Abstracts

An 8-18-GHz YIG-Tuned FET Oscillator

J.C. Papp and Y.Y. Koyano. "An 8-18-GHz YIG-Tuned FET Oscillator." 1980 Transactions on Microwave Theory and Techniques 28.7 (Jul. 1980 [T-MTT]): 762-767.

We report here on the design and construction of a YIG- tuned FET oscillator tunable over the entire 8-18-GHz frequency range. The minimum output power from this device operating into a 50-omega load is about +6 dBm. The addition of a balanced buffer amplifier increases the power to about +12-dBm minimum. When optimized for the 12-18-GHz band, the oscillator alone generates a minimum of +10 dBm. The oscillator/ amplifier combination produces at least +15 dBm. We discuss a number of difficulties inherent in the design of broad-band oscillators, especially fixed frequency resonances, linearity, and power drop outs at the low end of the frequency range.

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