Abstracts

A beam-steerer using reconfigurable PBG ground plane

B. Elamaran, Iao-Mak Chio, Liang-Yu Chen and Jung-Chih Chiao. "A beam-steerer using reconfigurable PBG ground plane." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 835-838.

Phased arrays with reduced cost and increased power handling capability are important for commercial applications. In this paper, we demonstrate beam-steering arrays using reconfigurable periodic structures in the ground plane without solid-state phase shifters. A linearly discrete beam-steering of 35/spl deg/ in steps of approximately 6/spl deg/ has been achieved at a fixed frequency of 5.6 GHz. The main beam power varied less than 2 dB over the whole range of beam-steering. A frequency-dependent beam-steering of 15/spl deg/ is also achieved from 5 GHz to 6 GHz.

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