

# **A 100nm Copper/Low-K Bulk CMOS Technology with Multi Vt and Multi Gate Oxide Integrated Transistors for Low Standby Power, High Performance and RF/Analog System on Chip Applications**

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**Abstract:** We report a 100nm modular bulk CMOS technology platform with multi Vt and multi gate oxide integrated transistors that offers the flexibility of combining varied performance levels, off-state leakage, Vdd coupled with well biasing and power down/reduction techniques for low standby power, high performance, and RF/Analog SoC applications. The transistor performances are comparable or better than recently reported data at the 100nm technology node. This technology also features an all-layer copper/low-k (<3.0) interlayer dielectric backend for speed improvement and dynamic power reduction.