Abstracts

Plane Wave Excitation of an Infinite Dielectric Rod

R.B. Keam. "Plane Wave Excitation of an Infinite Dielectric Rod." 1994 Microwave and Guided Wave Letters 4.10 (Oct. 1994 [MGWL]): 326-328.

The analysis of the fields induced inside and scattered externally by an infinite dielectric rod in an incident plane-polarized TEM wave is presented. It is assumed that the incident wave is polarized parallel to the rod, and that the dielectric has some significant loss. The analysis accounts for axial variation of the fields both inside and scattered by the rod. An investigation of the field distributions for a specific case is given, along with a brief discussion of the evaluation of integer order Bessel functions with complex arguement.

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