Abstracts

Harmonic control by photonic bandgap on microstrip patch antenna

Y. Horii and M. Tsutsumi. "Harmonic control by photonic bandgap on microstrip patch antenna." 1999 Microwave and Guided Wave Letters 9.1 (Jan. 1999 [MGWL]): 13-15.

In this work, the single microstrip patch antenna having two-dimensional photonic bandgap (PBG) in the ground has been demonstrated experimentally, and the effectiveness of the PBG structure is discussed for the suppression of the resonance at the harmonic frequencies of the antenna. Experimental results indicate that the radiation patterns at the harmonic frequencies can be drastically diminished comparing with the normal microstrip patch antenna without the PBG structure. For instance, the radiation to the forward of the PBG antenna is suppressed at more than 15 dB at the third harmonic frequency.

❑ Return to main document.