



The SST12CP11 is a high-power and high-gain power amplifier (PA) based on the highly-reliable InGaP/GaAs HBT technology. This PA can be easily configured for high-power applications with good power-added efficiency while operating over the 2.4-2.5 GHz frequency band. It typically provides 34 dB gain and has excellent linearity, typically ~3% added EVM at 25 dBm output power, which is essential for 54 Mbps 802.11g/n operation while meeting 802.11g spectrum mask at 28.5 dBm. The power amplifier IC also features easy board-level usage along with high-speed power-up/-down control. The SST12CP11 is offered in 16-contact VQFN package.

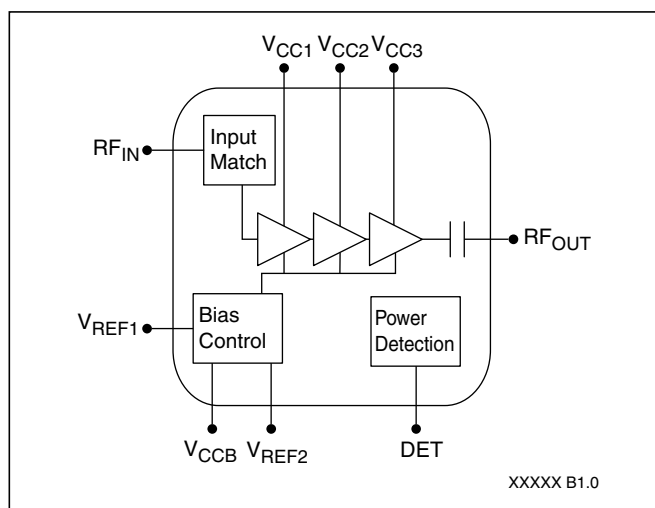
## Features

- **High Gain:**
  - Typically 34 dB gain across 2.4–2.5 GHz
- **High linear output power (at 5V)**
  - >30 dBm P1dB
  - Meets 802.11g OFDM ACPR requirement up to 28.5 dBm
  - Added EVM ~3% up to 25 dBm for 54 Mbps 802.11g signal
  - Meets 802.11b ACPR requirement up to 28.5 dBm
- **High-speed power-up/down**
  - Turn on/off time (10%-90%) <100 ns
- **10:1 VSWR survivability (unconditionally stable up to 28.5 dBm)**
- **On-chip power detection**
- **Simple input/output matching**
- **Packages available**
  - 16-contact VQFN (3mm x 3mm x 0.9mm)
- **All devices are RoHS compliant**

## Applications

- WLAN (IEEE 802.11b/g/n)
- WiMax (IEEE 802.16e)
- Home RF
- Cordless phones
- 2.4 GHz ISM wireless equipment

## Block Diagram



## Product Ordering

### Valid combinations for SST12CP11

SST12CP11-QVCE

### SST12CP11 Evaluation Kits

SST12CP11-QVCE-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.



A Microchip Technology Company

# 2.4 GHz High-Power and High-Gain Power Amplifier SST12CP11

Product Brief

## 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	Oct 2011

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Specifications are subject to change without notice. Refer to [www.microchip.com](http://www.microchip.com) for the most recent documentation. For the most current package drawings, please see the Packaging Specification located at <http://www.microchip.com/packaging>.

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.

For sales office locations and information, please see [www.microchip.com](http://www.microchip.com).

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