Abstracts

A High Efficiency Complementary GaAs Power FET Technology for Single Supply Portable Applications

E. Glass, J. Abrokwah, R. Lucero, E. Spears, J. Rollman, J.-H. Huang, B. Bernhardt and B. Ooms. "A High Efficiency Complementary GaAs Power FET Technology for Single Supply Portable Applications." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 1083-1086.

A high efficiency enhancement mode power heterostructure FET has been developed for single supply portable applications. The device requires only a single 3V supply for operation, making it an ideal candidate for portable applications. At 850 MHz, a 1.0 µm x 12 mm N-type FET exhibited a power output of +30.7 dBm, power gain of 10.6 dB, and a power-added efficiency of 60%, at a drain to source voltage of 3V, and drain to source quiescent current of 150 mA. This device was fabricated cm a standard Complementary GaAs (CGaAs) process flow, which is capable of simultaneously building low-voltage, low-power digital circuits (200MHz), high-speed digital circuits (5 GHz), and RF power circuits (900 MHz).

❑ Return to main document.