Abstracts

Low-noise monolithic Ku-band VCO using pseudomorphic HEMT technology

J. Portilla, M.L. de la Fuente, J.P. Pascual and E. Artal. "Low-noise monolithic Ku-band VCO using pseudomorphic HEMT technology." 1997 Microwave and Guided Wave Letters 7.11 (Nov. 1997 [MGWL]): 380-382.

A low-noise pseudomorphic HEMT Ku-band oscillator with varactor frequency tuning and voltage power control is reported. The circuit size, including the varactor and the pads for on-wafer testing, is less than 0.7 mm/sup 2/. On-wafer oscillator measurements show a frequency tuning bandwidth of 600 MHz centered at /spl sim/15.2 GHz and an output power up to 17 dBm with more than 15 dB of power control. Phase noise of -87 dBc/Hz at 100 kHz has been obtained, which is an excellent result for a fully monolithic integrated Ku-band voltage-controlled oscillator (VCO).

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