Abstracts

Analysis of a Grounded Junction Circulator

M. Omori. "Analysis of a Grounded Junction Circulator." 1966 G-MTT International Microwave Symposium Digest 66.1 (1966 [MWSYM]): 291-296.

The operation of a novel stripline circulator, which incorporates a single disk of yttrium aluminum iron garnet on one side of the center conductor and a large metallic short circuit on the other side, is described in terms of a resonance mode of the junction. The basic design of this circulator is shown in Figure 1. As seen in the figure the short circuit can be the magnet necessary to bias the garnet disk to the optinum point for circulation. Quarter wavelengths of low impedance line are used to couple the junction to the 50 ohm input lines. The performance of this circulator is typically 30 db of isolation and 0.2 db of insertion loss over an 1870 bandwidth.

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