

Abstracts

Harmonic Power Combining Of Microwave Solid-State Active Devices

D.F. Peterson. "Harmonic Power Combining Of Microwave Solid-State Active Devices." 1982 Transactions on Microwave Theory and Techniques 30.3 (Mar. 1982 [T-MTT]): 260-268.

A method for combining the power in a selected harmonic of the fundamental frequency for a symmetrical array of oscillating solid-state devices is described and demonstrated. These combiners convert fundamental power to harmonic power with filtering accomplished by symmetry. This technique appears useful for improving the performance of microwave and millimeter-wave power sources by effectively enhancing the frequency-power limitations of existing solid-state devices. An example of the method is provided by a simple three-phase frequency-tripling varactor-tuned transistor oscillator.

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