

*In this paper a rectangular microstrip patch antenna (RMPA) has been designed with coaxial feeding for 5.9GHz resonant frequency. This frequency spectrum is known as Wave Access in Vehicular Environment (WAVE) or IEEE 802.11p. Performance of the RMPA has been analysed by the simulation tool CST Microwave Studio v.2012. Several performance parameters such as return loss, bandwidth, Voltage Standing Wave Ratio (VSWR), directivity, gain and radiation efficiency have been obtained by simulation. This antenna has shown desirable results after a few optimization of design specifications. Designed RMPA resonates at 5.93 GHz and bandwidth has been found as 0.1417 GHz which has fractional bandwidth of 2.39% and that covers IEEE 802.11p band. Directivity and gain obtained at resonant frequency are 5.52 dBi and -0.174 dB respectively. The proposed RMPA radiation efficiency was found as 26.93% and VSWR as 1.05. As an overall evaluation, this antenna's performance was found to beat a satisfactory level.*