

Abstracts

Thin-Film YIG Oscillators with Low Phase Noise and High Spectral Purity

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Two broadband bipolar thin-film YIG oscillators have been developed, one having frequency coverage of 2.7 to 7.5 GHz with phase noise of -109 dBc at 10 kHz at a 3.0 GHz carrier. Another 0.5 to 2.0 GHz circuit exhibits -55 dBc second harmonic levels and is much more stable than a similar YIG-sphere circuit. This paper discusses design and measurement of thin-film resonators, as well as practical improvements that stabilize thermal drift.

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