Abstracts

An HBT MMIC Wideband VCO (1991 Vol. I [MWSYM])

A. Adar and R. Ramachandran. "An HBT MMIC Wideband VCO (1991 Vol. I [MWSYM])." 1991 MTT-S International Microwave Symposium Digest 91.1 (1991 Vol. I [MWSYM]): 247-250.

A wideband MMIC Voltage Controlled Oscillator (VCO) has been developed using AlGaAs/GaAs Heterojunction Bipolar Transistors (HBTs). Test results indicate a very wide tuning range of 7 to 15GHz, with a minimum output power of 9 dBm. This MMIC also exhibits low power dissipation (5 V and 25 mA) and excellent phase noise (75 dBc/Hz @ 100 KHz) for a broadband VCO. In addition to the basic oscillator this MMIC also includes a buffer amplifier to provide better load isolation and power output stability. All the required biasing and matching circuitry except for the resonator is contained within the chip that measures 30 X 40 mils (0.8 mm X 1 mm).

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