Abstracts

Transitions and Interconnects Using Coplanar Waveguide and Other Three Conductor Transmission Lines

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Multilayer substrates allow high density packaging of microwave components. Because of this, microwave products are being developed using technologies such as cofired AIN, LTCC, polyimide, soft substrates and various multilayer thin film methods. These multilayer boards often require the use of vertical interconnects and transitions to and from various transmission line types. By using three conductor lines such as CPW, it is possible to develop a packaging technique which permits operation up to 20 GHz. A packaging approach tailored for airborne radar is described along with the interconnects and transitions used in the module. This includes the use of 3-wire line. Transitions to/from CBCPW, stripline, 3-wire line, and microstrip are described along with modeling and test data. In addition, test data is presented on solderless interconnects using button connectors.

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