Abstracts

An innovative semianalytical technique for ceramic evaluation at microwave frequencies

A.E. Fathy, V.A. Pendrick, B.D. Geller, S.M. Perlow, E.S. Tormey, A. Prabhu and S. Tani. "An innovative semianalytical technique for ceramic evaluation at microwave frequencies." 2002 Transactions on Microwave Theory and Techniques 50.10 (Oct. 2002 [T-MTT]): 2247-2252.

We have developed an innovative semianalytical technique for various substrate material characterization. The developed technique is a measurement procedure and data-reduction formulation that takes into consideration the radiation loss in a resonant structure, allowing for a more effective means of dielectric- and conductor-loss determination for a microstrip ring resonator and its substrate material. We separate dielectric and conductor loss precisely, evaluate the contribution of each term in the overall loss performance, and analytically predict the error in their respective predicted value.

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