Abstracts

Experimental Results on Buried Microstrip Lines for Constructing High-Density Microwave Integrated Circuits

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This letter describes the characterization and some experimental results of a buried microstrip line (BMSL), a guided-wave structure considered to be promising for constructing high-density microwave and millimeter-wave integrated circuits because of its high isolation characteristics. The BMSL structure is characterized practically by the rectangular boundary division (RBD) method and rigorously by the finite difference time domain (FDTD) method. The analyzed results reveal that the BMSL structure possesses much lower coupling level than the conventional microstrip line does, from -15 to -100 dB depending on their burial depth. Experimental data show good agreement with numerical results.

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