

PRODUCT SUMMARY

SKY58105-11 Sky5® Mid- and High Band Front-End Module for 3G/4G/5G Applications

Applications

- Multi-band 3G/4G/5G Mobile Devices
- Handsets, Data Cards, M2M
- LTE Advanced Carrier Aggregation (CA)

Features

- MIPI® RFFE 3.0 control interface with 1.2V/1.8V nominal supply
- Supports envelope tracking applications
- Integrated quadplexer filter for Bands 1, 3, and 40
- Integrated diplexer filter for Bands 34/39
- Integrated filter for Band 41F
- One auxiliary MB Tx outputs for external filters; One auxiliary HB Tx output for external filter
- Two auxiliary TRx ports to support additional bands
- Six Low Noise Amplifiers (LNA) Outputs
 - ANT output ports support flexible ANT configurations and swap
- Auxiliary 2G Tx output from low band module
- Integrated bi-directional RF coupler with cascade support
- All RF I/O ports matched to 50 Ω impedance
- Small, low profile/low cost package:
 - 8.6 mm x 6.5 mm x 0.65 mm
 - SkyShield™ Shielded Module
 - 62-pad Large Grid Array (LGA) configuration

3G Features

- WCDMA, HSPA+
- TD-SCDMA, TD-HSPA
- CDMA2000 1x RC1, RC3, EVDO (Rev A)



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.

4G Features

- FDD LTE
- Uplink QPSK, 16QAM, 64QAM
- Intra-band uplink Carrier Aggregation (CA) support
 - 35 MHz (175 RB) for Band 39
 - 40 MHz (200 RB) for Bands 1, 3, 40, and 41
 - 60 MHz (300 RB) for Bands 40 and 41
- Inter-band downlink CA support

5G Features

- FDD/TDD NR Bands
- Uplink QPSK, 16QAM, 64QAM and 256QAM
- Up to 100 MHz APT and ET
- n1, n3, n41 support
- EN-DC Dual TX support for B3 + n41 and B39 + n41

Description

The SKY58105-11 Mid- and High Band Front-End Module (FEM) supports 3G/4G/5G mobile devices and operates efficiently in 3G/4G/5G modes. The SKY58105-11 is part of our Sky5® product portfolio. The module has separate 3G / 4G / 5G PA blocks operating in mid- and high bands, a silicon controller containing the MIPI RFFE interface, RF band switches, MB and HB antenna switches, bi-directional couplers, and integrated filters for Bands 1, 3, 34, 39, 40, and 41.

RF I/O ports are internally matched to 50 ohms to minimize the need for external components. Extremely low leakage current maximizes device standby time. IC die and passive components are mounted on a multi-layer laminate substrate. The module meets 5G NR and LTE advanced requirements where wider bandwidth (100 MHz) and CA are used for higher data rates. Combined filtering, RF matching, and TRx switching internal to the module optimizes performance for popular Downlink (DL) CA band combinations. The module contains necessary components between the antenna and RFIC transceiver and is optimized for superior Rx sensitivity and Tx efficiency. Two ANT ports provide flexibility to support multiple ANT configurations and ANT swap function. For the Uplink, the PA blocks support very wide bandwidth 5G NR operations: up to 60 MHz for n1 and up to 100 MHz for n41.

Figure 1 shows the SKY58105-11 functional block diagram.

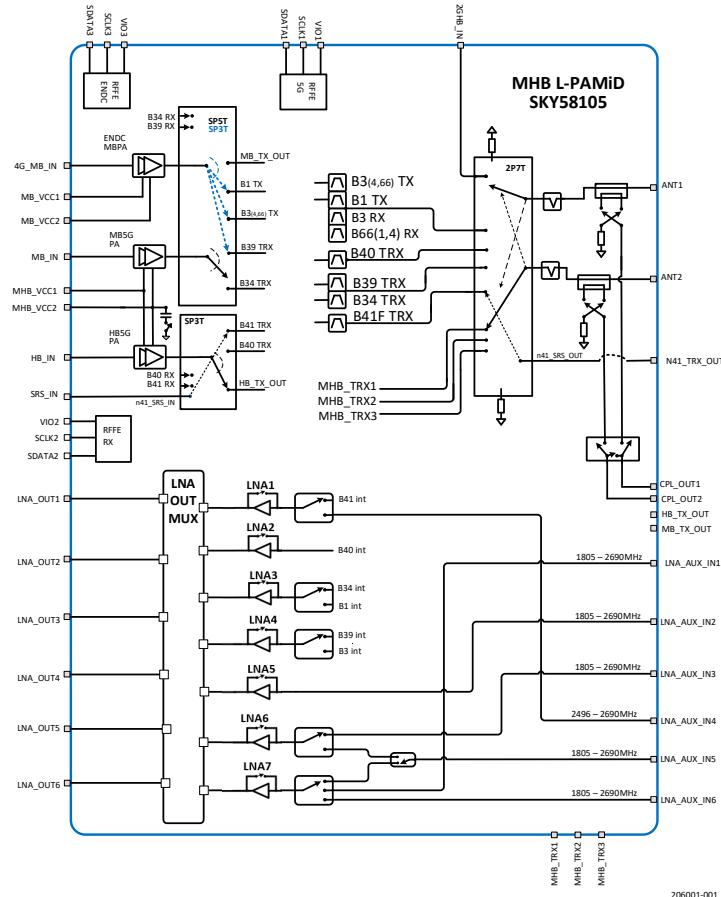


Figure 1. SKY58105-11 Functional Block Diagram

Ordering Information

Part Number	Part Description	Evaluation Board Part Number
SKY58105-11	SKY58105-11 Mid- and High Band FEM	SKY58105-11EK1

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