

# Abstracts

## The MSM5100/sup TM/ cdma2000 + AMPS + gpsOne/sup TM/ + Bluetooth multimode ASIC for 3G handsets

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*B.K. Butler, King-Chung Lai, K. Saints and B. Meagher. "The MSM5100/sup TM/ cdma2000 + AMPS + gpsOne/sup TM/ + Bluetooth multimode ASIC for 3G handsets." 2002 Radio Frequency Integrated Circuits (RFIC) Symposium 02. (2002 [RFIC]): 186A-186F.*

The MSM5100 ASIC forms the heart of a high-featured cdma2000 3G handset that is gpsOne position location capable. The gpsOne technology meets the accuracy requirements set by the FCC for E911 Phase II. This ASIC performs baseband processing for the spectrum of air interfaces supported: IS-2000 Release 0, IS-95A/B, AMPS, GPS, and Bluetooth 1.1. The ASIC itself is both a merging effort of two previous ASIC designs, MSM3300 and MSM5000, and the addition of new functionality. The new functionality includes USB speed enhancements and increased IS-2000 physical layer support. Also, several new VLSI challenges were met in creating this product, including our product in the 0.18 um process and integrated voltage regulators. Altogether, the MSM5100 makes a significant leap forward in 3G handset functionality.

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