

Abstracts

Design of Partial Height Ferrite Waveguide Circulators (Short Papers)

E.J. Denlinger. "Design of Partial Height Ferrite Waveguide Circulators (Short Papers)." 1974 Transactions on Microwave Theory and Techniques 22.8 (Aug. 1974 [T-MTT]): 810-813.

This short paper presents a design procedure for the widely used three-port waveguide circulator that has a partial height ferrite post in the junction region. Design formulas and curves are derived for two configurations of partial height circulators: one has a short circuit at one end of the ferrite post, while the other has dielectric spacers at both ends. The design method was used to build two circulators for operation at 38 GHz and 60 GHz, respectively. Excellent agreement between theory and experiment was obtained in predicting the center frequency and required matching structure of these devices.

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