

A 6.5GHz CMOS FSK Modulator for Wireless Sensor Applications

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A 6.5GHz FSK modulator suitable for low power wireless sensor network is presented. The modulator employs closed loop direct VCO modulation to achieve high data rate, variable loop bandwidth technique for fast start-up rates and Σ - Δ for reduced power consumption in the divider with fine resolution in channel selection. The synthesizer, implemented in 0.25 μ m CMOS, achieves 20 μ s start-up time with an effective data rate of 2.5Mbps while consuming 22mW.