Abstracts

Properties of a TEM Transmission Line Used in Microwave Integrated Circuit Applications (Correspondence)

H.C. Okean. "Properties of a TEM Transmission Line Used in Microwave Integrated Circuit Applications (Correspondence)." 1967 Transactions on Microwave Theory and Techniques 15.5 (May 1967 [T-MTT]): 327-328.

A somewhat unusual TEM transmission line configuration that is useful in certain microwave integrated circuit realizations, consists of a strip-line center conductor on a dielectric substrate coaxial with a cylindrical outer conductor, as shown in Fig. 1(a). The cylindrical outer conductor is perturbed slightly by slots that support the dielectric substrate. Due to the irregular conductor geometry and the presence of the dielectric substrate, exact closed-form theoretical solutions for the characteristic impedance Z/sub 0/ and the effective dielectric constant epsilon of this transmission line have heretofore not been obtained.

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