Abstracts

The Temperature Dependence of PIN Diode Attenuators

R.H. Caverly and G. Hiller. "The Temperature Dependence of PIN Diode Attenuators." 1993 MTT-S International Microwave Symposium Digest 93.2 (1993 Vol. II [MWSYM]): 553-556.

This paper presents the results of a study of the effect of temperature on PIN diode resistance whose knowledge will allow designers of microwave PIN diode attenuators to predict attenuation changes with temperature. A theoretical and experimental study of PIN diodes of different geometries and passivations indicates that the resistance-temperature coefficient of low capacitance silicon dioxide passivated PIN diodes is in the range of -0.1% to + 0.1% per degree C. Microwave attenuation measurements were taken that validate this approximation.

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