



Suite of Standards for Electromagnetic Material Characterization Using Mode Matching Theory

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Biblioscholar Nov 2012, 2012. Taschenbuch. Book Condition: Neu. 246x189x7 mm. This item is printed on demand - Print on Demand Neuware - The objective of this research is to determine if an acceptable standard can be developed to access the accuracy and precision of measurements taken using waveguide systems. Tiny changes in material fabrication, processing, and environment can cause problems with accuracy and precision in measurement. There is a great deal of research on uncertainty analysis in the literature. A large portion of the effort will be to determine the levels of uncertainty caused by each of the dimensions of the waveguide insert and to develop a suitable standard capable of verifying system performance. The Mode-Matching Technique will be used to extract input and output S-parameters of a suite of metallic verification waveguide standards. This suite will be used to set a new standard for acceptable tolerances of waveguide systems. After running the theoretical values of Scattering parameters against measured values, it can be determined whether small changes to the parameters of uncertainty greatly effect the measurements. If these changes only cause small changes in measurement, this will be considered an effective standard. 116 pp. Englisch.



Reviews

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