Abstracts

FDTD study of surface waves in microstrip and patch structures

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The Finite Difference Time Domain (FDTD) method is employed to visualize surface wave propagation in microstrip line and patch structures. Signal distortion in microstrip lines caused by surface waves is studied in substrates with different permittivities. Electric and magnetic field components of surface waves, excited by different sources, are analyzed and different types of surface waves are identified. An efficient method to suppress surface wave propagation using low-K plugs inserted in higher-K substrates is demonstrated.

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