A Microchip Technology Company

2.4 GHz High-Efficiency, High-Gain Power Amplifier Module

SST12LP19E

Product Brief

The SST12LP19E is a 2.4 GHz high-efficiency Power Amplifier based on the highly-reliable InGaP/GaAs HBT technology and designed in compliance with IEEE 802.11b/g/n applications. It typically provides 25 dB gain with 34% power-added efficiency, while meeting 802.11g spectrum mask at 23.5 dBm. The SST12LP19E also features easy board-level usage, along with high-speed power-up/-down control through a single combined reference voltage pin, and is offered in both a 6-contact XSON and 8-contact XSON package.

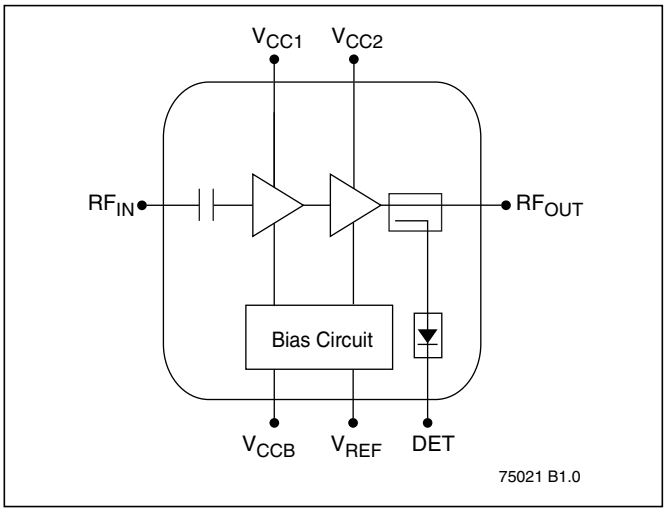
Features

- **High gain:**
  - Typically 25 dB gain across 2.4–2.5 GHz
- **High linear output power (at 3.3V):**
  - ~3% added EVM up to 20 dBm (high-power configuration)
  - ~2.5% added EVM up to 18 dBm (high-efficiency configuration)
  - Meets 802.11g OFDM ACPR requirement up to 23.5 dBm
  - Meets 802.11b ACPR requirement up to 23 dBm
- **High power-added efficiency/Low operating current for 802.11b/g/n applications**
  - ~34% @ P_{OUT} = 23.5 dBm for 802.11g
  - ~31% @ P_{OUT} = 23 dBm for 802.11b
- **Low shut-down current (~2 µA)**
- **Delivers excellent performance at low temperature down to 2.75 V bias voltage.**
- **Limited variation over temperature**
  - ~2.5 dB gain variation between -40°C to +85°C
  - ~1 dB power variation between -40°C to +85°C
- **Temperature and load insensitive on-chip power detector**
  - >20dB dynamic range
- **Packages available**
  - 8-contact XSON – 2mm x 2mm x 0.45mm
  - 6-contact XSON – 1.5mm x 1.5mm x 0.45mm
- **All non-Pb (lead-free) devices are RoHS compliant**

Applications

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

Block Diagram



Product Ordering

Valid combinations for SST12LP19E

SST12LP19E-QX8E SST12LP19E-QX6E

SST12LP19E Evaluation Kits

SST12LP19E-QX8E-K SST12LP19E-QX6E-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.

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Contact Information

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Global Sales and Distribution

Table 1: Revision History

Revision	Description	Date
A	• Initial release of Product Brief	Jul 2011

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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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