

## Integrated even harmonic type direct conversion receiver for W-CDMA mobile terminals (2002 [RFIC])

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This paper is the first demonstration of the overall performance of the integrated even harmonic type direct conversion receiver (EH-DCR) with the RAKE receiver. The configuration of the integrated EH-DCR and its evaluation results based on the 3GPP definition are indicated. The RX LTCC module with the SiGe RX-IC, and BiCMOS ABB-IC are developed to achieve high integration of the receiver with filters. The integrated EH-DCR with low second order distortion can achieve high sensitivity and selectivity of the W-CDMA receiver, even with interference due to the transmitting signal. Described evaluation results satisfy the specifications defined by 3GPP. This paper clarifies effectiveness of the integrated EH-DCR for the third generation mobile terminals.

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