Abstracts

Characteristic Impedance of a Wide Slotline on Low-Permittivity Substrates (Short Papers)

R. Janaswamy and D.H. Schaubert. "Characteristic Impedance of a Wide Slotline on Low-Permittivity Substrates (Short Papers)." 1986 Transactions on Microwave Theory and Techniques 34.8 (Aug. 1986 [T-MTT]): 900-902.

Computed results on the characteristic impedance of wide slots etched on an electrically thin substrate of low dielectric constant epsilon/sub r/ are presented. These results combined with those in [1] provide design data for these slotlines. Curves are presented for epsilon/sub r/= 2.22, 3.0, 3.8, and 9.8. Comparison is shown for the characteristic impedance between the present calculations and those available in the literature for high-epsilon/sub r/ substrates. Empirical formulas, based on least-square curve fitting, are presented for the normalized slot wavelength lambda'/lambda/sub 0/ and the characteristic impedance Z/sub 0/ over the range 0.0015<=W/lambda/sub 0/<=1.0, 0.006<=d/lambda/sub 0/<=0.06, 2.22<=epsilon/sub r/<=9.8.

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