PRODUCT SUMMARY

SKY77198-12 Power Amplifier Module for TD-SCDMA (1880–1920 MHz, 2010-2025 MHz)

Applications

- TD-SCDMA handsets

Features

- Low voltage positive bias supply
  - 3.2 V to 4.2 V
- Supports low collector voltage operation
- Good linearity
- High efficiency
  - 40% @ 28 dBm
- Large dynamic range
- Small, low profile package
  - 3 mm x 3 mm 0.85 mm
  - 10-pad configuration
- Power-down control
- Low power-state control
- InGaP
- CMOS Compatible Control
- Integrated Directional Coupler

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Description

The SKY77198-12 Power Amplifier Module (PAM) is a fully matched, 10-pad, surface mount module developed for Time Division Synchronous Code Division Multiple Access (TD-SCDMA) applications. Skyworks' SKY77198-12 also supports TD-SCDMA multi-slot operation.

This small and efficient module packs full 1880–1920 MHz and 2010-2025 MHz bandwidth coverage into a single compact package. The PAM meets the stringent spectral linearity requirements of TD-SCDMA transmission, with high power added efficiency for power output of up to 28 dBm.

A single Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all active circuitry in the module such as on-board bias circuit and input and interstage matching circuits. Output match is realized off-chip within the module package to optimize efficiency and power performance into a 50 Ω load.

This device is manufactured with Skyworks' InGaP GaAs Heterojunction Bipolar Transistor (HBT) BiFET process that provides for all positive voltage DC supply operation while maintaining high efficiency and good linearity.

Power-down is accomplished by setting the voltage on VENABLE to zero volts. No external supply side switch is needed as typical "off" leakage is a few microamperes with full primary voltage supplied from the battery.

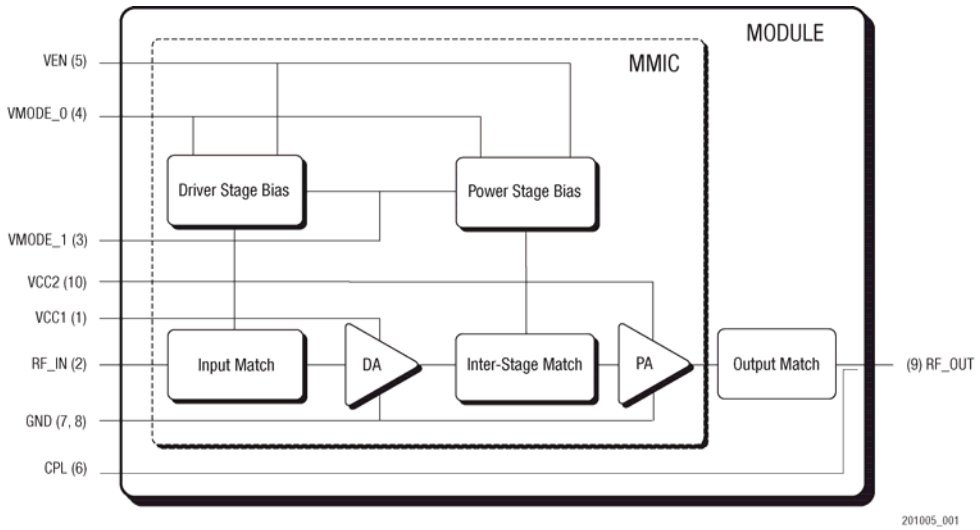

Figure 1. SKY77198-12 Functional Block Diagram

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