Abstracts

2-22 GHz Low Phase Noise Silicon Bipolar YIG Tuned Oscillator Using Composite Feedback

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A fundamental YIG Tuned Oscillator is presented to cover, for the first time, the frequency range of 2 to 22 GHz, using a high frequency silicon bipolar transistor and a single YIG sphere. A unique composite feedback approach has been utilized to demonstrate a minimum of 10 dBm power output and phase noise of -95dBc/Hz @ 10KHz across most of the band. The design approach and performance results of this widest band & low noise oscillator are described.

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