

**AMP-5800**  
**SMALL 4.9-5.9 GHz RF LINEAR**  
**AMPLIFIER 500mW**



This is a smallest linear amplifier for 4.9 GHz- 5.9 GHz band. This small amplifier requires 1 mW input RF Power for the maximum output power of 500 mW. It is excellent for security applications or small airplane models. It works at 3 V -5 V with a current consumption of 550 mA. Dimensions: 25 mm X 19 mm

### **Features**

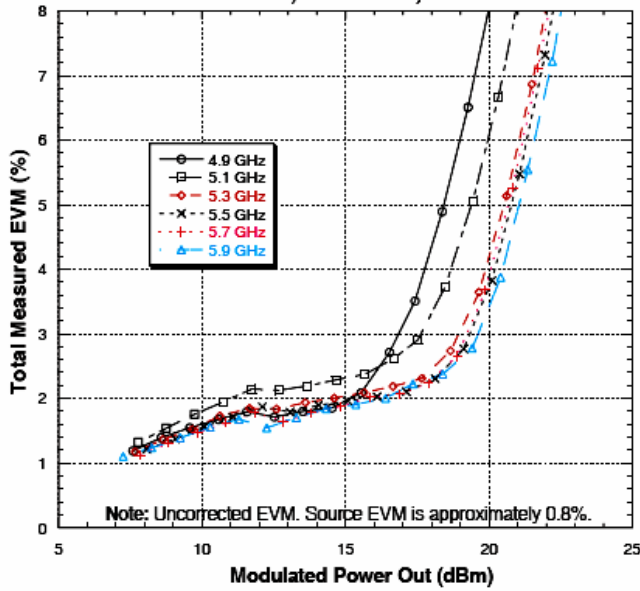
- Full 4.9 to 5.9 GHz operation
- 34 dB small signal gain
- 230 mA total current at 18 dBm modulated power out
- 2.3% EVM at 18 dBm modulated power out
- 3.3 V collector supply voltage
- Integrated power detector with 20 dB dynamic range
- Lead-free 5 x 5 x 1.5 mm leadless package
- Internally matched to 50 and DC blocked RF input/output
- Internal DC bias de-coupling
- Optimized for use in 802.11a applications

## Performance Data

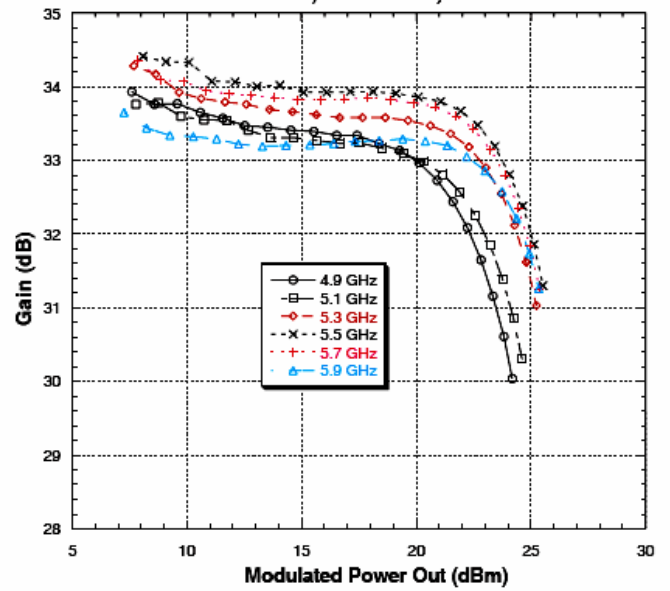
### 802.11a OFDM Modulation

(176 ms burst time, 100 ms idle time) 54 Mbps Data Rate, 16.7 MHz Bandwidth

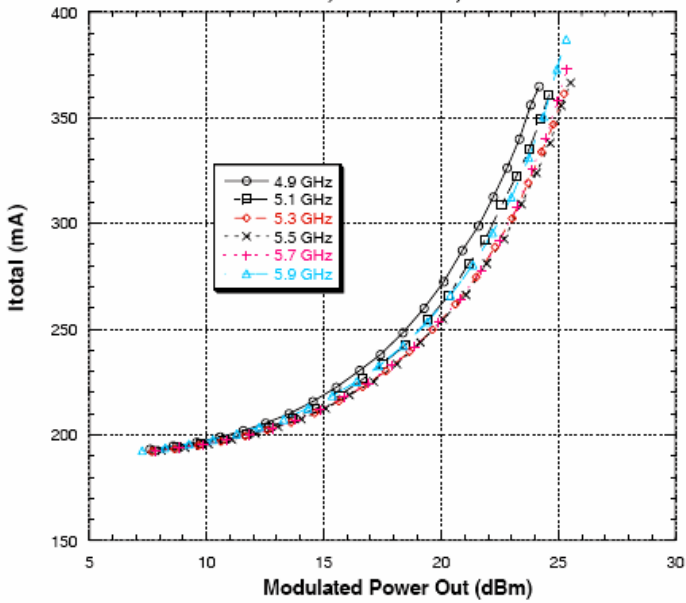
**EVM vs. Modulated Pout**  
VCC=3.3V, VPC=2.9V, T=25°C



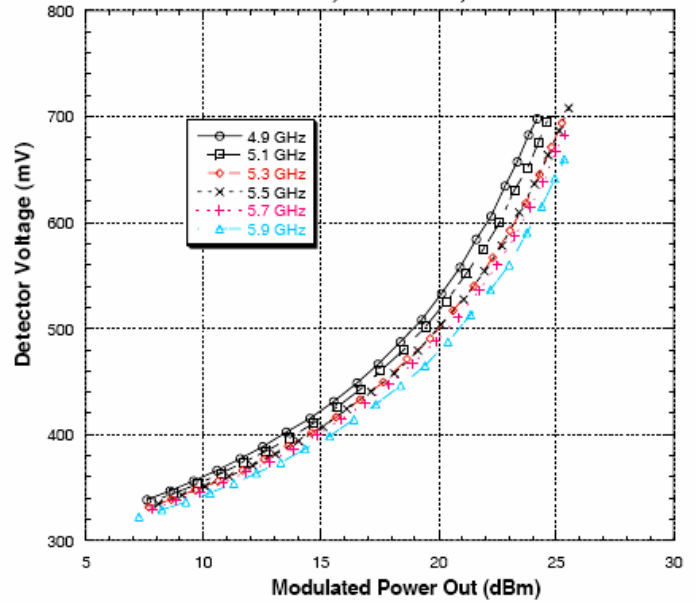
**Gain vs. Modulated Pout**  
VCC=3.3V, VPC=2.9V, T=25°C



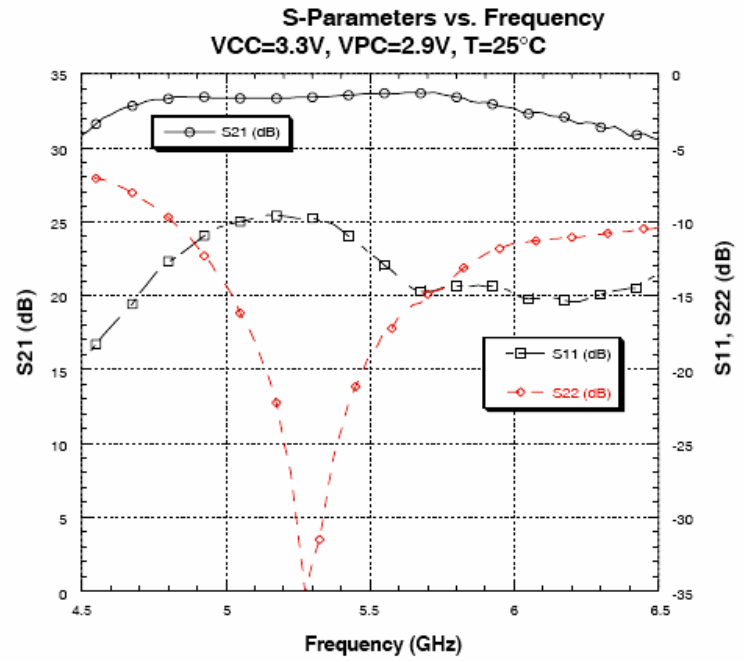
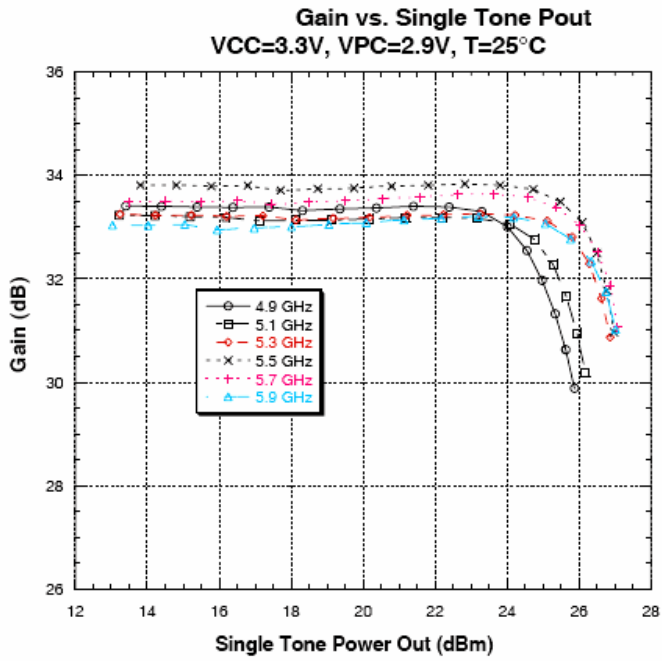
**Total Current vs. Modulated Pout**  
VCC=3.3V, VPC=2.9V, T=25°C

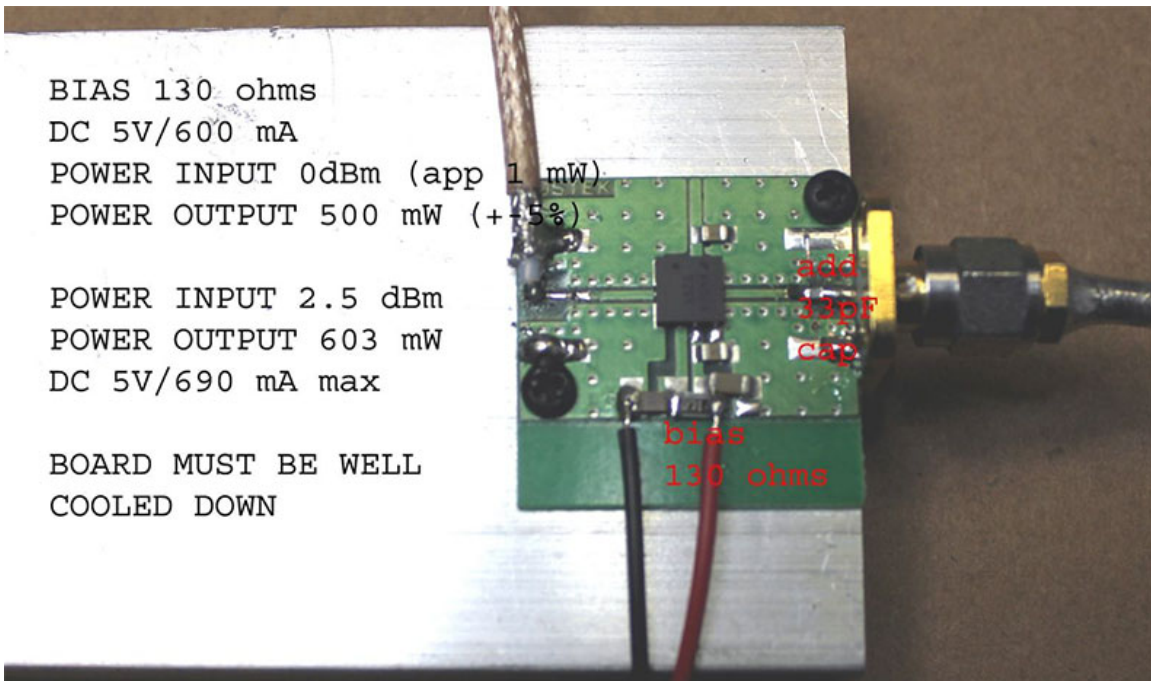


**Detector Voltage vs. Modulated Pout**  
VCC=3.3V, VPC=2.9V, T=25°C



# Performance Data Single Tone

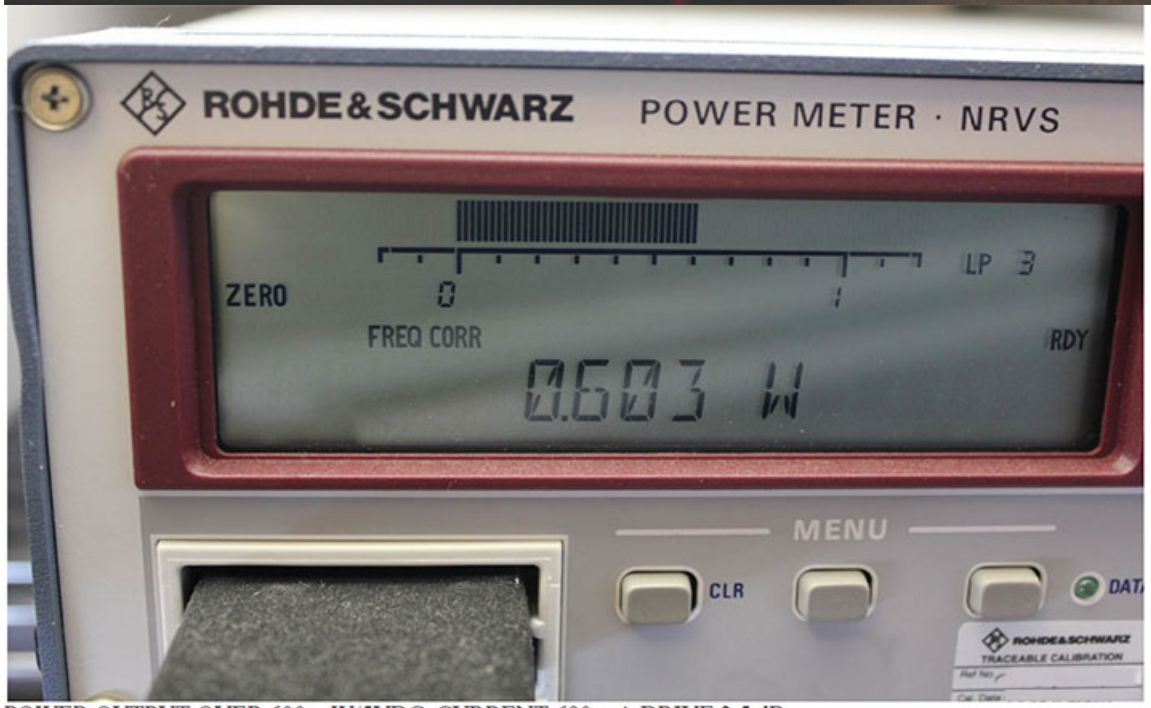




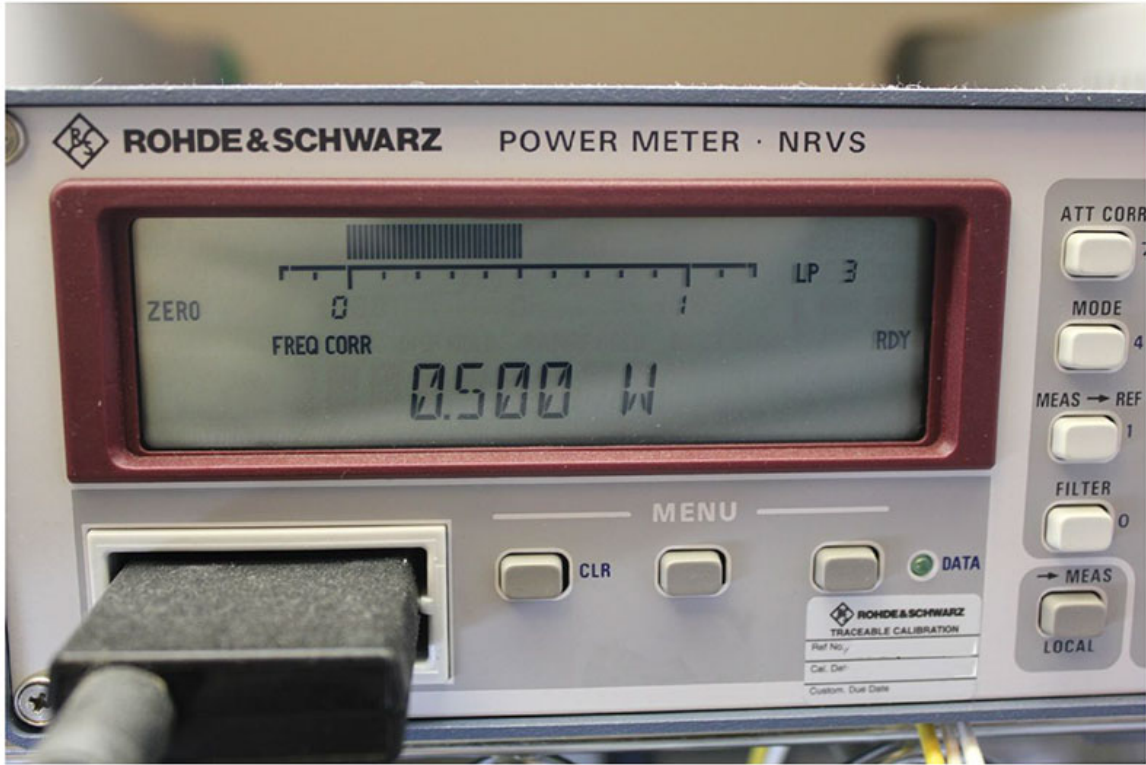
BIAS 130 ohms  
DC 5V/600 mA  
POWER INPUT 0dBm (app 1 mW)  
POWER OUTPUT 500 mW (+5%)

POWER INPUT 2.5 dBm  
POWER OUTPUT 603 mW  
DC 5V/690 mA max

BOARD MUST BE WELL  
COOLED DOWN



POWER OUTPUT OVER 600 mW/5VDC, CURRENT 690 mA DRIVE 2.5 dBm



500 mW POWER OUTPUT 5VDC /1 mW DRIVE