Abstracts

TM Modes in Oversized Planar Metallic Waveguides (Short Papers)

D. Pasquet, J.-L. Gautier and P. Pouvil. "TM Modes in Oversized Planar Metallic Waveguides (Short Papers)." 1986 Transactions on Microwave Theory and Techniques 34.1 (Jan. 1986 [T-MTT]): 172-175.

The propagation properties of transverse magnetic (TM) and hybrid modes in plane and circular metallic waveguides are considered when their dimensions are great with regard to the wavelength. When the oversizing is not too great, the behavior is the same as those of conventional metallic waveguides. For high frequencies (greater oversizing), we describe an unexpected bebavior for these modes. The aim of this work is mainly to derive asymptotic expressions useful for the design of for infrared (FIR) waveguide lasers.

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