

Abstracts

Analysis of the Power Loss in the Coupling Mechanism of a Cavity Resonator (Short Papers)

M. Nielsen. "Analysis of the Power Loss in the Coupling Mechanism of a Cavity Resonator (Short Papers)." 1972 Transactions on Microwave Theory and Techniques 20.11 (Nov. 1972 [T-MTT]): 758-760.

An analysis of a lossy coupling mechanism is presented. It is found that the reciprocal internal Q factor is augmented by a contribution $(1/2)\zeta(l/Q_{\text{sub ex}})$, where ζ depends on the Parameters of the coupling mechanism and $Q_{\text{sub ex}}$ is the external Q factor. The theory is applied to analyze the coupling to a superconducting high-Q cavity.

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