PRODUCT SUMMARY

SKY5A2204: Sky5® TX/RX Front-End Module with 15 Linear TRX Switch Ports for Quad-Band GSM/GPRS/EDGE

Applications

- 4G/5G automotive and telematics Network Attached Device (NAD)

Features

- High GMSK output power:
  - 34.5 dBm GSM850/GSM900
  - 31.5 dBm DCS1800/PCS1900
- TRX harmonics below –50 dBm
- 15 low loss/high linearity/high isolation TRX switch ports
- RF input switching to external 5G/4G/3G path
- Integrated directional coupler with forward directionality
- Dual antenna downlink interband Carrier Aggregation (CA) support with dedicated low band (LB) and mid/high band (M/HB) antenna ports
- Integrated noise suppression notch filter for Wi-Fi® coexistence
- Built-in IEC-compliant antenna ESD protection
- High impedance control inputs and low standby current
- Current limiting and overvoltage protection for ruggedness and extended battery life
- Power control circuitry built-in for improved Total Radiated Power (TRP) variation
- Supports uplink CA in Band 39 (35 MHz)
- RF ports internally matched to 50 Ω with zero dc offset
- Fully baseband agnostic design
  - MIPI® RFFE control with dual-standard support
  - User-selectable register mappings
  - Linear or VRAMP-based GMSK power control

Features

- Automotive support
  - Product Part Approval Process (PPAP)
  - AEC-Q104 qualification
  - IMDS material declaration
- Small, low profile LGA package
  - 5.5 mm x 5.5 mm x 0.755 mm
  - 44-pad configuration
  - Lead (Pb)-free, MSL3 @ 260 °C per JEDEC J-STD-020
- For RoHS and other product compliance information, see the Skyworks Certificate of Conformance.

Description

The SKY5A2204 Sky5® TX/RX FEM offers switching solutions for 4G/5G automotive and telematics NAD. Two power amplifiers (PAs) support quad-band GSM, GPRS, EDGE multi-slot operation and TD-SCDMA and TDD LTE transmission. The low band (LB) PA transmits in the GSM850/900 bands. The mid-band (MB) PA covers DCS1800, PCS1900, TD-SCDMA bands 34/39, and TDD LTE band 34/39. The SKY5A2204 is part of our Sky5® product portfolio.

The FEM facilitates flexible broadband RF switching using 15 transmit/receive (TRX) antenna switch ports, covering all 3G/4G/5G bands, from the 700 MHz range through the 2300 to 2700 MHz range.

In support of downlink inter-band CA, the TRX ports are partitioned into two independent switch blocks, including six LB ports and nine M/HB ports. Each switch block includes a forward directional coupler that may be monitored on the coupler port. For dual antenna application designs, the SKY5A2204 has dedicated LB and M/HB antenna ports. These ports provide the simultaneous LB and M/HB reception required for downlink CA. Figure 1 on page 2 shows the functional block diagram.

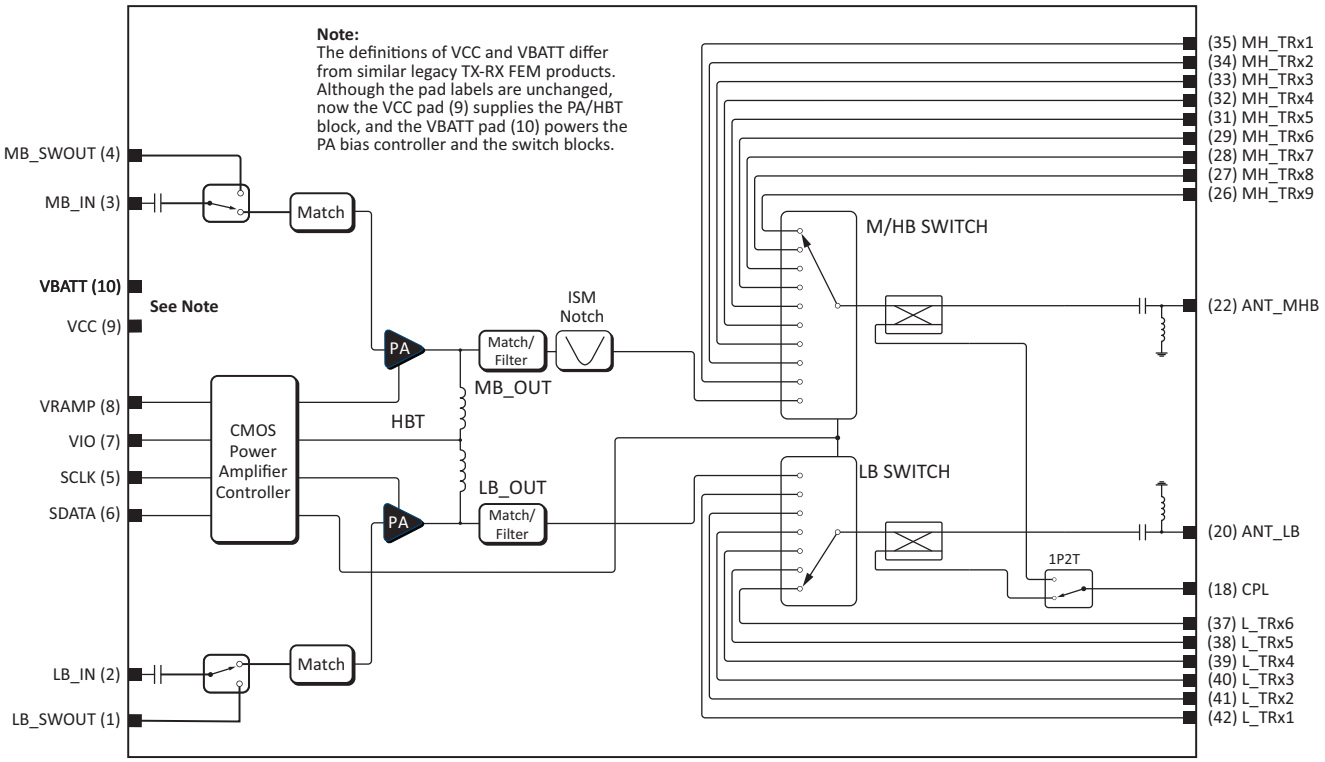

Figure 1. Functional Block Diagram

Ordering Information

Part Number	Description	Evaluation Board Part Number
SKY5A2204	Sky5® TX/RX Front-End Module with 15 Linear TRX Switch Ports for Quad-Band GSM/GPRS/EDGE	SKY5A2204EK1