

FREQUENCY RECONFIGURABLE ANTENNA FOR WI-FI/WI-MAX APPLICATIONS

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A novel, compact coplanar waveguide-fed flexible antenna is presented. The proposed design uses flexible FR-4(lossy) as a substrate with small size of 28×26.4 mm². Two switches are integrated on the antenna surface to change the current distribution which consequently changes the resonance frequency under different conditions of switches, thereby making it a frequency reconfigurable antenna. The antenna design is simulated on CST Studio 2016.

The proposed antenna exhibits $VSWR < 2$ and appreciable radiation patterns with positive gain over desired frequency bands. Good agreement exists between simulated and measured results. On the basis of results, the proposed antenna is envisioned to be deployed for the following applications 4.3GHz, 5.4GHz, 13.4GHz, 5.6GHz.

Index Terms: Multiband antenna; Reconfigurable antenna; Wi-Fi and WiMax application; Patch antenna, cst studio suite.