Abstracts

A 10-14 GHz Quenchable MMIC Oscillator

G. Dietz, R. Becker, R. Haubenstricker, S. Moghe and G. Giacomino. "A 10-14 GHz Quenchable MMIC Oscillator." 1991 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 91.1 (1991 [MCS]): 23-26.

A wideband negative resistance MMIC oscillator chip has been designed and tested for fast switching DRO and VCO applications. This MMIC has an on-chip quench circuit which allows for very fast switching of the oscillator without affecting the active device bias. The MMIC which also has an on-chip resistive heater section located in close proximity to the active device minimizes frequency drift due to temperature variations. The switching performance was measured with the chip configured as a DRO; its frequency settled within 0.6 MHz of the final frequency in only 0.5 us. This MMIC configured as a VCO achieved wideband tuning from 10 to 14 GHz.

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