Abstracts

A CPW T-resonator technique for electrical characterization of microwave substrates

R.L. Peterson and R.F. Drayton. "A CPW T-resonator technique for electrical characterization of microwave substrates." 2002 Microwave and Wireless Components Letters 12.3 (Mar. 2002 [MWCL]): 90-92.

An impedance independent method is proposed using a finite ground coplanar waveguide (CPW) T-resonator to electrically characterize microwave materials. Silicon-based CPW T-resonators are designed and measured, with calibrated data agreeing well with other methods up to 30 GHz. Uncalibrated measurements produce dielectric constant and attenuation results within 3.7% and 25%, respectively, of those obtained with calibration. Hence, the CPW T-resonator can be used to provide rapid and accurate characterization of microwave substrates with unknown dielectric properties.

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