

ABSTRACT

The cellular technology with a better performance than the previous generation is developing rapidly nowadays especially in the technology of UMTS (Universal Mobile Telecommunication System), so that as the supported thing an antenna which can receive and transmit the optimal radio wave is needed.

This last project was designed and realized an unidirectional microstrip antenna which operate in the frequency 1920 MHz -2170 MHz with VSWR $\leq 1,5$ 50 Ω unbalance Gain ≥ 10 dBi. For knowing the performance of this antenna, the measuring the input impedance, ratio of the voltage of the standing wave (VSWR), bandwidth antenna, radiation pattern, antenna gain, beamwidth, and the polarization.

After doing a design, simulation and measuring to the antenna, the result are :

Operation Frequency	: 1920 MHz - 2170 MHz
Middle Frequency	: 2045 MHz
Radiation Pattern	: Unidirectional
Impedance	: 64,88-j3,67 Ω
VSWR	: $\leq 1,5$
Gain	: ≥ 10 dBi
Polarization	: Linier

The final results has been fulfilled the purpose in making the UNIDIRECTIONAL MICROSTRIP ANTENNA 1920 MHz-2170 MHz VSWR $\leq 1,5$ 50 Ω GAIN ≥ 10 dBi.