Abstracts

Temperature Dependent Performance of Coplanar Waveguide (CPW) on Substrates of Various Materials

S.R. Taub and P. Young. "Temperature Dependent Performance of Coplanar Waveguide (CPW) on Substrates of Various Materials." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1049-1051.

This paper presents the attenuation (alpha) and effective dielectric constant (Epsilon/sub eff/) of Coplanar Waveguide (CPW) transmission lines on high-resistivity silicon and diamond substrates as a function of both temperature and frequency. The technique used to obtain the values for alpha and Epsilon/sub eff/ involves the use of a unique cryogenic probe station designed and build by NASA. Attenuation of gold CPW lines on diamond substrates is compared with that of superconducting CPW lines.

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