# Abstracts

## Approximate analytical evaluation of the continuous spectrum in a substrate-superstrate dielectric waveguide (2002 Vol. II [MWSYM])

*P. Baccarelli, P. Burghignoli, F. Frezza, A. Galli, G. Lovat and D.R. Jackson. "Approximate analytical evaluation of the continuous spectrum in a substrate-superstrate dielectric waveguide (2002 Vol. II [MWSYM])." 2002 MTT-S International Microwave Symposium Digest 02.2 (2002 Vol. II [MWSYM]): 953-956 vol.2.*

In this work, an original closed-form approximate evaluation is performed for the continuous-spectrum field excited by an electric-current line source in a substrate-superstrate configuration, optimized for leaky-wave radiation. The validity of these results is shown for the near and the far field at different frequencies, including the frequency range in which the leaky wave is physical and the entire transition region through the spectral gap. This new closed-form result shows explicitly the nature of the continuous-spectrum field in the transition region, and provides insight into the nature of the fields on more complicated structures such as microwave integrated circuits.

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