

PRELIMINARY PRODUCT SUMMARY

SKY77152: PA Module for WCDMA (1920-1980 MHz)

APPLICATIONS

- WCDMA handsets

Features

- Low voltage positive bias supply
 - 3.2 V to 4.2 V
- Low V_{REF}
 - 2.85 V, nominal
- Supports low collector voltage operation
- Good linearity
- High efficiency
- Large dynamic range
- 10-pin package
 - 4 mm x 4 mm x 1.5 mm
- Power down control
- Low power-state control
- InGaP

The SKY77152 Power Amplifier Module (PAM) is a fully matched, 10-pin, surface mount module developed for Wideband Code Division Multiple Access (WCDMA) applications. This small and efficient module packs full 1920-1980 MHz bandwidth coverage into a single compact package. The SKY77152 meets the stringent spectral linearity requirements of WCDMA transmission, with high power added efficiency for power output of up to 28 dBm. A low current pin (V_{CONT}) is provided to improve efficiency for the low RF power range of operation.

The single Gallium Arsenide (GaAs) Microwave Monolithic Integrated Circuit (MMIC) contains all active circuitry in the module. The MMIC contains on-board bias circuitry, as well as 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' GaAs Heterojunction Bipolar Transistor (HBT) process that provides for all positive voltage DC supply operation while maintaining high efficiency and good linearity. Primary bias to the SKY77152 is supplied directly from a three-cell Ni-Cad, a single-cell Li-ion, or other suitable batteries with outputs in the 3.2 to 4.2 volt range. Power down is accomplished by setting the voltage on the low current reference pin 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.

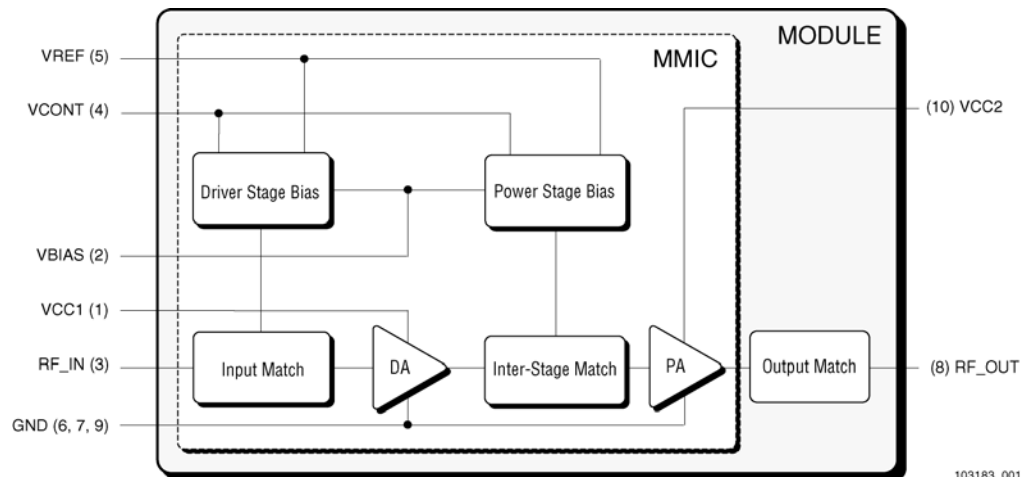


Figure 1. Functional Block Diagram

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