Abstracts

X-Band Doubly Balanced Resistive FET Mixer with Very Low Intermodulation (Short Papers)

F. De Flaviis and S.A. Maas. "X-Band Doubly Balanced Resistive FET Mixer with Very Low Intermodulation (Short Papers)." 1995 Transactions on Microwave Theory and Techniques 43.2 (Feb. 1995 [T-MTT]): 457-460.

This paper describes a practical realization of a mixer that achieves low intermodulation distortion by using the channel resistance of a GaAs MESFET to provide mixing and achieves even-order spurious response rejection through the use of a doubly balanced structure. Very good results were achieved in terms of second- and third-harmonic levels of -67 and -45 dBC, respectively, at +10 dBm input level. The band-center conversion loss was 11 dB. The circuit was realized in microstrip on an alumina substrate, with a monolithic FET "quad."

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