Abstracts

A 4-port resonant switch patterned in a photonic crystal

J. Danglot, O. Vanbcsien and D. Lippens. "A 4-port resonant switch patterned in a photonic crystal." 1999 Microwave and Guided Wave Letters 9.7 (Jul. 1999 [MGWL]): 274-276.

We report an experimental and theoretical investigation of a 4-port resonant switch patterned in a two-dimensional (2-D) metallic photonic lattice. Four-port measurements of scattering parameters are carried on in the 22-40-GHz frequency band. They show quasi-full lateral transfers, with or without reversal of propagation direction of electromagnetic wave, which are interpreted in terms of multimode propagation phenomena within the coupling region. Experimental data are explained by the solution of a suitable form of the 2-D Helmholtz equation for metallic propagation media.

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