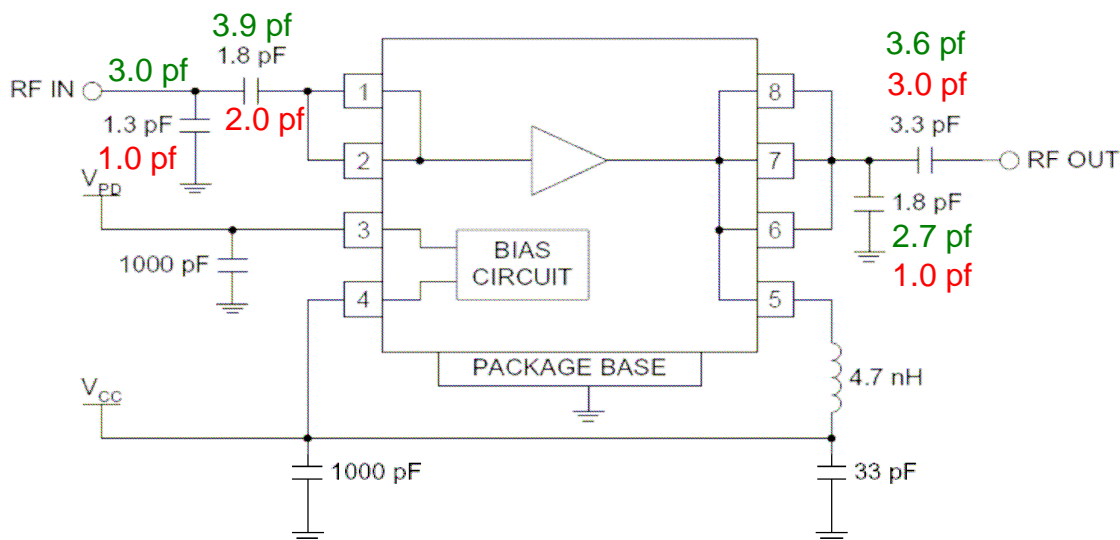


Matching The RF2125P At 2.3 GHz

R. L. Frey 17 March 2006

The purpose of this note is to provide a guess at the parts values that should be used to match the RF2125P on a frequency of 2304 MHz. Perhaps we can use two other parts that RFMD makes as guides for what to use for matching. It is likely the RF die have very similar designs and characteristics, because all these parts operate at about the same power level in about the same frequency range. The packages are also the same.

In the schematic below, the original black values are for the RF2126 at 2450 M. **The Values in GREEN are for the RF2125P operating at 1880-1990 MHz and The Values in Red are for the RF5187 operating at 2400-2700 MHz.** Note the RF5187 had different design goals than the 2125 and 2126. It is intended to be used as a high dynamic range, medium power linear amplifier, not a power amp.

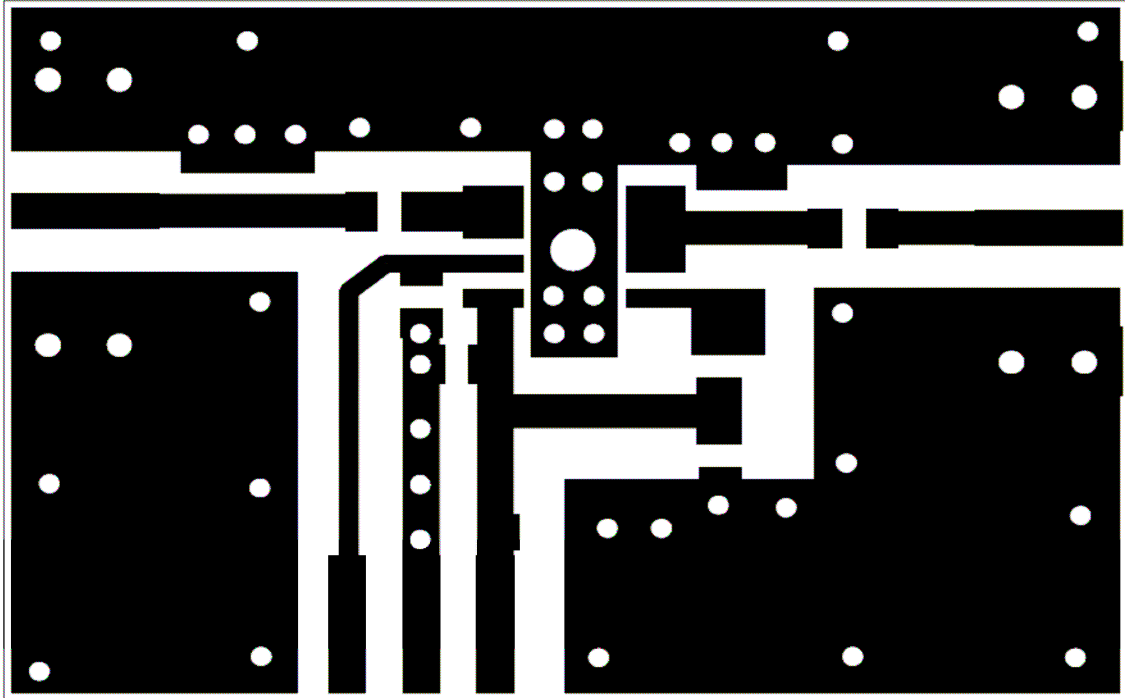


My best guess for what we should use as parts values for the RF2125P at 2300 MHz would be just a little larger than the original black values above for the RF2126 at 2450 MHz. The general trend seems to be pretty consistent for all these parts that all deliver similar power levels. Perhaps we could try values like these:

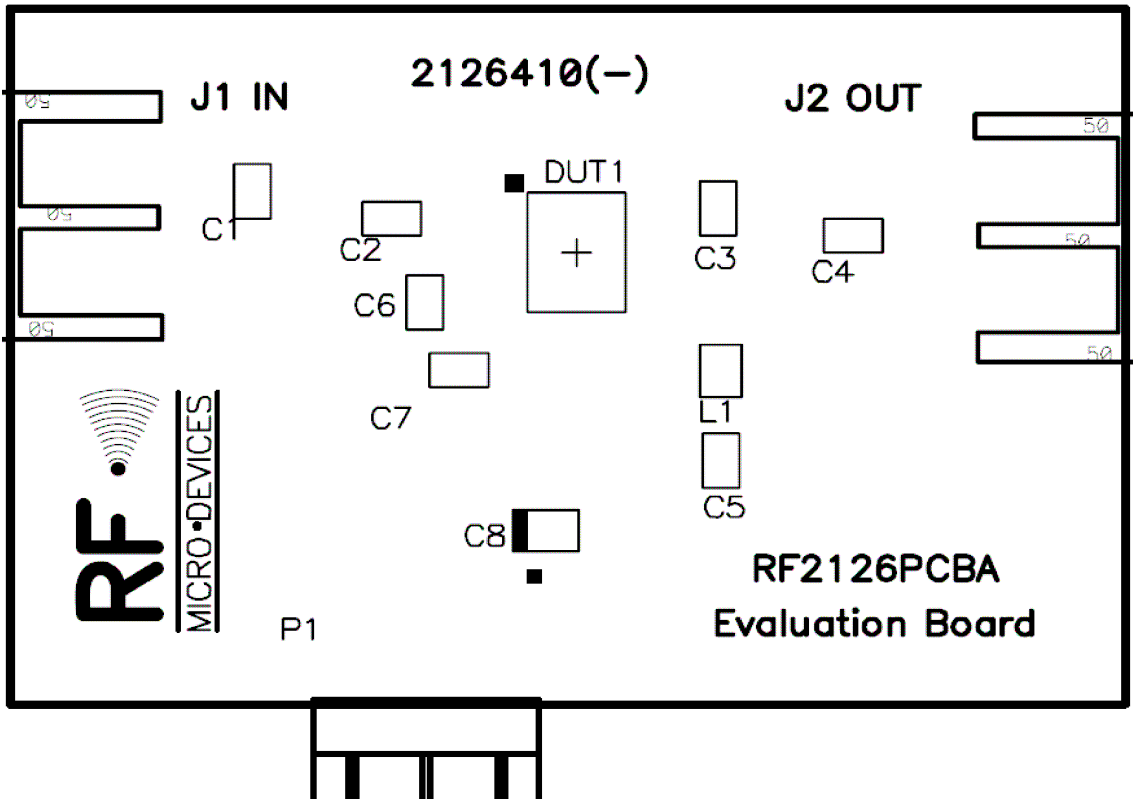
Input shunt = 1.5 pf, Input series = 2.0, Output shunt = 2.0, Output series = 3.6pf

and position these capacitors approximately as shown on the evaluation board layout in the RF2126 data sheet.

The Evaluation Board layout for the RF2126 is shown in the figures below.



Foil Pattern of RF2126 Evaluation Board (From RFMD Data Sheet)



Part Layout for RF2126 Evaluation Board (From RFMD Data Sheet)