Abstracts

Uniplanar broad-band push-pull FET amplifiers

P.-C. Hsu, C. Nguyen and M. Kintis. "Uniplanar broad-band push-pull FET amplifiers." 1997 Transactions on Microwave Theory and Techniques 45.12 (Dec. 1997, Part I [T-MTT]): 2150-2152.

We report the development of completely uniplanar broadband balanced push-pull FET amplifiers using slot line and coplanar waveguide. The amplifiers employ broad-band uniplanar baluns to achieve the push-pull function over a wide bandwidth. One amplifier, designed in the unconditionally stable region, exhibits a gain of 3.5-5 dB over the frequency range of 5.4-10 GHz and an output 1-dB compression point of 19 dBm at 10 GHz. The other amplifier was designed in the potentially unstable range and achieves a high gain between 10-11 dB from 2 to 4 GHz and an output 1-dB compression point of 17 dBm at 4 GHz. These results show the feasibility of the push-pull FET amplifier configuration using uniplanar technology for microwave and millimeter-wave integrated circuits and systems.

❑ Return to main document.