Abstracts

Possibility of Silicon Monolithic Millimeterwave Integrated Circuits

S.A. Campbell and A. Gopinath. "Possibility of Silicon Monolithic Millimeterwave Integrated Circuits." 1989 MTT-S International Microwave Symposium Digest 89.2 (1989 Vol. II [MWSYM]): 817-819.

Previous work on high resistivity silicon suggests that microstrip line dielectric losses cease to be significant above 30 GHz. Silicon-Germanium Heterojunction Bipolar Transistors now provide a well behaved three-terminal device capable of operating at microwave frequencies. The tradeoffs available to operate this device at millimeterwave frequencies are discussed, making the fabrication of Silicon Monolithic Millimeterwave Integrated Circuits a genuine possibility.

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