

Operation Modes of a Waveguide Y Circulator (Short Papers)

Y. Akaiwa. "Operation Modes of a Waveguide Y Circulator (Short Papers)." 1974 Transactions on Microwave Theory and Techniques 22. 11 (Nov. 1974 [T-MTT]): 954-960.

Operation modes of a waveguide Y circulator with a circular and a triangular ferrite post are investigated both theoretically and experimentally. Field analysis is carried out taking into consideration the field variation along the ferrite axis. Frequencies are calculated by assuming TM modes nearly agree with measured frequencies. It is shown that the circulator action occurs at frequencies where two HE modes interfere with each other, besides occurring at HE mode resonance frequencies. Effects of Teflon spacers on circulator performances are investigated in detail.

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