Abstracts

Measurement of the Microwave Conductivity of a Polymeric Material with Potential Applications in Absorbers and Shielding

K. Naishadham and P.K. Kadaba. "Measurement of the Microwave Conductivity of a Polymeric Material with Potential Applications in Absorbers and Shielding." 1991 Transactions on Microwave Theory and Techniques 39.7 (Jul. 1991 [T-MTT]): 1158-1164.

The microwave conductivity of a new material, the polymer PBT made conductive by ion-implantation doping with iodine, is measured at 9.89 GHz as a function of temperature using the cavity perturbation technique applicable to thin films of arbitrary shape. The dc and microwave conductivities of PBT are seen to approach asymptotically the low-temperature limit predicted by Mott's energy-dependent hopping model. The potential utilization of conductive polymers in microwave absorbers and EMI shielding is examined.

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