

Abstracts

Monolithic 38GHz Dielectric Resonator Oscillator

P.G. Wilson. "Monolithic 38GHz Dielectric Resonator Oscillator." 1991 MTT-S International Microwave Symposium Digest 91.2 (1991 Vol. II [MWSYM]): 831-834.

A 38GHz monolithic DRO incorporating a 0.3micron HEMT has been designed, using a small-signal design procedure. Following fabrication in-house, ten DROs have been tested, seven of which were found to be fully working at RF and gave ouput powers up to 0dBm. The temperature coefficient of the frequency of oscillation was -2.1ppm/°C and the phase noise was -68dBc/Hz @ 100kHz from carrier. The DRO is potentially inexpensive in high volume and suitable for a local oscillator in a broadband telecommunications system.

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