



Analysis of Patch Antenna Having EBG Substrate

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LAP Lambert Academic Publishing Feb 2013, 2013. Taschenbuch. Book Condition: Neu. 220x150x6 mm. This item is printed on demand - Print on Demand Neuware - Microstrip patch antennas became very popular in mobile and radio wireless communication. This is because of ease of analysis and fabrication, and their attractive radiation characteristics. However, they have some drawbacks of low efficiency, narrow bandwidth and surface wave losses. In order to overcome the limitations of microstrip antennas such as narrow bandwidth (< 5%), lower gain (-6 dB), excitation of surface waves etc, a new solution method, using electromagnetic bandgap (EBG) materials, as substrates has attracted increasing attention. Unlike other methods, this new method utilizes the inherent properties of dielectric materials to enhance microstrip antenna performance. The aim of this book is to design and simulate the new EBG structure operating at 2.96GHz frequency and study the performance of the rectangular microstrip antenna with 2-D planar EBG structure and 2-D planar EBG structure where the substrate is made of by joining two different dielectric materials and effect of gap width of 2-D EBG structure. Those designs were simulated with Ansoft HFSS software. 96 pp. English.



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