Abstracts

A 38-GHz push-push oscillator based on 25-GHz f/sub T/ BJT's

F.X. Sinnesbichler, H. Geltinger and G.R. Olbrich. "A 38-GHz push-push oscillator based on 25-GHz f/sub T/ BJT's." 1999 Microwave and Guided Wave Letters 9.4 (Apr. 1999 [MGWL]): 151-153.

In this work, we present a 38 GHz push-push oscillator based on low-cost state-of-the-art silicon bipolar junction transistors (BJTs) with transit frequencies of approximately 25 GHz. The push-push principle allows the extension of the usable frequency range of the well-established silicon bipolar technology (with its specific advantages, as, for example, a low 1/f-noise) into the K and the Ka bands. The circuitry has been fabricated in thin film technology on a 10-mil alumina substrate. The output power of the oscillator is -11.5 dBm with a single-sideband phase noise of -80 dBc/Hz at an offset frequency of 100 kHz.

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