Abstracts

A GSM/EDGE dual-mode, 900/1800/1900-MHz triple-band HBT MMIC power amplifier module

K. Yamamoto, T. Asada, S. Suzuki, T. Miura, A. Inoue, S. Miyakuni, J. Otsuji, R. Hattori, Y. Miyazaki and T. Shimura. "A GSM/EDGE dual-mode, 900/1800/1900-MHz triple-band HBT MMIC power amplifier module." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 245-248.

This paper describes a 3.5-V operation HBT MMIC power amplifier module for use in GSM/EDGE dual-mode, 900/1800/1900-MHz triple band handset applications. With diode switches and a band select switch built on the MMIC, the module delivers a P/sub out/ of 35.5 dBm and a PAE of about 50% for GSM900, a 33.4-dBm P/sub out/ and a 45% PAE for GSM1800/1900. While satisfying an error vector magnitude (EVM) of less than 4% and a receive-band noise power of less than -83 dBm/100 kHz, the module also delivers a 29.5 dBm P/sub out/ and a PAE of over 25% for EDGE900, a 28.5 dBm P/sub out/ and a PAE of over 25% for EDGE1800/1900.

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