Abstracts

Reflected Power Effects in Computer Simulations Using the Quantum Theory of Mixing

Q. Ke and M.J. Feldman. "Reflected Power Effects in Computer Simulations Using the Quantum Theory of Mixing." 1992 MTT-S International Microwave Symposium Digest 92.3 (1992 Vol. III [MWSYM]): 1425-1428.

Attention is directed to the signal reflection gain and the signal-to-image conversion gain in the quantum theory of mixing. The theory gives two distinct types of solutions for the minimum noise temperature of an SIS receiver. One has very high IF conversion gain, and the returned signal and image powers are extremely high as well. The other has moderate IF conversion gain, but the returned powers tend to be very small. This resolves a longstanding mystery.

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