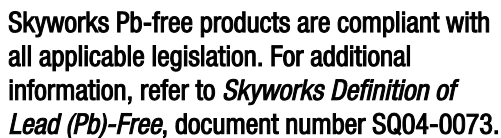# SKY85303-11: 2.4 GHz, 256 QAM WLAN/Bluetooth® Front-End Module

Applications

- WiFi-enabled smartphones, tablets, and mobile/portable devices
- System-in-Package (SIP) modules for embedded systems

Features

- Integrated high performance 2.4 GHz PA, harmonic filter, LNA with bypass, and T/R switch
- Fully-matched input and output
- LNA with integrated bypass mode
- High performance SP3T switch to support Bluetooth/WiFi functions
- Transmit loopback mode
- Integrated positive slope power detector
- Transmit gain: 26 dB
- Receive gain: 14 dB
- Output power:
  − +18 dBm @ 1.8% EVM, MCS8, HT20
  − +19 dBm @ 3% EVM, MCS7, HT20
- Direct connection to battery with 3.6 V nominal supply
- Small, QFN (16-pin, 2.5 x 2.5 x 0.4 mm) package (MSL1, 260 °C per JEDEC J-STD-020)

Figure 1. SKY85303-11 Block Diagram

Description

The SKY85303-11 is a complete 802.11b/g/n WLAN RF Front-End Module (FEM) with a Bluetooth port. The device provides all the functionality of a fully matched Power Amplifier (PA), power detector, harmonic filter, Low-Noise Amplifier (LNA), and Single-Pole, Triple-Throw (SP3T) switch.

The SKY85303-11 provides a complete 2.4 GHz WLAN RF solution from the output of the transceiver to the antenna, and from the antenna to the input of the transceiver. The LNA increases the receive sensitivity of embedded solutions to improve range or to overcome the insertion loss of cellular filters (often included for mobile applications).

The SKY85303-11 also includes a transmitter power detector with 20 dB of dynamic range, and a digital enable control for transmitter power ramp on/off control.

The device is provided in an ultra- compact, 16-pin 2.5 x 2.5 x 0.4 mm Quad Flat No-Lead (QFN) package. A functional block diagram is shown in Figure 1.

Ordering Information

Model Name	Manufacturing Part Number	Evaluation Board Part Number
SKY85303-11 2.4 GHz Front-End Module	SKY85303-11	SKY85303-11-EVB