Abstracts

A novel triple-push oscillator approach

Yu-Long Tang and Huei Wang. "A novel triple-push oscillator approach." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 1201-1204.

A novel triple-push oscillator approach is proposed for the first time. This new oscillator topology combines three identical oscillator subcircuits. An analytical formulation is derived to present all the current modes. As will be shown, odd mode currents in each oscillator subcircuit have a 1200 phase shift to one another and thus produce in-phase combining for the third harmonic signal. To prove this concept, a 5-GHz triple-push oscillator was designed and fabricated on an FR4 substrate. The measured results showed that at 4.86 GHz, an output signal of 1.7 dBm was delivered with 12.7-dB suppression of the fundamental frequency.

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