Abstracts

Voltage-current definition of impedance of single-ridge waveguide

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An essential feature of any waveguide is its three classic definitions of impedance. The purpose of this paper is to provide some calculations on the voltage-current definition of impedance in single ridge waveguide using the finite element method. The current paths coincide with either the top and side walls or the ridge and trough walls. The decomposition of the waveguide walls coincides with the positions at which the polarity of the electric field reverses on its interior contour. The power-voltage definition of impedance is also evaluated for completeness.

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