

Abstracts

The E-Plane Step-Diaphragm Junction Discontinuity

T. Ruehle and L. Lewin. "The E-Plane Step-Diaphragm Junction Discontinuity." 1979 Transactions on Microwave Theory and Techniques 27.2 (Feb. 1979 [T-MTT]): 158-160.

A two-to-one E-plane step in rectangular guide is combined with a capacitive diaphragm at the junction. Singular integral equation techniques are applied, and the effect of the diaphragm in distorting the junction field is determined. The junction susceptance is shown to be augmented by a term corresponding directly to the diaphragm susceptance, with, rather surprisingly, zero net coupling effect between the step and the diaphragm.

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