

LMS6002D

Product Brief: Multi-band Multi-standard Transceiver with Digital Interface

SUMMARY FEATURES

- Single chip transceiver covering 375MHz-4GHz.
- Digital interface with on chip D/A and A/D
- Few external components
- Programmable modulation bandwidth: 1.5, 1.75, 2.5, 2.75, 3, 3.5, 5, 5.5, 6, 7, 8.75, 10, 12, 14, 20 and 28MHz
- Fast multi-synthesiser architecture
- Supports both FDD and TDD full duplex
- Low voltage operation, 1.8V and 3.3V
- Tx RF output +6dBm, continuous wave
- 108 pin dQFN package
- LO leakage calibration
- IQ gain imbalance calibration
- TX/RX power and envelope detection for calibration
- Power down
- Serial interface

GENERAL DESCRIPTION

LMS6002D is a fully integrated, multi-band, multi-standard RF transceiver for WiMAX and 3GPP (WCDMA/HSPA, CDMA2000, LTE) applications. As well as GSM PICO BTS and GSM MS RX for 'listen' mode. It combines LNA, PA driver, RX/TX mixers, RX/TX filters, VCO, synthesizer, RX gain control, and TX power control with very few external components. It contains high specification DA and AD 12 bit converters and uses an industry standard multiplexed IQ parallel digital interface.

APPLICATIONS

Small cell WCDMA, CMDA2000 Base stations
Broad band wireless communication devices for IEEE® 802.16x, WCDMA/HSPA and LTE radios

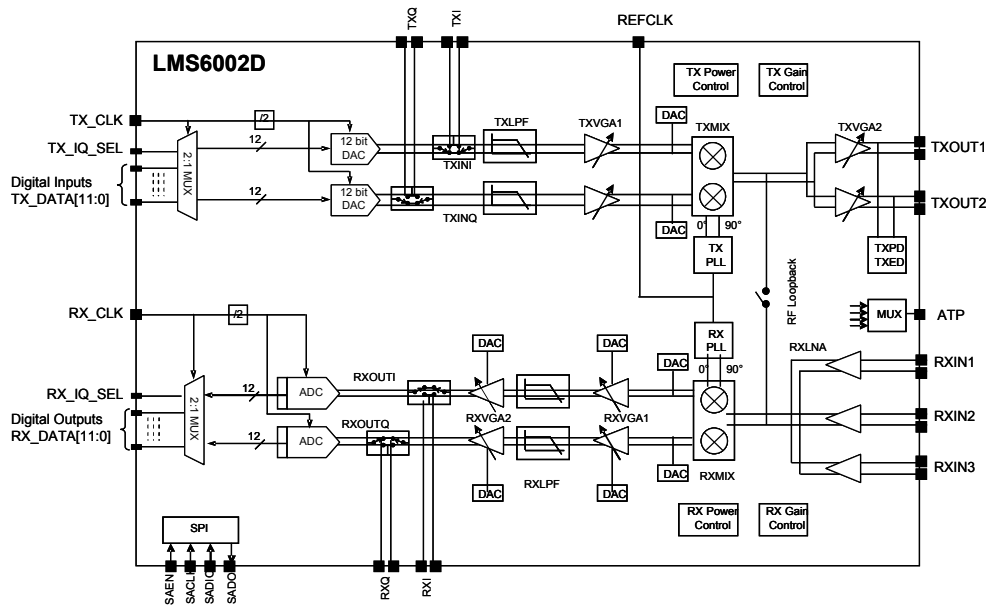


Figure 1: Functional block diagram

| General Specifications | | | | | | |
|------------------------|--------------------------------------------------|-----------------------------------|-----|-------|------|--------|
| Symbol | Parameter | Condition | Min | Typ | Max | Unit |
| REFCLK | Reference Clock | No gaps in Freq resolution. | 26 | 30.72 | 41 | MHz |
| PN | LO Phase Noise | 1MHz Offset | | -130 | | dBc/Hz |
| Transmit | | | | | | |
| TX EVM | Transmitter EVM | UMTS test mode 1 | | | 5 | % |
| ACPR1 | 1 st Adjacent channel power rejection | Pout -10dBm | | 50 | | dBm |
| GTX | Gain control range | 1dB steps | | 50 | | dB |
| Receive | | | | | | |
| RX NF | Receiver Noise figure | | | 5 | | dB |
| SENS 3G | UMTS Sensitivity (Full duplex) | 12.2kBs Single Code (2dB FE loss) | | | -113 | dBm |
| SENS GSM | GSM Sensitivity (Listen mode) | 2dB FE loss | | | -103 | dBm |

Full Data Sheet Available with Non Disclosure Agreement

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