

Ultra low phase noise sapphire-SiGe HBT oscillator

O. Llopis, G. Cibiel, Y. Kersale, M. Regis, M. Chaubet and V. Giordano. "Ultra low phase noise sapphire-SiGe HBT oscillator." 2002 Microwave and Wireless Components Letters 12.5 (May 2002 [MWCL]): 157-159.

A state of the art C-band oscillator is presented. It is based on a high Q WGM sapphire resonator combined with a low residual phase noise SiGe HBT amplifier. A two oscillator experiment performed on this system has revealed a phase noise level of -133 dBc/Hz at 1 kHz offset from the 4.85 GHz carrier, which is the best published phase noise result for a single loop, free running microwave oscillator.

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