

PRODUCT SUMMARY

SKY77437 Front-End Module for WCDMA / HSDPA / HSUPA (TX 1920-1980 MHz), (RX 2110-2170 MHz)

Applications

- Digital cellular (WCDMA) handsets

Features

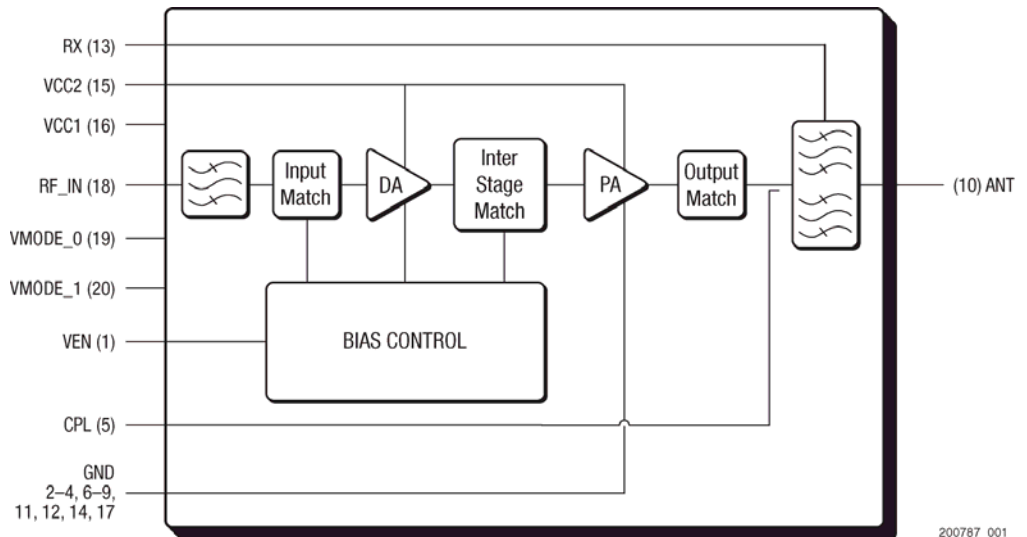
- High Speed Downlink Packet Access (HSDPA)
- High Speed Uplink Packet Access (HSUPA)
- Low quiescent current - 15 mA
- Low current consumption - 330 mA
- Integrated Coupler
- 20-pad package
- Small profile - 4 mm x 7 mm x 1.2 mm
- Low voltage - 3.2 V to 4.2 V
- Digital enable pad
- Highly integrated, user friendly solution
- InGaP HBT
- Integrated interstage filter and duplexer
- Requires few external components

Description

The SKY77437 Front-End Module (FEM) is a fully matched, 20-pad surface mount module developed for WCDMA applications. Small and efficient, this WCDMA FEM integrates the interstage filter, the input matching, the power amplifier, the output matching, the directional coupler, and the duplexer into a single 4 mm x 7 mm x 1.2 mm package.

The SKY77437 meets the stringent spectral requirements of HSDPA standards up to 24.5 dBm output power. The FEM includes an InGaP HBT PA incorporating three selectable bias levels to enhance the performance of the FEM at different power levels.


Integration of the RF front-end greatly simplifies the design of the handset radio as all critical matching between the interstage filter, PA, directional coupler, and duplexer is optimized within the module. By optimizing the efficiency of the InGaP HBT PA MMIC and reducing the RF loss between the integrated components, this FEM achieves current as low as 330 mA at maximum output power (24.5 dBm) that significantly improves the talk time of the WCDMA handset. This small package uses Skyworks' low cost, multi-laminate substrate technology and is approximately half the size of individually packaged component solutions. The SKY77437 front-end module can save handset designers significant board space and design-cycle time.



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Figure 1. Functional Block Diagram

NEW Skyworks offers lead (Pb)-free, RoHS (Restriction of Hazardous Substances)-compliant packaging.



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