Abstracts

An Integrated GPS Receiver with Synthesizer and Downconversion Functions

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An integrated circuit for GPS (Global Positioning System) receivers has been developed which includes, on one chip, an L-band downconversion function, and an LO synthesizer function with a phased-locked loop. The downconversion function contains an L-Band amplifier, active mixer, and IF amplifier. The synthesizer function is comprised of a VCO, a prescaler, a phase/frequency detector, and loop amplifier. The chip also contains output buffers for three frequencies generated by the synthesizer, and on-chip power regulation. This IC advances the level of integration for IC's operating at the L-band frequencies used by GPS. This paper will report on the design, performance, packaging, and testing techniques.

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