



4.9-5.9 GHz High-Linearity Power Amplifier SST11CP15E

Product Brief

SST11CP15E is a versatile power amplifier designed for embedded applications and is based on the highly-reliable InGaP/GaAs HBT technology. It is easily configured for high-linearity, high-efficiency applications over a wide temperature range while operating over the 4.9-5.9 GHz frequency band. The SST11CP15E has excellent linearity while meeting 802.11a spectrum mask at 23 dBm with a 3.3V power supply, and at 24.5 dBm with a 5.0V supply. The power amplifier requires only a 4mA reference current for on/off control. It includes a VSWR/temperature insensitive, linear power detector. The SST11CP15E is offered in a 12-contact UQFN package.

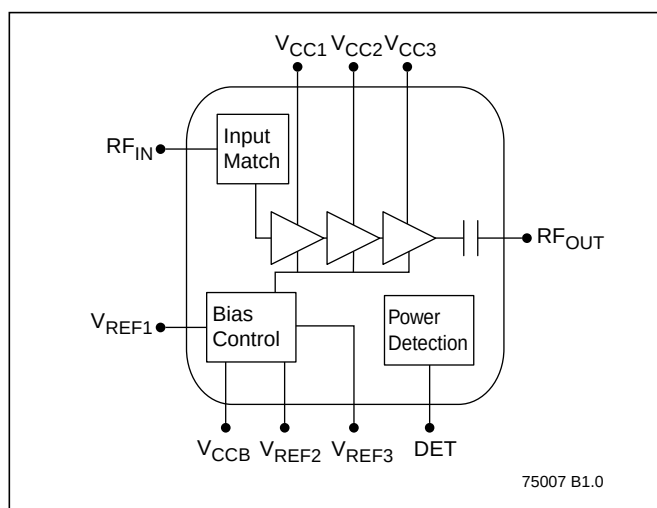
Features

- **Small package size**
 - 12-contact UQFN (2mm x 2mm x 0.6mm max thickness)
- **Wide operating voltage range**
 - $V_{CC} = 3.0\text{--}5.0\text{V}$
- **High linear output power:**
 - Spectrum mask compliant using 802.11a OFDM
 - Up to 24 dBm at 5.0V
 - Up to 22 dBm at 3.3V
 - Spectrum mask compliant using 802.11n MCS7, 40 MHz
 - Up to 22 dBm at 5.0V
 - Up to 19 dBm at 3.3V
 - Added EVM ~3% across 5.1-5.9 GHz for 54 Mbps 802.11a
 - Up to 20 dBm at 5.0V V_{CC}
 - Up to 18 dBm at 3.3V V_{CC}
- **High power-added efficiency/low operating current for 54 Mbps 802.11a applications**
 - ~10% @ $P_{OUT} = 19\text{ dBm}$ for 54 Mbps, 3.3V V_{CC}
- **Gain:**
 - Typically >26 dB gain across broadband 4.9-5.9 GHz, 3.3V V_{CC}
- **Low shut-down current (<1 μA)**
- **On-chip power detection with 20 dB linear dynamic range**
- **50 Ω on-chip input match and simple output match**
- **All lead-free devices are RoHS compliant**

Applications

- WLAN (IEEE 802.11a/n)
- Japan WLAN
- HyperLAN2
- Multimedia

Block Diagram



Product Ordering

Valid combinations for SST11CP15E

SST11CP15E-QUBE

SST11CP15E Evaluation Kits

SST11CP15E-QUBE-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

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	Jan 2012

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Specifications are subject to change without notice. Refer to 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.

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