Abstract

The radiation pattern of a Coplanar Wave guide (CPW) fed printed monopole antenna is modified to that suitable for a mobile handset is presented and discussed. The printed metal wiremesh structure in the back side of the monopole modify the far field pattern, ideal for mobile handset. The antenna offers a bandwidth of 125MHz(measured) when printed on a substrate of dielectric constant (er) 4.4 and thickness 1.6mm with an overall dimension of 42X31.7X1.6mm3.
Experimental and simulation studies of the antenna radiation characteristics are presented and discussed. A 21 dB reduction of radiated power in one quadrant of the radiation pattern offers a reduction of radiation towards the users head.

**Reference**

- Chaoqun Jiao, Xiang Cui, Lin Li, Xuelian gao, 2008 The Analysis of the Effects to Affect Shielding Effectiveness of the Cage Built with the Wire-Mesh Reinforcement Based on FDTD Method Asia-Pacific Symposium on Electromagnetic Compatibility & 19th International Zurich Symposium on Electromagnetic Compatibility, Singapore
- David A. Hill and James R. Wait, "Electromagnetic Surface-Wave Propagation Over a Rectangular-Bonded Wire Mesh"
- S Sang il Kwak, Dong-UK Sim and Jong Hwa Kwon, "SAR reduction on mobile phone antenna using the EBG structures" Proceeding. 38th European Microwave Conference, The Netherlands, pp. 1308-1311, 2008

**Index Terms**

Computer Science

Wireless
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