

# Abstracts

## Loss Mechanisms in Dielectric-Loaded Resonators (Dec. 1985 [T-MTT])

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*K.A. Zaki and C. Chen. "Loss Mechanisms in Dielectric-Loaded Resonators (Dec. 1985 [T-MTT])." 1985 Transactions on Microwave Theory and Techniques 33.12 (Dec. 1985 [T-MTT] (1985 Symposium Issue)): 1448-1452.*

Analysis is presented of resonators consisting of a section of a dielectric-loaded waveguide shorted at both ends. The analysis includes resonant frequency calculations, mode charts, and unloaded Q computations. Numerical results are presented for the unloaded Q's of various modes, as a function of the resonator parameters. Effects of losses in different parts of the resonator wall on the unloaded Q are discussed, and methods of improving these Q's are explored. Experimental verification of the theoretically derived results is made for a number of resonators, and the measurements agree closely with theory.

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