



2.4 GHz High-Gain, High-Efficiency Front-end Module

SST12LF02

Product Brief

The SST12LF02 is a 2.4 GHz Front-End Module (FEM) that combines a high-performance Power Amplifier (PA) and a switch within a compact, fully-matched package. Designed in compliance with IEEE 802.11b/g/n applications and based on GaAs PHEMT/HBT technology, the SST12LF02 operates within the frequency range of 2.4–2.5 GHz with very low DC-current consumption. The Transmitter chain has excellent linearity, typically <3% added EVM up to 18 dBm output power, with 802.11g 54 Mbps OFDM operation while meeting 802.11b/g/n spectrum mask at 21 dBm. An option to simultaneously connect the WLAN and Bluetooth receiver ports is available. The SST12LF02 is offered in a 16-contact XQFN package.

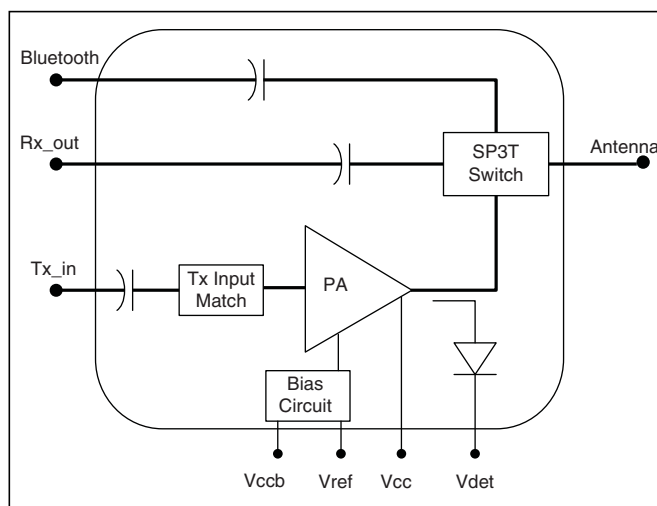
Features

- **High Gain:**
 - Typically 29 dB gain across 2.4–2.5 GHz over temperature -20°C to +85°C for Transmitter (TX) chain.
- **High linear output power (at 3.3V):**
 - Meets 802.11g OFDM ACPR requirement up to 21 dBm
 - <3% added EVM up to 18 dBm for 54 Mbps 802.11g signal
 - Meets 802.11b ACPR requirement up to 21 dBm
- **High power-added efficiency/Low operating current for 802.11b/g/n applications**
- **High temperature stability**
 - ~1 dB power variation between -20°C to +85°C
 - ~3 dB gain variation between -20°C to +85°C
- **Temperature and load insensitive on-chip power detector**
 - 20 dB dynamic range
- **Low insertion loss**
 - 0.5 dB for WLAN receiver and Bluetooth ports
 - 4.5 dB and 3.8 dB for simultaneous WLAN and Bluetooth receiver ports, respectively
- **Input/output ports matched to 50Ω internally and DC decoupled.**
- **Packages available**
 - 16-contact XQFN – 3mm x 3mm x 0.45mm
- **All non-Pb (lead-free) devices are RoHS compliant**

Applications

- WLAN (IEEE 802.11b/g/n)
- Bluetooth™
- Home RF
- Cordless phones
- 2.4 GHz ISM wireless equipment

Block Diagram



Product Ordering

Valid combinations for SST12LF02

SST12LF02-QXCE

SST12LF02 Evaluation Kits

SST12LF02-QXCE-K

Note: Valid combinations are those products in mass production or will be in mass production. Consult your SST sales representative to confirm availability of valid combinations and to determine availability of new combinations.



Contact Information

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Global Sales and Distribution

Table 1:Revision History

Revision	Description	Date
A	<ul style="list-style-type: none">Initial release of Product Brief	Apr 2011
B	<ul style="list-style-type: none">Added Contact InformationModified summary paragraph on page 1.Added "Insertion loss" information to Features on page 1.	Jun 2011

ISBN:978-1-61341-338-8

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Memory sizes denote raw storage capacity; actual usable capacity may be less.

SST makes no warranty for the use of its products other than those expressly contained in the Standard Terms and Conditions of Sale.

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