# Abstracts

## 2-18-GHz Dispersion Measurements on 10-100-Omega Microstrip Lines on Sapphire

*T.C. Edwards and R.P. Owens. "2-18-GHz Dispersion Measurements on 10-100-Omega Microstrip Lines on Sapphire." 1976 Transactions on Microwave Theory and Techniques 24.8 (Aug. 1976 [T-MTT]): 506-513.*

Dispersion measurements on microstrip lines with characteristic impedances between 10 and 100 Omega are described, covering the frequency range 2-18 GHz. Single-crystal sapphire cut with a specified crystal orientation was used as the substrate material. Microstrip effective permittivities were calculated from the resonant frequencies of open-ended straight resonators using a technique which eliminated end-effect. The experimental results are compared with some recent dispersion theories. An empirical dispersion formula is independently developed, and is shown to provide well-fitting curves for all the measured dispersion results.

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