Abstracts

A 20 mA quiescent current CV/CC parallel operation HBT power amplifier for W-CDMA terminals

S. Shinjo, K. Mori, H. Ueda, A. Ohta, H. Seki, N. Suematsu and T. Takagi. "A 20 mA quiescent current CV/CC parallel operation HBT power amplifier for W-CDMA terminals." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 249-252.

A novel constant voltage/constant current (CV/CC) parallel operation HBT power amplifier (PA) configuration is proposed. By combining two HBT's having different base bias circuits for each (one is CV and the other is CC), non-linearity at large back-off region can be canceled out. Therefore, both low quiescent current and enough ACPR performance can be achieved. The fabricated CV/CC parallel operation HBT PA demonstrates extremely low quiescent current of 20 mA and ACPR of less than -38 dBc at the output power range up to 27.5 dBm.

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