Abstracts

Dielectric Properties of Millimeter Wave Materials

M.N. Afsar and K.J. Button. "Dielectric Properties of Millimeter Wave Materials." 1984 MTT-S International Microwave Symposium Digest 84.1 (1984 [MWSYM]): 522-524.

It is no longer necessary to use extrapolated microwave dielectric values when designing millimeter wave components, devices and systems. We are now furnishing highly accurate millimeter wave (5 mm to 1/2 mm) data on complex dielectric permittivity and loss tangent to engineers for a variety of materials such as common ceramics, semiconductors, crystalline and glass materials. For most materials the dielectric loss increases with frequency in the millimeter, unlike the microwave, is an important feature of our new data. Reliable measurements also reveal that the method of Preparation of nominally identical specimens can change the dielectric losses by many factors.

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