

Abstracts

A 3-Position Transmission/Reflection Method for Measuring the Permittivity of Low Loss Materials

K.-H. Baek, H.-Y. Sung and W.S. Park. "A 3-Position Transmission/Reflection Method for Measuring the Permittivity of Low Loss Materials." 1995 Microwave and Guided Wave Letters 5.1 (Jan. 1995 [MGWL]): 3-5.

A 3-position transmission/reflection method for measuring the permittivity of low loss materials is presented. In this method, the measurement errors of the permittivity due to 1) the mismatch at the connections, 2) the metallic loss of the holder, 3) the uncertainty of sample position in the airline, and 4) the imperfection of the calibration kit can be removed by the measured data for a sample at three different positions. Experimental results for a low loss engineering plastic ($\tan \delta / \text{spl equiv} / 0.025$) are included.

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