

A Low Power 200MHz Receiver for Wireless Hearing Aid Devices

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A low power receiver for a wireless hearing aid system working in the 174-223MHz range has been implemented in a 0.8 μ m BiCMOS technology. The chip comprises LNA, RF-mixer, variable-gain IF-amplifier, and demodulator, which consists of digital phase-shifter and I/Q IF-mixers, 5th order Bessel filters, and DC-amplifiers. Thanks to optimization on different levels, merely 667 μ A including biasing is consumed for the reception of an 8-ary PSK signal with a data rate of 336kbit/s.