Abstracts

A Ferrite Cutoff Switch

R.F. Soohoo. "A Ferrite Cutoff Switch." 1959 Transactions on Microwave Theory and Techniques 7.3 (Jul. 1959 [T-MTT]): 332-336.

The theory and operating characteristics of a new type of high performance reflective switch is given. It utilizes the cut-off phenomenon in transversely-magnetized ferrites. The insertion loss of the device is 0.4 db and over 60 db within the 8.8 to 9.5 kmc band when the ferrite is demagnetized and magnetized respectively. The reflection coefficient of the switch in the "off" state is more than 90 per cent over this same band. In contrast to most other ferrite devices, it is of the reflective rather than the absorptive type. Furthermore, it has the unique property that its operating bandwidth is determined mainly by the magnitude of the applied field. Possible applications of the device in antenna switching and as a tunable cutoff filter will be discussed.

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