Abstracts

Revisiting guided-wave and leakage-wave modal properties in near cutoff region with the concept of complex effective dielectric constant

Xiang-yin Zeng, Shan-jia Xu, Ke Wu and Kwai-man Luk. "Revisiting guided-wave and leakage-wave modal properties in near cutoff region with the concept of complex effective dielectric constant." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1541-1544.

A simple but good alternative way is given to define the antenna-mode and reactive-mode regions for open dielectric guiding structures by means of the concept of complex effective dielectric constant. The attenuation constant is clearly divided for the first time into two separate parts due to cutoff and leakage effect respectively. Simple closed-form expressions are derived to determine the two parts.

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