Abstracts

A Theoretical Three-Port Coaxial-Line Rectangular-Waveguide Model and its Application to Millimeter-Wave Structures

A. Rydberg and B.N. Lyons. "A Theoretical Three-Port Coaxial-Line Rectangular-Waveguide Model and its Application to Millimeter-Wave Structures." 1991 Microwave and Guided Wave Letters 1.12 (Dec. 1991 [MGWL]): 393-395.

A theoretical three-port model for coaxial-line rectangular-waveguide junction is described and evaluated using several different realistic millimeter-wave mount structures, The model is found to be usable with good accuracy over a large variation in mount dimensions. The model is specifically applied in calculations of the embedding impedance seen by the diode in a millimeter-wave frequency multiplier. The three-port model is an improvement over simpler models hitherto used for devices such as millimeter-wave frequency multipliers, in taking into account all parameters in the mount.

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