Abstracts

Polynomial representations of split-phase constants of gyromagnetic waveguides with electric and magnetic walls

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Two classic circular waveguides met in the design of nonreciprocal Faraday rotation devices and waveguide junction circulators are the gyromagnetic ones with electric and magnetic walls. The purpose of this letter is to present some polynomial representations of the split-phase constants in the gyrotropy of each problem region and to compare the opening between the split branches for the two situations. A polynomial representation of the cutoff space of the lower split branch of the magnetic wall problem region is separately computed.

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