

ABSTRACT

In general, feeding's method for microstrip antenna could be classified into microstrip feeding, probe feeding, and electromagnetically coupled (EMC) feeding. Feeding microstrip could be made easily by simply connecting the microstrip to the edge of the patch directly, but the matching impedance resulted is improper and appear the undesire radiation from the feed line. Feeding with the coaxial probe could create the proper matching impedance and the low undesire radiation, but a narrow bandwidth resulted in using this way.

Electromagnetically coupled (EMC) feeding is absolutely different with the both methods above mentioned. By using Electromagnetically coupled (EMC) feeding the undesire radiaton will not appear and has a benefit which offers the wideband characteristic without any matcing circuit. This microstrip antenna used the Electromagnetically coupled (EMC) feeding method with the L-strip feeder structure, which resulting the frecueny of (2.3 – 2.4) GHz.

This final project is going to describe the planning of microstrip antenna with triangle patch and EMC feeder (L-strip feeder) and works at the frecueny of (2.3-2.4) GHz used to bolster the WiMax technology by simulating through Ansoft HFSS 9.2 program. The parameter that analized are gained, radiation pattern, input impedance, and VSWR. From the simulation we could analized that to gain the proper main characteristic of antenna that matched with the desired specification that is the VSWR < 2 is influenced by triangle patch dimension, the supporting triangle patch and feeder length.

Keyword : electromagnetically coupled (emc), microstrip antenna