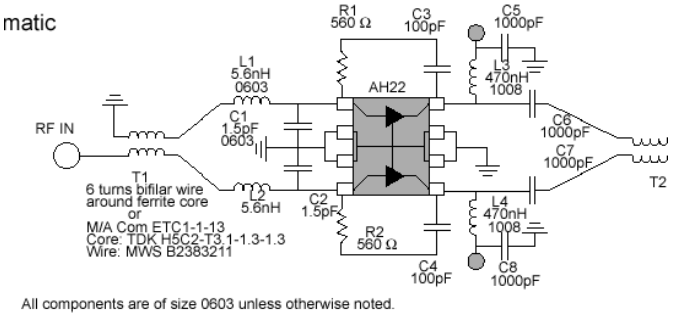
AH22 Improved Return Loss Push-Pull Reference Design

Product Information

The AH22 evaluation board can have improved Input and Output Return Loss (better than 16 dB across the 50 – 870 MHz band) by replacing the following eight components. The reference designators are shown in the AH22 datasheet. The simulation did not take into account of losses through the baluns. This circuit offers excellent Return Loss (greater than 17 dB across band) and Gain Flatness in a push-pull design optimal for CATV applications.

Reference Designator	Value in Datasheet	New value
C1, C2	1.5 pF	1 pF
L1, L2	5.6 nH	3.3 nH
R1, R2	560 Ohms	295 Ohms
C3, C4	100 pF	1000 pF



FR4 Board Layout (T = 28 Mils to ground plane)

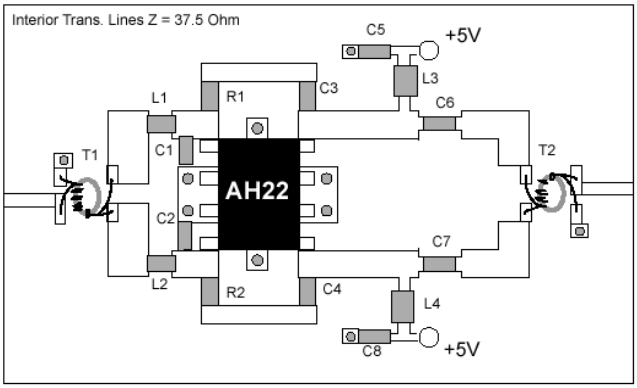


Figure 1. Circuit layout shown in AH22 datasheet for 75 Ω Push-Pull Application Circuit

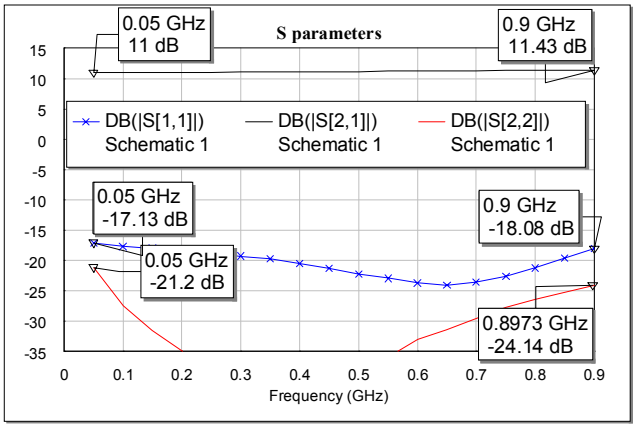


Figure 2. Simulation results for one of the branches of the AH22 used in a Push-Pull Configuration

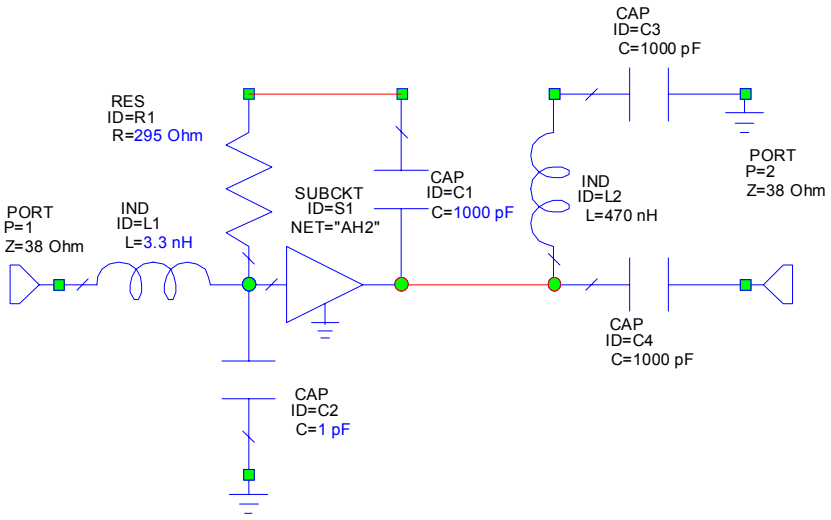


Figure 3. Circuit schematic simulation