

Frequency Reconfigurable Multiband Patch Antenna Using PIN-Diode for ITS Applications

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Abstract : A frequency reconfigurable multiband antenna for intelligent transportation system (ITS) applications is proposed in this paper. A PIN-diode is used for reconfigurability. Centre frequencies are 1.38, 1.98, 2.89, 3.86, and 4.34 GHz in “ON” state of Diode and 1.56, 2.16, 2.88, 3.91 and 4.45 GHz in “OFF” state. Achieved maximum bandwidth is 18%. The maximum gain of the proposed antenna is 2.7 dBi in “ON” state and 3.95 dBi in “OFF” state of the diode. The antenna is simulated, fabricated, and tested in the lab. Measured and simulated results are in good confirmation.

Keywords : ITS, multiband antenna, PIN-diode, reconfigurable

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