Abstracts

A Si/SiGe HBT dielectric resonator push-push oscillator at 58 GHz

F.X. Sinnesbichler, B. Hautz and G.R. Olbrich. "A Si/SiGe HBT dielectric resonator push-push oscillator at 58 GHz." 2000 Microwave and Guided Wave Letters 10.4 (Apr. 2000 [MGWL]): 145-147.

In this work, we present a dielectric resonator push-push oscillator at 58 GHz. The microstrip circuit is fabricated in hybrid thin-film technology on a 10 mil alumina substrate. Flip-chip bonded Si/SiGe HBT's are used as active devices. A maximum output power of -8 dBm and a phase noise of -105 dBc/Hz at an offset frequency of 1 MHz have been measured. At a lower output power of -14 dBm an optimum phase noise of -112 dBc/Hz has been achieved. The mechanical tuning range of the oscillator is approximately 500 MHz.

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