

PRODUCT SUMMARY

SKY77354 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:
 - GSM LB
 - 55% at high power
 - 17% at low power
 - GSM HB
 - 53% at high power
 - 22% at low power
- Small, low profile package
 - 5 x 3.5 mm x 0.9 mm
 - 14-pad configuration

Description

SKY77354 Power Amplifier Module (PAM) is designed in a compact form factor for quad-band cellular handsets comprising GSM850/900, DCS1800 and PCS1900, supporting fixed gain Gaussian Minimum-Shift Keying (GMSK) and linear 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 Multi-function Power Amplifier Control (MFC) block. A custom BiCMOS IC provides the internal MFC function and interface circuitry.

Two separate Heterojunction Bipolar Transistor (HBT) PA blocks are fabricated onto a single InGaP die; one supports the GSM850/900 bands, the other the DCS1800/PCS1900 bands. Both PA blocks share common power supply pads to distribute current. The InGaP and silicon dies and the passive components are mounted on a multi-layer laminate substrate. The entire assembly is encapsulated with plastic overmold.

RF input and output ports of the SKY77354 are internally matched to a 50 Ω load to reduce the number of external components. Extremely low leakage current (15 μA, typical) of the PAM module maximizes handset standby time.

The SKY77354 also contains switching circuitry to select GSM or DCS/PCS bands and select high or low power modes. See Figure 1 shown below.

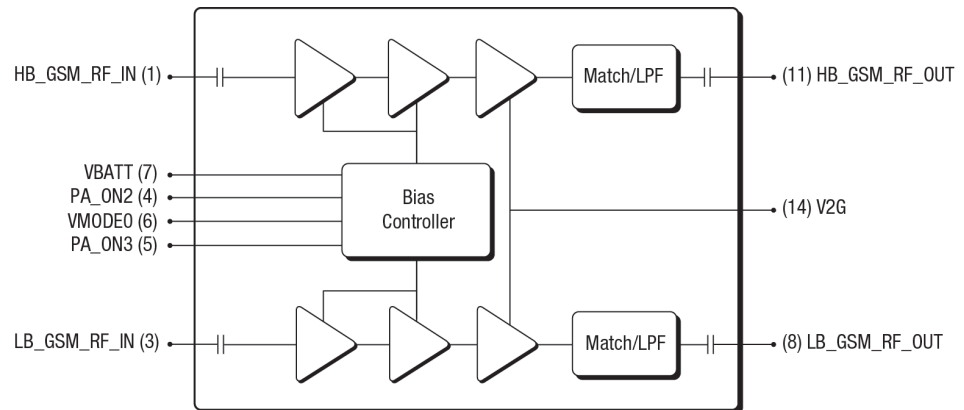
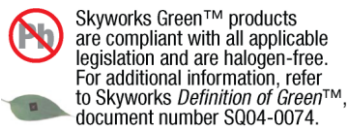


Figure 1. SKY77354 Functional Block Diagram

Ordering Information

Order Number	Manufacturing Part Number	Evaluation Board Part Number
SKY77354	SKY77354-	DNA

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