Abstracts

Enhanced forward coupling phenomena between microstrip lines on periodically patterned ground plane

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Strong forward coupling and slow-wave effects have been observed between two parallel microstrip lines on a periodically patterned ground plane, even though the two lines are separated with very large gap spacing. The even- and odd-mode effective dielectric constants have been calculated using the FDTD method to investigate this phenomenon. The slow-wave effects and enhanced coupling will help in the design of forward-wave directional couplers with reduced line lengths and relaxed gap spacing requirements.

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