SKY77806 Multiband Front-End Module for LTE Bands 12 / 17, 13

Applications

- Multiband 2G, 3G/4G handsets
  - LTE-modulated handsets for Bands 12 / 17, 13

Features

- SkyShield™ shielded module

- Average Power Tracking (APT)

- 50 ohm input/output impedance with internal DC-blocking

- Temperature Sensor

- MiPi RFFE Control Interface w/ 1.8 V Nominal Supply, Separate Vcc1/Vcc2, Completely Operable for VIO High and Vbatt Low, Continuous Bias Adjustment vs. Power

- Downlink Carrier Aggregation for LTE with state-of-the-art de-sense performance•

- Low Supply voltage

- Excellent harmonic and noise coexistence performance for radiated emissions, enabled by Skyshield™ and product partitioning, to manage simultaneous requirements with GPS/WiFi and B12/17+B4 CA

- Small, low profile package
  - 4.6 x 5.2 x 0.8 mm
  - 34-pad configuration

- Carrier Aggregation (CA):
  - B12/17, 13 PAiD supports DL CA capabilities for CA band combinations
  - B2-B12, B2-B17, B4-B17, B4-B12, B4-B13, B2-B13

Skyworks Green™ products are compliant with all applicable legislation and are halogen-free. For additional information, refer to Skyworks *Definition of Green™*, document number SQ04-0074.

Description

The SKY77806, a multiband LTE Front-End Module (FEM), efficiently supports 4G handset operation. The FEM consists of a PA block, a logic control block for multiple power control levels, band enable functions, and integrated duplex filters with single-ended receive outputs. The RF I/O ports internally matched to 50 ohms minimize the need for external components. Extremely low leakage current maximizes handset standby time. The InGaP/GaAs die and passive components are mounted on a multi-layer laminate substrate and the assembly encapsulated in silver plated plastic overmold.

LTE: SKY77806 meets spectral linearity requirements of LTE modulation with QPSK/16QAM up to 10 MHz bandwidth, including various resource block allocations, with good power-added efficiency.

Receiver Section: The SKY77806's integrated Duplexers provide 4G Rx paths from antenna to LNA port of RFIC. Carrier Aggregation (CA) requirements for noise and harmonics are designed-in for best de-sense performance. Additionally, GPS and LB/HB WiFi coexistence are designed-in for exceptional support to maintain all radio performance, even in user scenarios of simultaneous use. Optimized low insertion-loss Rx paths, matching circuits, and well-grounded guard traces (high Tx–Rx isolation) inside the module mitigate de-sense problems and enhance sensitivity performance.
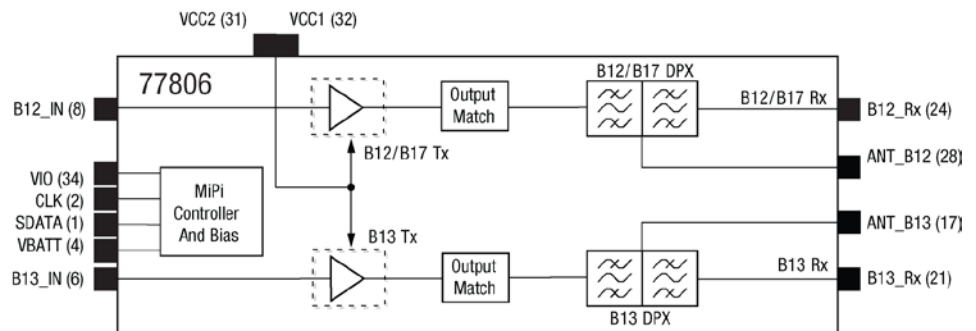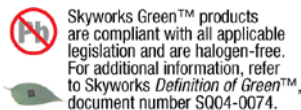

FIGURE 1. SKY77806 FUNCTIONAL BLOCK DIAGRAM

Ordering Information

Product Name	Order Number	Evaluation Board Part Number
SKY77806	SKY77806	