

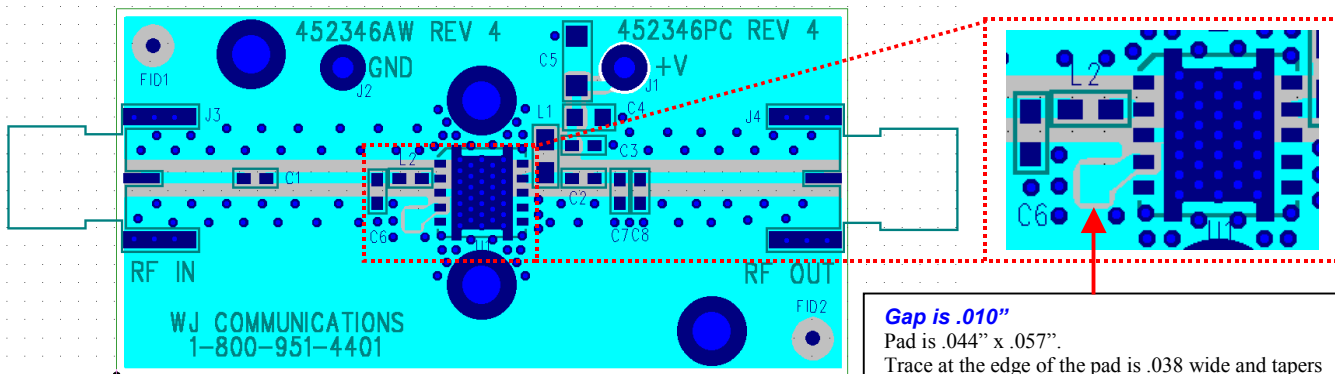
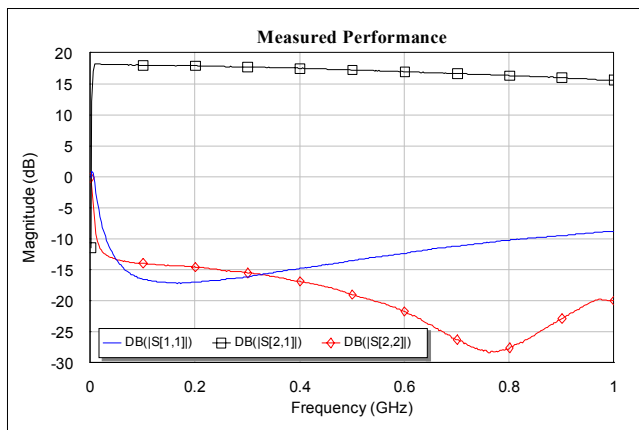


### Summary

The AH201 is suitable for applications between 50 – 800 MHz without any requirements for input or output matching. Only bypass and blocking capacitors and an RF bias choke are needed for operation. A user can simply request an AH201-PCB900 Evaluation Board and replace components: C1, C2, C3, C6, L1, and L2 to the values shown below to evaluate the device.

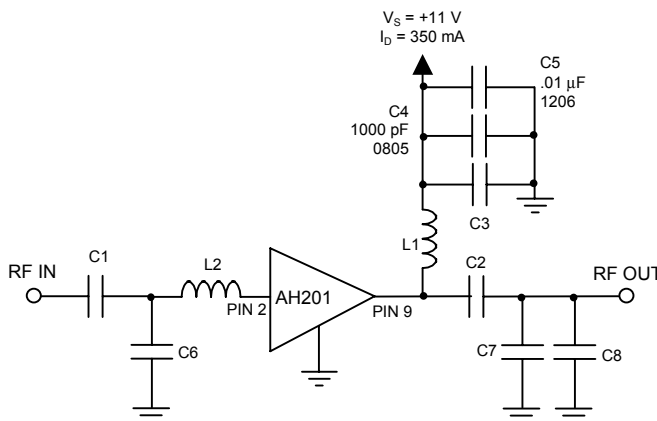
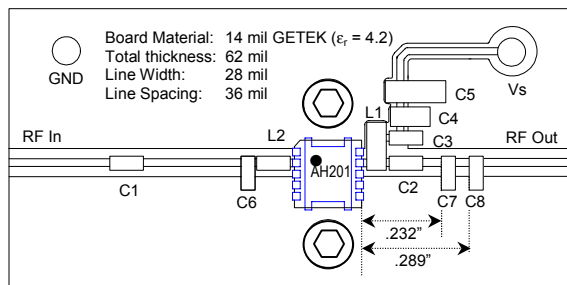
### Typical RF Performance

Frequency	MHz	50	200	400	600	800
S21 – Gain	dB	18	17.9	17.5	17.0	16.3
S11 – Input Return Loss	dB	-13	-17	-15	-12.4	-10.3
S22 – Output Return Loss	dB	-13	-15	-17	-22	-28
Output P1dB	dBm	+30				
Output IP3 (+15 dBm / tone, 1 MHz spacing)	dBm	+47				
Supply Bias	dB	+11 V @ 350 mA				



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.

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.



### Component values

Frequency	50 – 600 MHz	Size
C1, C2	1000 pF	0603
C4	1000 pF	0805
C5	.01 $\mu$ F	1206
C3, C6, C7, C8	no load	
L1	470 nH	1008
L2	0 $\Omega$	

### 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 1008 CS series is recommended (part #1008CS-471X\_B\_).
- Pin 4 should contain a stub as shown above.

Specifications and information are subject to change without notice.