Abstracts

The Effect of Capacitive-Screw Turners on Waveguide Loss (Correspondence)

C.T. Stelzried. "The Effect of Capacitive-Screw Turners on Waveguide Loss (Correspondence)." 1969 Transactions on Microwave Theory and Techniques 17.3 (Mar. 1969 [T-MTT]): 172-173.

Waveguide dissipative loss is a critical factor in the performance of a low-noise receiving system. Precision calibrations require that the waveguide system be well matched. This is easily accomplished with multiple capacitive-screw tuners. The effect of screw tuners on waveguide loss has been studied by making microwave loss measurements on a waveguide test fixture with and without insertion of the tuning screws. The increase in dissipative loss for two copper and two nickel-plated brass ¼-inch-diameter tuning screws was 0.0003 and 0.0022 dB, respectively, at 2295 MHz. This result indicates the advantage of copper screw tuners for reducing waveguide dissipative loss.

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