

PRODUCT SUMMARY

SKY58502-16: Sky5® Front-End Module for LTE and NR Bands 1, 3, 7, 21, 25, 30, 32 (75/76), 39, 40, 41, 66, and 70

Applications

- Multi-band 4G and 5G handsets
- Long Term Evolution (LTE), up to 60 MHz bandwidth/300RB
- 5G New Radio: Up to 190 MHz bandwidth

Features

- Highly integrated 1T2R support
- High efficiency average power tracking (APT) mode
- Integrated bands 1, 3, 7, 21, 25, 30, 32 (75/76), 39, 40, 41, 66, and 70 (66 TX and 25 RX)
- Two fully programmable Mobile Industry Processor Interface (MIPI®) v3.0 digital controls
- Continuous bias control via MIPI/RFEE interface
- Low leakage current in power-down mode
- Autonomous over voltage protection
- Integrated antenna and band select switches
- One auxiliary MB TX output for external filter
- Three auxiliary TRX ports and four auxiliary LNA AUX ports support additional bands
- Auxiliary mid-band antenna switch input for 2G TX output from low band module
- Integrated bi-directional RF coupler with cascade support
- Integrated SRS_IN and SRS_OUT functions for B40 and B41 support
- Small, low profile package:
 - 7.1 mm x 6.8 mm x 0.75 mm (max.)
 - MSL3, 260 °C per JEDEC J-STD-020
- SkyShield™ self-shielded module
- For RoHS and other product compliance information, see the [Skyworks Certificate of Conformance](#).

Description

The SKY58502-16 front-end module (FEM) is a fully matched, Dual-Sided Mold Grid Array (DSMGA) module developed for 4G LTE and 5G NR applications. The SKY58502-16 is part of our Sky5® product portfolio.

The FEM is housed in a low profile package which includes PAs, LNAs, and RF inputs and outputs matched to 50 Ω.

Also included are MIPI standard digital control blocks and integrated duplexers for LTE bands 1, 3, 7, 21, 25, 30, 32 (75/76), 39, 40, 41, 66, and 70.

The enhanced SKY58502-16 architecture covers multiple bands and meets the spectral linearity requirements of LTE QPSK, 16QAM, and 64QAM modulations and New Radio DFTS-OFDM and CP-OFDM modulations up to 190 MHz bandwidth.

Power output is controlled by varying the input power. An extremely low leakage current maximizes handset standby time.

Block Diagram

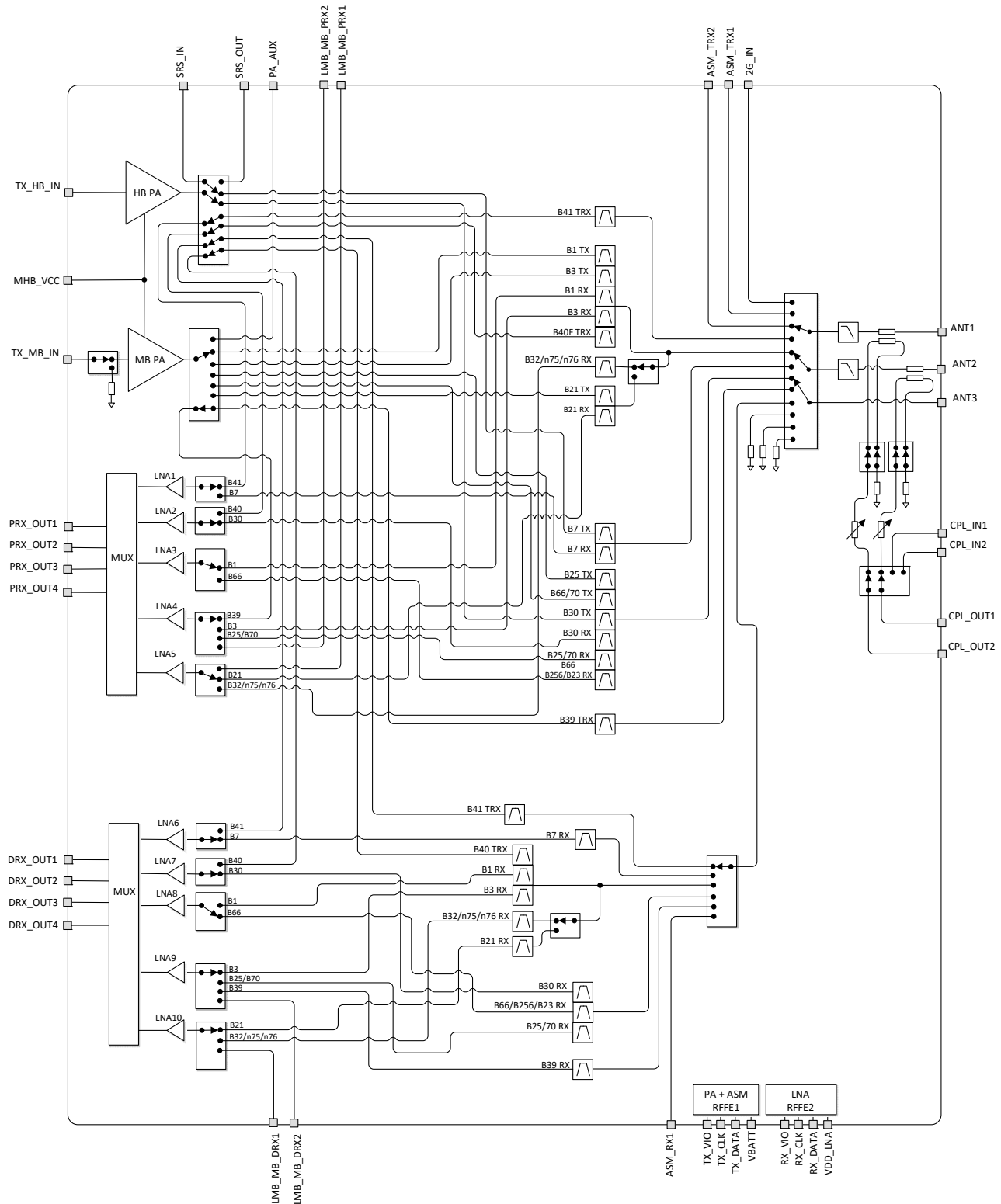


Figure 1. Functional Block Diagram

Ordering Information

Part Number	Description	Evaluation Board Part Number
SKY58502-16	Front-End Module for LTE and NR Bands 1, 3, 7, 21, 25, 30, 32 (75/76), 39, 40, 41, 66, and 70	SKY58502-16EK1

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