PRODUCT SUMMARY

SKY77336 Power Amplifier Module for Quad-Band GSM / GPRS / EDGE

Applications

- Quad-band cellular handsets
- GMSK Modulation
  - Class 4 GSM850/900
  - Class 1 DCS1800/PCS1900
  - Class 12 GPRS multi-slot operation
- EDGE modulation
  - Class E2 GSM850/900
  - Class E2 DCS1800/PCS1900

Features

- High efficiency:
  - GSM850, 52%
  - GSM900, 52%
  - DCS, 50%
  - PCS, 50%
- Small outline
  - 5 x 5 mm
- Low profile
  - 0.9 mm, max
- Low VRAMP current
  - 10 μA

Description

SKY77336 Power Amplifier Module (PAM) is designed in a compact form factor for quad-band cellular handsets comprising GSM850/900, DCS1800 and PCS1900, supporting Gaussian Minimum-Shift Keying (GMSK) and Polar Enhanced Data for GSM Evolution (EDGE) modulation. Class 12 General Packet Radio Service (GPRS) multi-slot operation is also supported.

The module consists of GSM850/900 PA and DCS1800/PCS1900 PA blocks, impedance matching circuitry for 50 Ω input and output impedances, and a Power Amplifier Control (PAC) block. The custom CMOS integrated circuit provides the internal PAC function and interface circuitry. Fabricated in InGaP/GaAs, the Heterojunction Bipolar Transistor (HBT) PA blocks support the GSM850/900 bands and DCS1800/PCS1900 bands. Both PA blocks share common power supply pads to distribute current. The InGaP/GaAs die, Silicon (Si) controller die, and passive components are mounted on a multi-layer laminate substrate and the entire assembly is encapsulated with plastic overmold.

RF input and output ports of the SKY77336 are internally matched to a 50 Ω load to reduce the number of external components for a quad-band design. Extremely low leakage current (10 μA, typical) of the PAM module maximizes handset standby time.

The SKY77336 also contains band-select switching circuitry to select GSM (logic 0) or DCS/PCS (logic 1) as determined from the Band Select (BS) signal. See Figure 1 shown below.

![Figure 1. SKY77336 Functional Block Diagram](image-url)
**Ordering Information**

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Manufacturing Part Number</th>
<th>Product Revision</th>
<th>Package</th>
<th>Operating Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKY77336</td>
<td>SKY77336</td>
<td>5 x 5 x 0.9 MCM–16</td>
<td>−20 °C to +85 °C</td>
<td></td>
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