Abstracts

Measurement of Transmission Cavity Quality Factors

F.M. Palka and J.R. Ashley. "Measurement of Transmission Cavity Quality Factors." 1973 G-MTT International Microwave Symposium Digest of Technical Papers 73.1 (1973 [MWSYM]): 143-145.

The high internal Q and the presence of two coupling ports greatly complicate the accurate determination of the Q and coupling factors for the transmission cavities used in the stabilization of microwave oscillators. Most signal sources used in microwave measurements do not have sufficient carrier stability to allow VSWR measurements on resonators with Q's greater than 10,000 and a dynamic or sweeping method is required. This paper uses a method based on readily available sweep oscillators. A system for proper termination of the "unused" port is described. The most significant advantage of the method is the small amount of time required to take and process the data.

❑ Return to main document.