Abstracts

A Variable Directional Coupler Using InSb Thin Films (Short Papers)

I. Tanaka and M. Ohshita. "A Variable Directional Coupler Using InSb Thin Films (Short Papers)." 1976 Transactions on Microwave Theory and Techniques 24.10 (Oct. 1976 [T-MTT]): 660-662.

A variable directional coupler whose coupling is varied by an applied dc magnetic field is presented in this short paper. The directional coupler is of the two-hole type having InSb thin films in the coupling apertures to which the magnetic field is applied perpendicularly. The directional coupler was tested at room temperature at frequencies from 32 to 36 GHz. At a frequency of 33.1 GHz and magnetic flux densities of up to 13 kG, the coupling varies from 14.2 to 40.2 dB with the directivity exceeding 24.6 dB, the insertion loss of about 1 dB, and the VSWR of 1.2.

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