Abstracts

Dispersion characteristics of EME microstrip at first higher order

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The dispersion characteristics of the electric-magnetic-electric (EME) microstrip at the first higher order are presented. The EME microstrip consists of composite metals paralleling the electric and magnetic surfaces, where the magnetic surface is made of an array of coupled inductors. The dispersion curves obtained by matrix-pencil analyses are validated experimentally by the measured radiation patterns. The line width is reduced by 47.5%, compared to that of the conventional microstrip for the same onset frequency of the leaky mode. The EME microstrip is potentially useful for compact microstrip leaky-mode array design.

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