

Abstracts

Longitudinal and Transverse Current Distributions on Microstriplines and Their Closed-Form Expression

M. Kobayashi. "Longitudinal and Transverse Current Distributions on Microstriplines and Their Closed-Form Expression." 1985 Transactions on Microwave Theory and Techniques 33.9 (Sep. 1985 [T-MTT]): 784-788.

Simple but accurate closed-form expressions for the normalized longitudinal and transverse current distributions on microstriplines are derived by rising the charge conservation formula and the charge distributions calculated by the Green's function technique. Their dependence on both the relative permittivity of the substrate ϵ_{r} and the shape ratio w/h are explained, and the results are compared with other available results. It is confirmed by comparison with other theoretical results that the present closed-form expressions are valid for an even higher frequency. The reasonable expression for the normalized transverse current distribution is believed to be the first.

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