Abstracts

Analysis of a Hemispherical Dielectric Resonator Antenna with an Airgap

K.-L. Wong, N.-C. Chen and H.-T. Chen. "Analysis of a Hemispherical Dielectric Resonator Antenna with an Airgap." 1993 Microwave and Guided Wave Letters 3.10 (Oct. 1993 [MGWL]): 355-357.

A probe-fed hemispherical dielectric resonator antenna with an airgap of hemispherical shape between the dielectric and the ground plane is investigated theoretically by using a Green's function formulation. Input impedance of the efficiently radiating mode of TE/sub 111/ is calculated and analyzed. It is found that, with the presence of the airgap, the antenna bandwidth, obtained from the 3-dB impedance bandwidth, can be considerably enhanced. This study provides a new design for bandwidth enhancement of the dielectric resonator antenna.

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