

ABSTRACT

Modern transformation of society lifestyle, requires of quick and mobile information technology. To support the evolution, it needs the smaller dimensional device and faster transfer rate. LTE which is MIMO system is the information technology which can transmit data faster and can be implemented on LTE signal transmitter. To get smaller dimensional mobile device it has to be supported by smaller dimensional components as well. One of components which can be minimized by its dimension is antenna.

This final project is the design and realization of rectangle 3x3 MIMO microstrip antenna and it has three patches which can work at 2,6-2,7 of frequency range. Antenna design is simulated and optimized by using CST 2010. After getting the optimal parameters, antenna is printed and antenna parameters are measured.

The final result of this final project is antenna which has vswr on three patches such as 1,098 , 1,033 and 1,067 and it also has values of bandwidth such as 91.5 MHz, 93 MHz and 84 MHz . The antenna also has gain which is higher than the result simulation at 9,723dBi. The radiation pattern of this antenna is unidirectional and the polarization is elliptical. The patches work independently with a correlation coefficient nears zero. This antenna has been qualified to be used on MIMO system for LTE technology systems.

Keywords : LTE , MIMO , antenna , microstrip .