

Abstracts

Microwave Helix Waveguide Absorption Cell for Passive Frequency Standard (Short Papers)

J.-C. Mollier and M. Valentin. "Microwave Helix Waveguide Absorption Cell for Passive Frequency Standard (Short Papers)." 1984 Transactions on Microwave Theory and Techniques 32.7 (Jul. 1984 [T-MTT]): 721-722.

A new closed absorption cell, which has been developed for a passive frequency standard, is described. This cell is made from a cylindrical quartz tube with copper wire wound around it. For the limiting case of the zero pitch helix, Maxwell's equations are graphically solved, which show that the cell is operating like a monomode waveguide at 23.8 GHz, the frequency of interest, and can be used from 10 to 100 GHz with few modifications.

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