

ABSTRACT

Full-CMOS transmitter and receiver for 2.4GHz wideband CDMA with direct conversion mixers and DC-offset cancellation is described. The proposed direct conversion scheme combined with a multi-phase sampling fractional-N prescaler offers solutions to problems of a direct conversion transmitter and receiver. In the experimental results, the transmitter shows 0dBm maximum output power with 38dB ACPR at 0.5BW, 50dB dynamic range, and 363mW power consumption. The receiver shows -115.4dBm sensitivity, 4.0dB noise figure, and 80dB dynamic range with 396mW power consumption.

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