Abstracts

Full-Wave Analysis of a Lossy Rectangular Waveguide Containing Rough Inner Surfaces

C.-D. Chen, C.-K.C. Tzuang and S.T. Peng. "Full-Wave Analysis of a Lossy Rectangular Waveguide Containing Rough Inner Surfaces." 1992 Microwave and Guided Wave Letters 2.5 (May 1992 [MGWL]): 180-181.

The full-wave mode-matching method employing the similarity transformation to derive the eigenvalue equation for the periodic bumpy regions that model the surface roughness of a WR-10 (75-110 GHz) waveguide is presented. For the particular case study under the particular conditions applied, attenuation losses increase by approximately 60% (36%) at 75 GHz (110 GHz).

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