Abstracts

Broad-band power amplifier using dielectric photonic bandgap structure

V. Radisic, Y. Qian and T. Itoh. "Broad-band power amplifier using dielectric photonic bandgap structure." 1998 Microwave and Guided Wave Letters 8.1 (Jan. 1998 [MGWL]): 13-14.

Two class AB GaAs field-effect transistor (FET) power amplifiers have been designed and fabricated in the 4.4-4.8 GHz range. In the first case, a dielectric PBG line was incorporated in the design to tune the second harmonic. In the second case, a 50-/spl Omega/ line is used with no harmonic tuning. The PBG structure allows broad-band harmonic tuning and is inexpensive to fabricate. A 5% improvement in power-added efficiency was achieved at the design frequency of 4.5 GHz, in both simulation and measurement.

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