

Abstract

90nm CMOS RF Technology with 9.0V I/O Capability for Single-Chip Radio

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Single chip radio design requires integration of high performance RF transistors and passive components, high voltage components, and dense SRAM cells with high performance digital logic. Integration is achieved with no added process steps, providing an industry record low mask count 90nm CMOS system-on-chip technology with industry leading low leakage CMOS digital and RF performance, high voltage on-chip signal capability, and a $0.97\mu\text{m}^2$ SRAM cell. The key RF, analog and digital technology parameters are presented.