SKY77188 Power Amplifier Module for WCDMA / HSDPA Band V (824–849 MHz)

Applications

- WCDMA handsets
- HSDPA

Features

- Low voltage positive bias supply
- 3.2 V to 4.2 V
- Good linearity
- High efficiency
- 40% @ 28.25 dBm
- Large dynamic range
- 10-pad package
- 3 x 3 x 0.85 mm
- Power down control
- InGaP
- Supports low collector voltage operation
- Digital Enable
- No V$_{REF}$ required
- CMOS compatible control signals
- Integrated Directional Coupler

The SKY77188 Power Amplifier Module (PAM) is a fully matched 10-pad surface mount module developed for Wideband Code Division Multiple Access (WCDMA) applications. This small and efficient module packs full 824–849 MHz bandwidth coverage into a single compact package. Because of high efficiencies attained throughout the entire power range, the SKY77188 delivers unsurpassed talk-time advantages. The SKY77188 meets the stringent spectral linearity requirements of High Speed Downlink Packet Access (HSDPA) data transmission with high power added efficiency. A directional coupler is integrated into the module thus eliminating the need for any external coupler.

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 into a 50-ohm load is realized off-chip within the module package to optimize efficiency and power performance.

The SKY77188 PAM 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. Primary bias to the SKY77188 is supplied directly from any three-cell Ni-Cd, a single-cell Li-Ion, or other suitable battery with an output in the 3.2 to 4.2 volt range. No VREF voltage is required. 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.
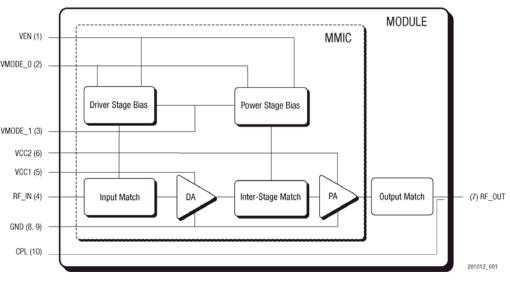

Figure 1. Functional Block Diagram

Ordering Information

Model Number	Manufacturing Part Number	Product Revision	Package	Operating Temperature
SKY77188	SKY77188		MCM 3 x 3 x 0.85 mm	−20 °C to +85 °C