



## Sub Ghz transceiver daughterboard with power amplifier based on the SPIRIT1

Data brief

### Features

- SPIRIT1 low power sub GHz transceiver in a standalone RF module tuned for 169 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 narrowband requirements
- Max  $P_{OUT}$  +27 dBm
- Excellent receiver sensitivity (up to -123 dBm)
- Low duty cycle RX/TX operation mode
- Automatic acknowledgement re-transmission and timeout protocol engine
- AES 128-bit encryption coprocessor
- SPI interface for microcontroller
- RoHS compliant



### Description

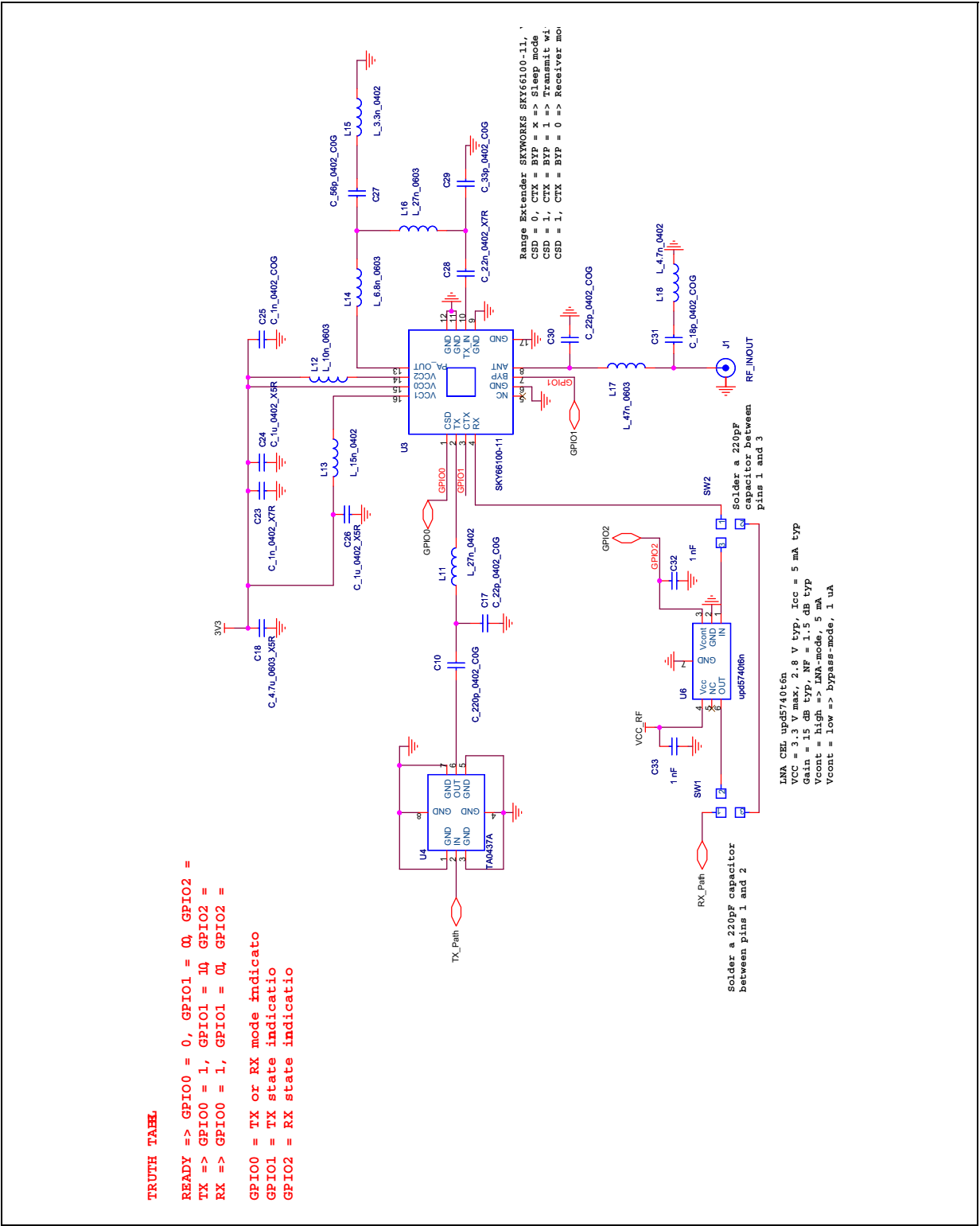
The STEVAL-IKR001V7D demonstration board is based on the SPIRIT1, a sub GHz low power, low data rate transceiver suitable for ISM bands and wireless M-BUS systems.

The STEVAL-IKR001V7D includes an external power amplifier from Skyworks®, which allows the application to reach +27 dBm (500 mW) output power.

This daughterboard is compatible with the STM32L microcontroller-based motherboard used in all other SPIRIT1 development kits.



Figure 2. Test circuit schematic



## 2 Revision history

**Table 1. Document revision history**

| Date        | Revision | Changes          |
|-------------|----------|------------------|
| 28-Jan-2013 | 1        | Initial release. |

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