Abstracts

Field Distribution of Two Conducting Posts in a Waveguide

S.L. Lopuch and T.K. Ishii. "Field Distribution of Two Conducting Posts in a Waveguide." 1984 Transactions on Microwave Theory and Techniques 32.1 (Jan. 1984 [T-MTT]): 29-33.

This paper reports a field analysis of two short and narrow metal posts in a rectangular waveguide. The posts project from the center of the wider wall: one post is "grounded" in the wall, and the other post terminates in a variable impedance (coaxial line). An integral over a Green's function relates the post currents to the electric field, which is high and quite nonuniform near the posts, and depends on the variable impedance. The posts could excite a glow-discharge detector or mixer circuit. Some measurements of guide impedance and observations on a glow tube are included.

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