

DESCRIPTION

The RTC6671B power amplifier (PA) is designed to operate in 5GHz ISM band, compatible with 802.11a wireless LAN system with high power, high gain. The Amplifier consists of 3 gain stages with inter-stage matching, build-in input matching network, and a power detector for close loop power control operation. In 802.11a mode (OFDM 64QAM, 54Mbps), it provides a low EVM (Error-Vector magnitude) of 3% at +18dBm linear output power. The device is packaged in a tiny industry-standard 16-lead surface mount package QFN 3mmX3mm.

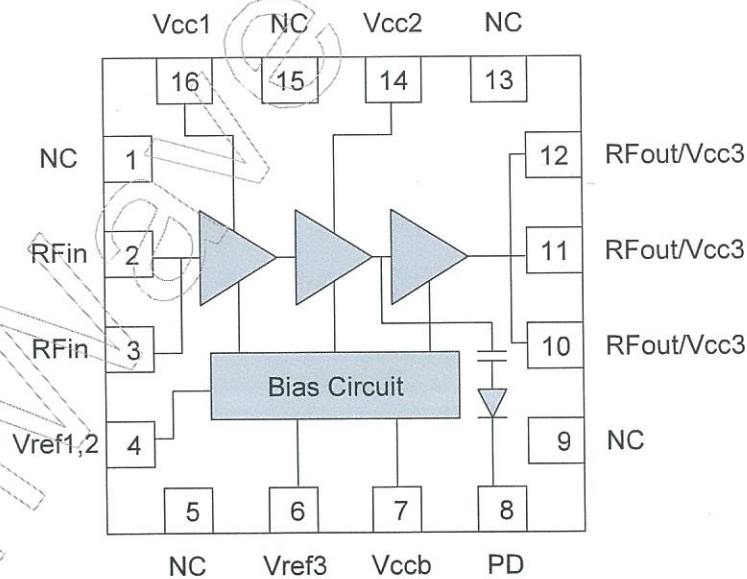
FEATURE

- ◆ 3.3V Power Supply
- ◆ Maximum Linear Output Power for 11a usage : +18 dBm (54Mbps OFDM 64 QAM)
- ◆ Small Signal Gain : 28dB
- ◆ On-chip Input Matching
- ◆ Operation Ambient Temperature: -40 ~ +85 °C
- ◆ RoHS / Halogen Free compliant
- ◆ Moisture Sensitivity Level : MSL-3

APPLICATION

- ◆ IEEE 802.11a Wireless LAN System
- ◆ 5GHz ISM Band Application
- ◆ 5GHz Cordless Phones
- ◆ High Power WLAN applications

FUNCTIONAL BLOCK & PINOUT (top view)



AC ELECTRICAL CHARACTERISTICS

T=25°C, Vcc=3.3V, Freq=5.4GHz

PARAMETER	CONDITION	MIN	TYP	MAX	UNITS
Frequency Range		5.1		5.8	GHz
Small Signal Gain	Pin= -20dBm	27.5	28	28.8	dB
P1dB	1dB Gain compression		24		dBm
Linear Pout for 11a usage	802.11a OFDM 64 QAM EVM = 3%		18		dBm
Pout for 11a Spectral mask	802.11a OFDM 64 QAM		20		dBm
Gain Flatness	within band			2	dB
Input return loss			-10		dB
Output return loss			-10		dB
2f, 3f, 4f harmonics	CW signal, Pout = 18 dBm			-32	dBc
t _{on} (ramp-on time)	Rise time for 10% to 90% Pout		100		ns