Abstracts

A spiral-shaped defected ground structure for coplanar waveguide

Jong-Sik Lim, Chul-Soo Kim, Young-Taek Lee, Dal Ahn and Sangwook Nam. "A spiral-shaped defected ground structure for coplanar waveguide." 2002 Microwave and Wireless Components Letters 12.9 (Sep. 2002 [MWCL]): 330-332.

The authors present a spiral-shaped defected ground structure for coplanar waveguides (DGSCPW), which can be used as a kind of periodic structure for a planar transmission line. The proposed spiral-DGSCPW adopts spiral-shaped defects on both ground planes of CPW. Due to the spiral-shaped defects, the equivalent shunt inductance and slow-wave effects increase more rapidly than the standard CPW or CPW lines combined with the conventional PBG. The modeling and analysis to extract the equivalent circuit, increased slow-wave factor, and simulated and measured performances are presented.

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