

Abstracts

Very Linear X-Band MIC Bipolar VCO with 100MHz FM Rate

R.G. Winch and J.L. Matson. "Very Linear X-Band MIC Bipolar VCO with 100MHz FM Rate." 1980 MTT-S International Microwave Symposium Digest 80.1 (1980 [MWSYM]): 499-500.

This paper describes a microstrip, doubling mode bipolar transistor oscillator (osciplier), varactor tunable over 8- 10GHz with an output power of $12\text{dBm}\pm1\text{dB}$. It has an FM rate of 100MHz with a set-on accuracy of $\pm8\text{MHz}$ from perfect linearity (i.e. $\pm0.1\%$) and frequency pulling $\pm1\text{MHz}$ into a 2:1 mismatched load. Power flatness and frequency pulling immunity is achieved using a two stage GaAS FET buffer/limiter. It maintains these specifications over a temperature range of -54°C to 100°C.

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