Abstracts

A High-Performance Integrated Microwave Circuit Frequency Quadrupler

K.M. Johnson. "A High-Performance Integrated Microwave Circuit Frequency Quadrupler." 1968 Transactions on Microwave Theory and Techniques 16.7 (Jul. 1968 [T-MTT] (Special Issue on Microwave Integrated Circuits)): 420-424.

An S- to X-band frequency quadrupler was developed with a 4.0-dB conversion loss and 11-percent bandwidth using hybrid integrated microwave circuit techniques. The multiplier has a low-pass transforming filter on the input and a bandpass filter consisting of half-wavelength lines edge coupled over quarter wavelengths on the output. Design curves for the bandpass filter are given for ceramic microstrip. Two beam-lead varactors were used in the multiplier giving it an input power-handling capability of 3-watts peak power.

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