



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

SST12LP17E

Product Brief

The SST12LP17E is a 2.4 GHz fully-integrated, high-efficiency Power Amplifier module based on the highly-reliable InGaP/GaAs HBT technology and designed in compliance with IEEE 802.11b/g/n applications. It typically provides 29 dB gain with 28% power-added efficiency. The SST12LP17E has excellent linearity while meeting 802.11g spectrum mask at 21.5 dBm. The SST12LP17E 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 8-contact USON and 8-contact X2SON packages.

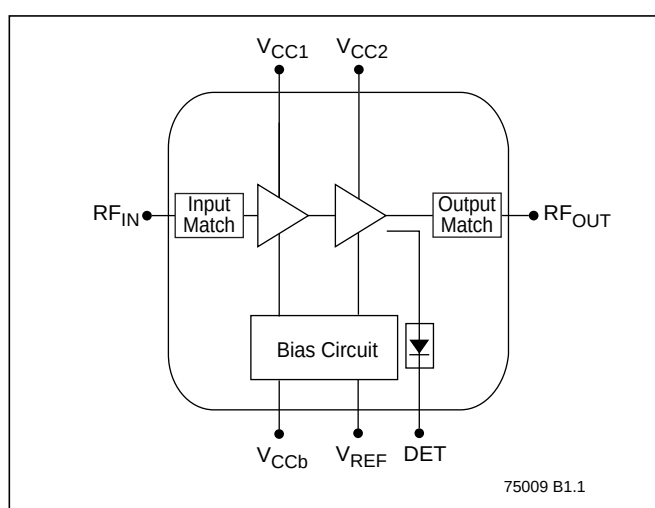
Features

- **Input/Output ports matched to 50Ω internally and DC decoupled**
- **High gain:**
 - Typically 29 dB gain across 2.4–2.5 GHz
- **High linear output power (at 3.3V):**
 - >24 dBm P1dB
 - Meets 802.11g OFDM ACPR requirement up to 21.5 dBm
 - ~3% added EVM up to 18 dBm for 54 Mbps 802.11g signal
 - Meets 802.11b ACPR requirement up to 22.5 dBm
- **High power-added efficiency/Low operating current for both 802.11b/g/n applications**
 - ~28% @ $P_{OUT} = 21.5$ dBm for 802.11g
 - ~33% @ $P_{OUT} = 22.5$ dBm for 802.11b
- **Low shut-down current (~2 μA)**
- **Delivers excellent performance at low temperature down to 2.7 V bias voltage.**
- **Limited variation over temperature**
 - ~2 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**
 - >15 dB dynamic range
- **Packages available**
 - 8-contact USON – 2mm x 2mm x 0.550mm
 - 8-contact X2SON – 2mm x 2mm x 0.375mm
- **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 SST12LP17E

SST12LP17E-QU8E
SST12LP17E-XX8E

SST12LP17E Evaluation Kits

SST12LP17E-QU8E-K
SST12LP17E-XX8E-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	Jun 2011
B	• Added package XX8E	May 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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