

A rectangular dielectric waveguide technique for determination of permittivity of materials at W-band

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The rectangular dielectric waveguide (RDWG) technique has been previously described for the determination of complex permittivity of a wide class of dielectric materials of various thicknesses and cross sections. This paper presents a unified RDWG technique for the determination of the dielectric constant of materials. Some measurement results are reported at W-band frequencies to demonstrate the usefulness of the RDWG technique where other techniques are usually constrained by the sample dimensions.

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