

# Abstracts

## Exact noise parameters of lossy transmission lines

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*R. Shimon and M. Feng. "Exact noise parameters of lossy transmission lines." 1999 MTT-S International Microwave Symposium Digest 99.1 (1999 Vol. I [MWSYM]): 47-50 vol. 1.*

This paper presents exact expressions for the noise parameters of a lossy transmission line in terms of its characteristic impedance, propagation constant and physical length. These expressions are valid for complex values of characteristic impedance, generalizing previously published approximate expressions that assume real values of characteristic impedance. Like the approximate expressions, the exact expressions accept positive and negative values of length, making them quite useful for analysis and design.

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