

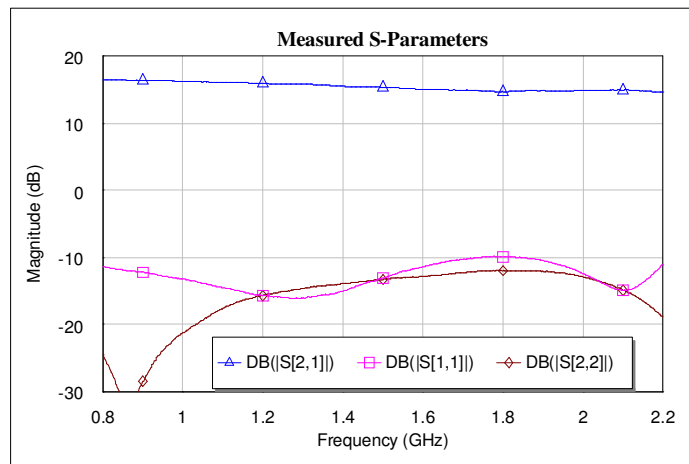
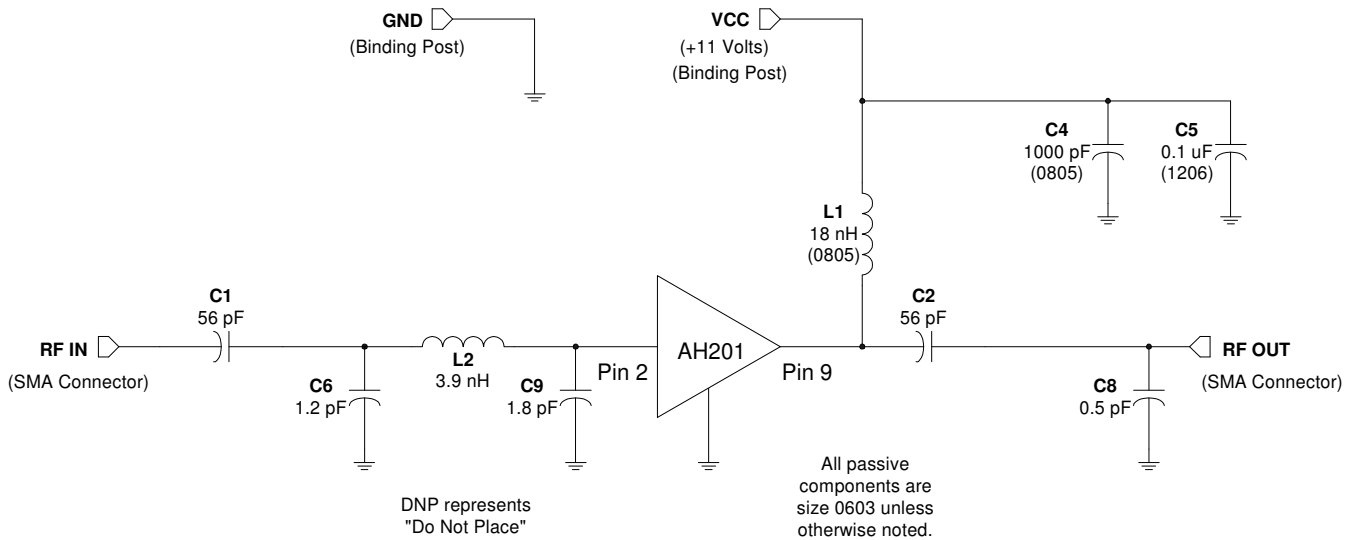


Summary

The AH201 is a high linearity 1-Watt MMIC amplifier targeted for 2nd and 3rd generation wireless mobile infrastructure as well as other applications requiring medium output power and high linearity. **This application note examines the performance of the AH201 tuned for wideband performance from 1100 MHz to 2200 MHz.** More details of the circuit application are shown below.

Measured RF Performance

Frequency	MHz	1100	1400	1750	1900	2140
S21 – Gain	dB	16.1	15.5	14.9	14.9	14.9
S11 – Input Return Loss	dB	-14.5	-15.0	-10.0	-10.4	-14.2
S22 – Output Return Loss	dB	-17.6	-13.9	-12.0	-12.0	-16.1
Output P1dB	dBm	30.5	30.3	29.9	29.7	29.6
Output IP3 (+15 dBm / tone, 10 MHz spacing)	dBm	45.6	45.3	44.0	43.2	42.0
Device / Supply Voltage	V	+11				
Device Current	mA	350				

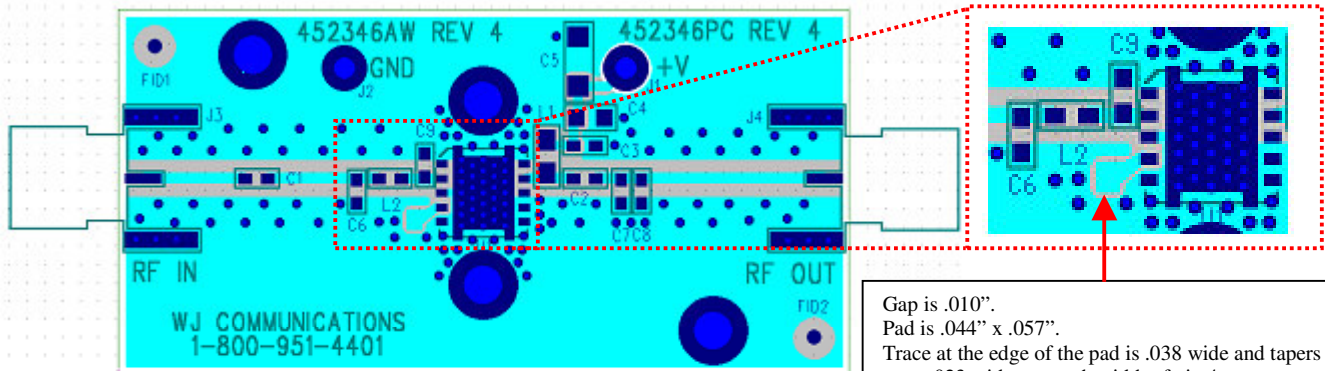


Specifications and information are subject to change without notice.



Application Note

AH201 1100 MHz to 2200 MHz Reference Design



Gap is .010".
 Pad is .044" x .057".
 Trace at the edge of the pad is .038 wide and tapers to .023 wide to match width of pin 4.
 The edge of the pad is .039" to the edge of the pin.

Circuit Board Material: .014" Getek ($\epsilon_r=4.2$), 4 layers (other layers added for rigidity), .062" total thickness, 1 oz copper
 Microstrip line details: width = .028", spacing = .036"
 The stub on pin 4 is added for additional external matching.
 This stub should not be grounded for proper operation.

Notes:

- Via holes are omitted for clarity.
- The microstrip line is weakly co-planar. Ground planes around it are not necessary for operation of the AH201.
- Adequate heat sinking is required for the device. Further mounting instructions are shown in the AH201 datasheet.
- The RF choke should be a wirewound ceramic type to insure sufficient current carrying capacity. Coilcraft's 0805 CS series is recommended.
- Pin 4 should contain a stub as shown above.

