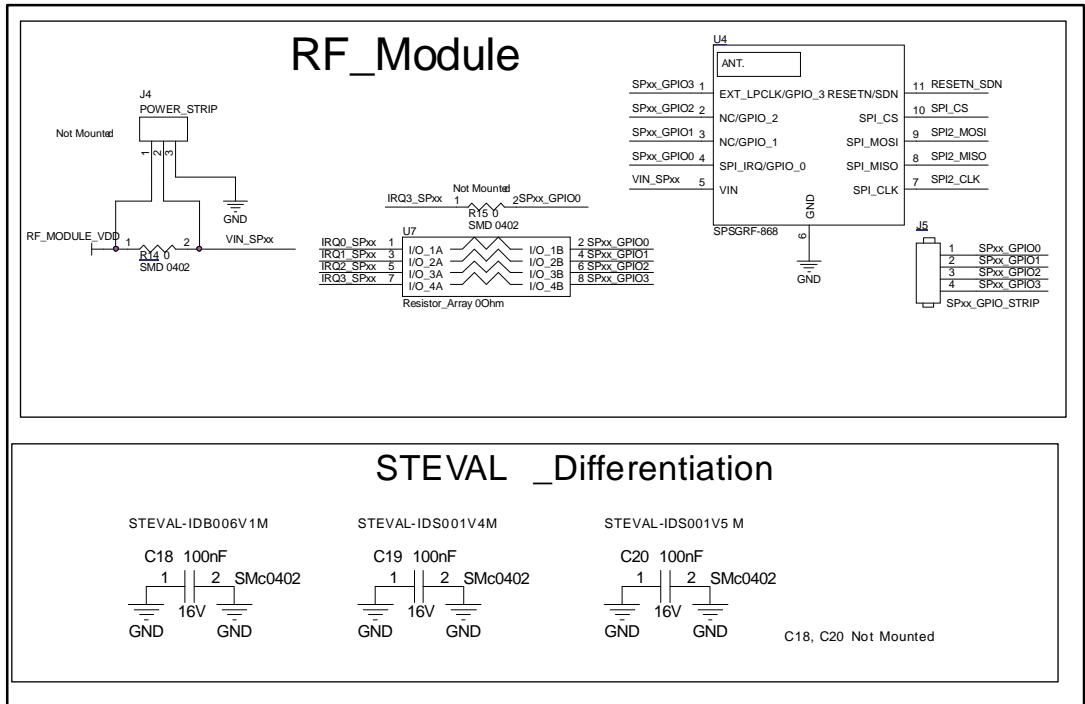


Figure 5: STEVAL-IDS001V5M part 5



## 2 Revision history

Table 1: Document revision history

Date	Version	Changes
17-Jul-2015	1	Initial release.

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