



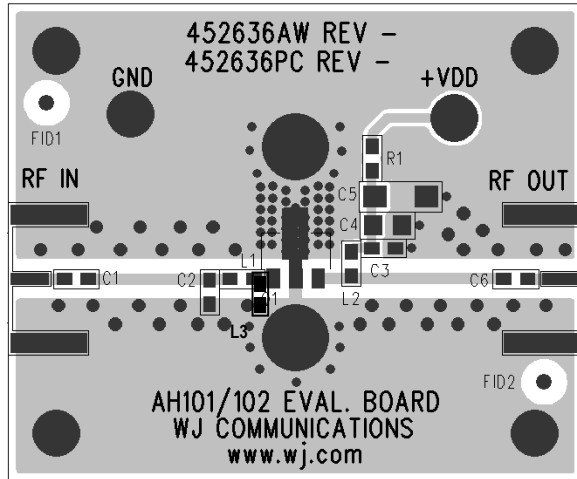
Application Note

AH102 400 - 900 MHz Reference Design

Summary

The AH102 is a high linearity 1/2-Watt MMIC amplifier targeted for 2nd and 3rd generation wireless mobile infrastructure as well as other applications requiring high output power. At 0.8 GHz, the class A amplifier typically has 14 dB gain, +27 dBm P1dB, and +46 dBm OIP3 when biased off its recommended standard +9V supply. While typical applications for most amplifiers are usually fairly narrowband and only consist of 20% or less bandwidth, **this application note examines the performance of the AH102 tuned over a broad 400 – 900 MHz frequency bandwidth.**

Circuit Board Material: .014" Getek ML200DSS ($\epsilon_r = 4.2$), 1 oz copper
The main microstrip line has a line impedance of 50 Ω .



Measured RF Performance

Frequency	MHz	400	650	900
S21 – Gain	dB	15	14.6	14.3
S11 – Input Return Loss	dB	-20	-16	-16
S22 – Output Return Loss	dB	-22	-18	-16
Output P1dB	dBm	+26.6	+27.3	+27
Output IP3 (+12 dBm / tone, 1 MHz spacing)	dBm	+48	+47.5	+47.5
Device / Supply Voltage	V	+9		
Supply Current	mA	200		

