Abstracts

Asymmetric Excitation of Symmetric Single-Mode Y-Junction: The Radiation Mode Effects

D.A.M. Khalil, P. Benech and S. Tedjini. "Asymmetric Excitation of Symmetric Single-Mode Y-Junction: The Radiation Mode Effects." 1992 MTT-S International Microwave Symposium Digest 92.1 (1992 Vol. I [MWSYM]): 441-444.

This work studies, for the first time, a symmetric single-mode Y-junction under the asymmetric excitation by an optical fiber. The asymmetric excitation is due to fiber displacement with respect to junction axis. The power splitting between the two outputs of the junction is found to depend strongly on the fiber position. The theoretical analysis shows a splitting ratio as high as 14 dB, that could not be explained if the radiation mode coherent coupling is neglected, A GaAs/GaAIAs junction is tested and the experimental results confirm these theoretical predictions.

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