

Failure of the Classical Circuit Model in the Analysis of Low-Loss Band-Limited Mixers

M.E. Hines. "Failure of the Classical Circuit Model in the Analysis of Low-Loss Band-Limited Mixers." 1978 MTT-S International Microwave Symposium Digest 78.1 (1978 [MWSYM]): 402-404.

The classical small-signal frequency-domain theory of resistive diode mixers fails to provide correct results in low-loss cases where reactive filtering is used to suppress undesired responses. Previously published theoretical results, which describe the low-loss limits, are erroneous and misleading. Single-diode mixers are inherently lossy devices, even with ideal diodes.

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