Abstracts

A New Microwave Frequency Standard by Quenching Oscillator Control

N. Sawazaki and T. Honma. "A New Microwave Frequency Standard by Quenching Oscillator Control." 1956 Transactions on Microwave Theory and Techniques 4.2 (Apr. 1956 [T-MTT]): 116-121.

This paper shows that in this new frequency standard system the multiplication is made by synchronizing oscillation, which is achieved by quenching a microwave oscillator with a standard quartz-crystal oscillator. The output frequency spectrum of this synchronizing oscillator includes only integral multiple frequencies of a quartz-crystal oscillator. Each spectrum can be utilized as standard frequencies. Theoretical calculations and experimental results are also described here. And to avoid the influence of noise voltage on the build-up of the quenching control microwave oscillator, the double modulation system is used, which is controlled and intermitted simultaneously by both f/sub 1/ voltage (output of the low frequency standard) and n/sub 1/ f/sub 1/ voltage (n/sub 1/ is an integer).

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