ABSTRACT

Annular-ring microstrip antenna (ARSA) is one form of hollow microstrip antenna (slotted). ARSA has a level of difficulty in design more than other forms of microstrip and antenna efficiency is less good. Usually the form of ARSA used at high frequencies, at high frequencies usually get a relatively high gain. But in the low frequency gain obtained by the antenna is relatively small.

In this final project designed and realized the microstrip antenna in the form of annular-ring slotted antenna where this antenna will be allocated for frequency 2100 MHz and 1900 MHz. For simulation of antenna which is designed using Ansoft HFSS 15 software and the feeding for antenna which is designed is technique of quarter wave transformer. From impedance matching technique using quarter wave transformer is expected to get antenna characteristic which is designed and realized.

From antenna simulation result using Ansoft HFSS 15 software got antenna characteristic with impedance for frequency 2100 MHz is 53.81 Ω and for frequency 1900 MHz is 61.62 Ω, gain at frequency 1900 MHz is -5.7 dBi and for 2100 MHz is -1.9 dBi, VSWR for frequency 2100 MHz is 1.7 and for frequency 1900 MHz is 1,174, return loss at frequency 2100 MHz is -11.47 dB and at frequency 1900 MHz is -22.92 dB.

Keyword: microstrip antena, frequency, annular-ring microstrip antenna (ARSA), FR 4, quarter wave transformer