Abstracts

Microwave-Power Absorption by Rectangular-Shaped Conductive Dielectric Samples in Stripline (Letters)

W.T. Joines, G. Dakermandji, R.L. Seaman and H. Wachtel. "Microwave-Power Absorption by Rectangular-Shaped Conductive Dielectric Samples in Stripline (Letters)." 1976 Transactions on Microwave Theory and Techniques 24.8 (Aug. 1976 [T-MTT]): 536-538.

A general method of calculating the power absorbed by a rectangular sample of material within the microwave field of a stripline is developed. Equations which account for the sample's disturbance of the otherwise uniform plane-wave field of the stripline are given, and restrictions on sample size for best accuracy are stated in terms of stripline dimensions. Power absorption measurements are made on a 0.775 x 1.04 x 1.7-cm sample of seawater over the 1-2-GHz range and compared with calculations made using the equations developed.

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