Abstracts

RF Performance of a Novel Planar Millimeter-Wave Diode Incorporating an Etched Surface Channel

D.G. Garfield, R.J. Mattauch and S. Weinreb. "RF Performance of a Novel Planar Millimeter-Wave Diode Incorporating an Etched Surface Channel." 1991 Transactions on Microwave Theory and Techniques 39.1 (Jan. 1991 [T-MTT]): 1-5.

A new whiskerless millimeter wave mixer diode has performance comparable to that of the highest quality whisker-contacted diodes. The diode rises an etched surface channel and planar air bridge to obtain greatly reduced parasitic capacitance. At 94 GHz the room-temperature diode exhibited a conversion loss of 5.3 ± 0.5 dB and an equivalent input noise temperature of 518 ± 50 K SSB.

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