Abstracts

A Novel Single Device Balanced Resistive HEMT Mixer

K. Yhland, N. Rorsman and H. Zirath. "A Novel Single Device Balanced Resistive HEMT Mixer." 1995 MTT-S International Microwave Symposium Digest 95.3 (1995 Vol. III [MWSYM]): 1411-1414.

A novel single device balanced resistive HEMT mixer operating at 18 GHz has been designed and characterized. The mixer has 180 degree baluns at the RF and IF Dorts. Measurements show a conversion loss of 6 to 7 dB and an LO to RF isolation of up to 37 dB. The main advantages of this type of mixer are that no device pairing is necessary, since only one HEMT is used and that no high frequency grounding is necessary. These advantages make this topology suitable for microstrip MICS, crossbar, fin-line and quasi optical mixers.

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