Abstracts

Variable gain power amplifier for mobile WCDMA applications (2001 Vol. II [MWSYM])

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A single chip linear power amplifier (PA) with >48 dB gain control range and >24 dBm output power with adjacent channel leakage power (ACP) figures below -36 dBc is presented. The chip is realized using an AlGaAs-GaAs HBT process and is aimed at 1.95 GHz mobile WCDMA applications. The amplifier consists of two blocks, the variable gain amplifier and the power amplifier; The chip size is 1.3/spl times/1.1 mm/sup 2/ and it is mounted on a 8/spl times/8 mm FR-4 type laminate with 26 pieces of 0402 SMD components composing a complete 50 /spl Omega/ input-output amplifier module. This paper presents the design of the two blocks, discusses issues related to the combining and finally presents the complete amplifier realization and measurement results.

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