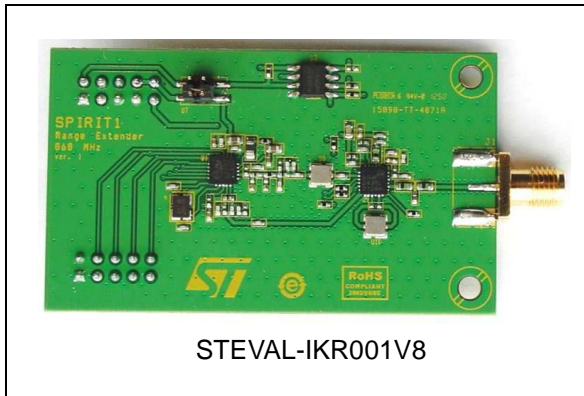


SPIRIT1- low data rate transceiver - 868 MHz - daughterboard - range extender

Data brief



Description

The STEVAL-IKR001V8D demonstration board is based on the SPIRIT1, a sub GHz low power, low data rate transceiver suitable for ISM bands and wireless M-BUS systems.

The STEVAL-IKR001V8D includes an external power amplifier from SkyWorks®, which allows the application to reach +27 dBm (500 mW) output power.

Features

- SPIRIT1 low power sub GHz transceiver in a standalone RF module tuned for 868 MHz band with external power amplifier
- Associated SPIRIT1 development kit, including documentation, firmware for STM32L and GUI
- Suitable for wireless M-BUS systems
- Modulation schemes: 2-FSK, GFSK, MSK, GMSK, OOK, and ASK
- Air data rate from 1 to 500 kbps
- TCXO for narrow band requirements
- Max P_{OUT} +27 dBm
- Excellent receiver sensitivity (up to -123 dBm)
- TX power consumption @ +27 dBm: 350 mA
- SAW filter in reception path to prevent interference from out-of-band signals
- SkyWorks® SEXXXXSL power amplifier
- Low duty cycle RX/TX operation mode
- Automatic acknowledgment, re-transmission and timeout protocol engine
- AES 128-bit encryption co-processor
- SPI interface for microcontroller
- RoHS compliant

1 Schematic diagram

Figure 1. STEVAL-IKR001V8D circuit schematic (1 of 2)

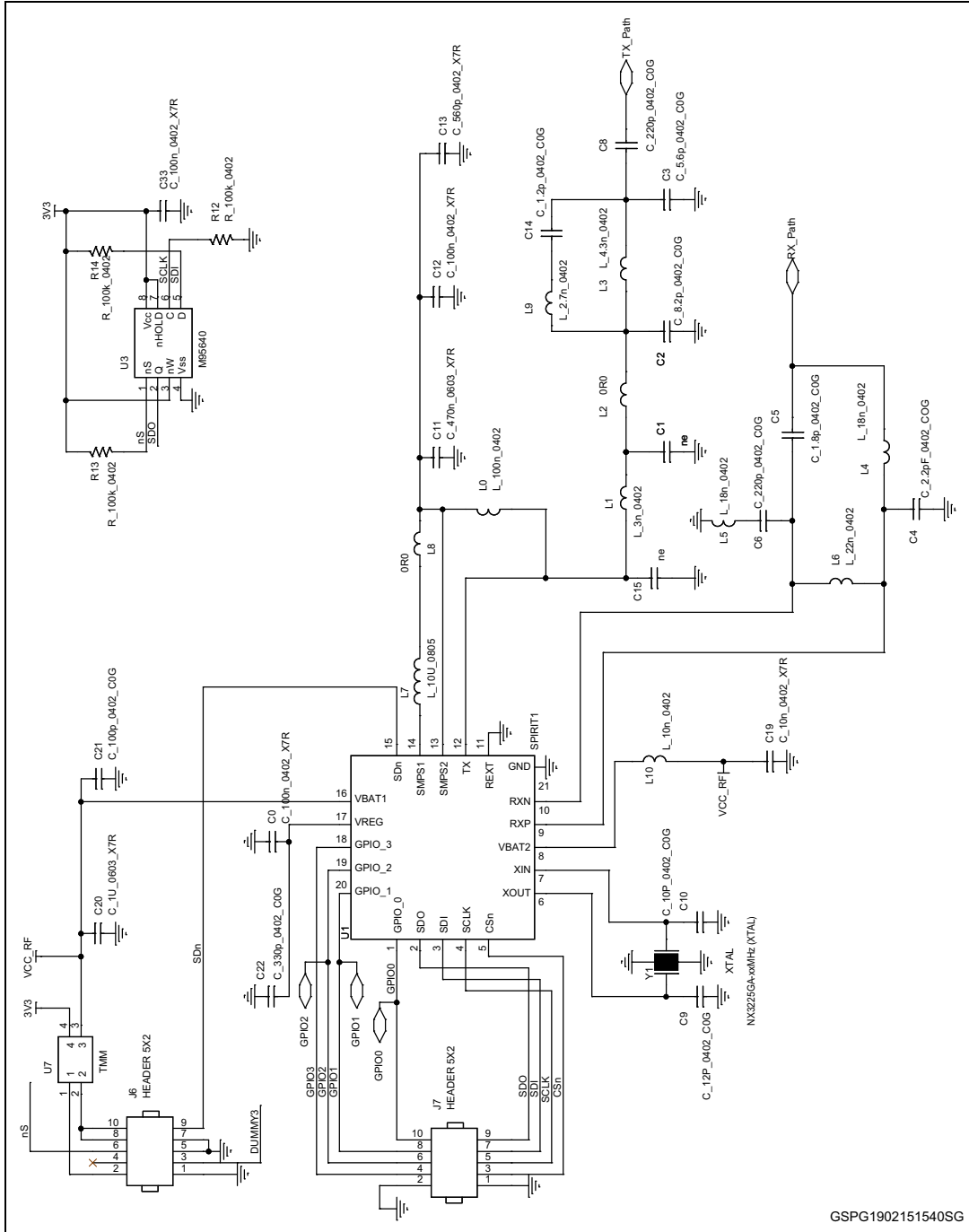
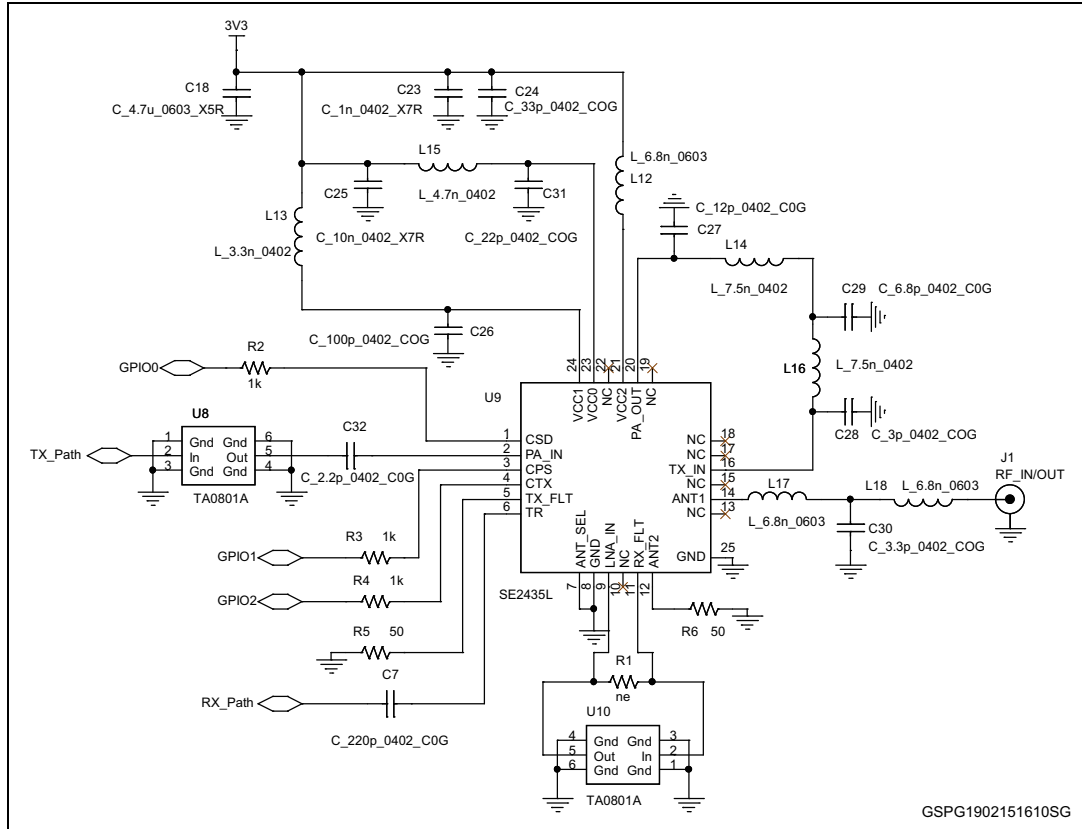


Figure 2. STEVAL-IKR001V8D circuit schematic (2 of 2)



2 Revision history

Table 1. Document revision history

| Date | Revision | Changes |
|-------------|----------|--|
| 25-Jul-2013 | 1 | Initial release. |
| 02-Apr-2014 | 2 | Title has been modified. |
| 23-Feb-2015 | 3 | Updated: <i>Figure 1</i> Added: <i>Figure 2</i> |

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