

Abstracts

Low Phase Noise X/Ku-Band VCO

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A balanced, thin-film VCO utilizing silicon bipolar transistors and hyper-abrupt varactor diodes has yielded 40% tuning bandwidth while demonstrating excellent frequency stability. Key features of this design are: High RF output power, linear tuning characteristics, excellent sub-harmonic rejection, and low single sideband phase noise. At an operating frequency of 11.5 GHz, single sideband phase noise of -104 dBc/Hz at 100 KHz offset has been obtained. An X-band VCO subsystem designed for missile LO applications utilizing the developed oscillator is also presented.

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