

Abstracts

Review of Circulator Technology

G.P. Rodrigue. "Review of Circulator Technology." 1971 G-MTT International Microwave Symposium Digest of Technical Papers 71.1 (1971 [MWSYM]): 76-77.

The ferrite circulator has come a long way from its beginning as a practical application of Faraday rotation some eighteen to twenty years ago. The name, circulator, was coined by A. G. Fox, and in the process of this development, circulators have assumed many forms and an almost equal number of interpretations. Circulators to handle the duplexing function in megawatt systems have utilized differential phase shifters in conjunction with 3 dB power splitters (couplers or tees). A more compact and economical version of the circulator evolved in the use of the turnstile junction. This circulator design also depends on a split of the input power and a phase cancellation of waves due to phase shift introduced in the ferrite loaded turnstile circular guide section. While more compact and potentially cheaper, the turnstile adjustment is somewhat critical and its resulting bandwidth rather limited.

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