A Microchip Technology Company

2.4 GHz High-Power, High-Gain Power Amplifier Module
SST12LP08

Product Brief

The SST12LP08 is a versatile power amplifier based on the highly-reliable InGaP/ GaAs HBT technology. Easily configured for linear high-power applications with excellent power-added efficiency while operating over the 2.4- 2.5 GHz frequency band, it typically provides 30 dB gain with 34% power-added efficiency, while meeting 802.11b/g spectrum mask at 23.5 dBm. The SST12LP08 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 12-contact XQFN and 6-contact XSON packages.

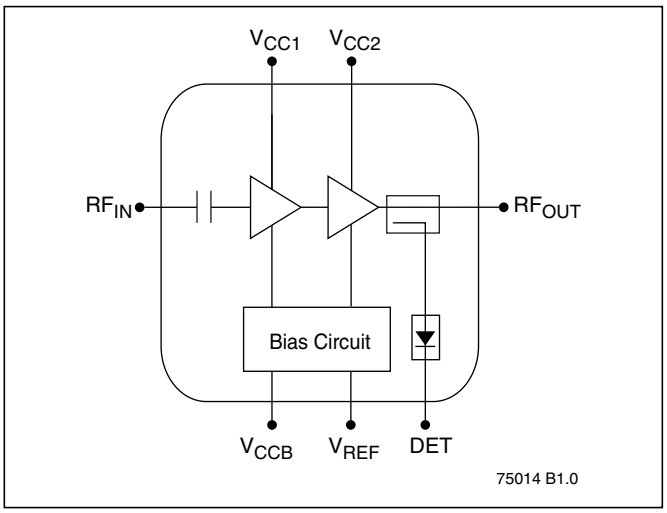
Features

- **High Gain:**
  - Typically 30 dB gain across 2.4~2.5 GHz
- **High linear output power (at 3.3V):**
  - >28 dBm P1dB
  - ~3% added EVM up to 20 dBm for 54 Mbps 802.11g signal
  - Meets 802.11g OFDM ACPR requirement up to 23.5 dBm
  - Meets 802.11b ACPR requirement up to 23.5 dBm
- **High power-added efficiency/Low operating current for both 802.11g/b applications**
  - ~34% @ P_{OUT} = 23.5 dBm for 802.11b/g
- **Low Shut-down Current (~2 µA)**
- **High temperature stability**
  - ~1 dB power variation between -40°C to +85°C
  - ~2.5dB gain variation between -40°C to +85°C
- **Temperature and load insensitive on-chip power detector**
  - 20 dB dynamic range
- **Simple input/output matching**
- **Packages available**
  - 12-contact XQFN – 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 and DECT phones**
- **2.4 GHz ISM wireless equipment**

Block Diagram



Product Ordering

Valid combinations for SST12LP08

SST12LP08-QXBE

SST12LP08-QX6E

SST12LP08 Evaluation Kits

SST12LP08-QXBE-K

SST12LP08-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.

Contact Information

Thank you for your interest in Microchip RF products. The data sheet for this device contains proprietary information. To obtain a copy of the data sheet, contact your local Microchip sales representative or distributor at the link below.

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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