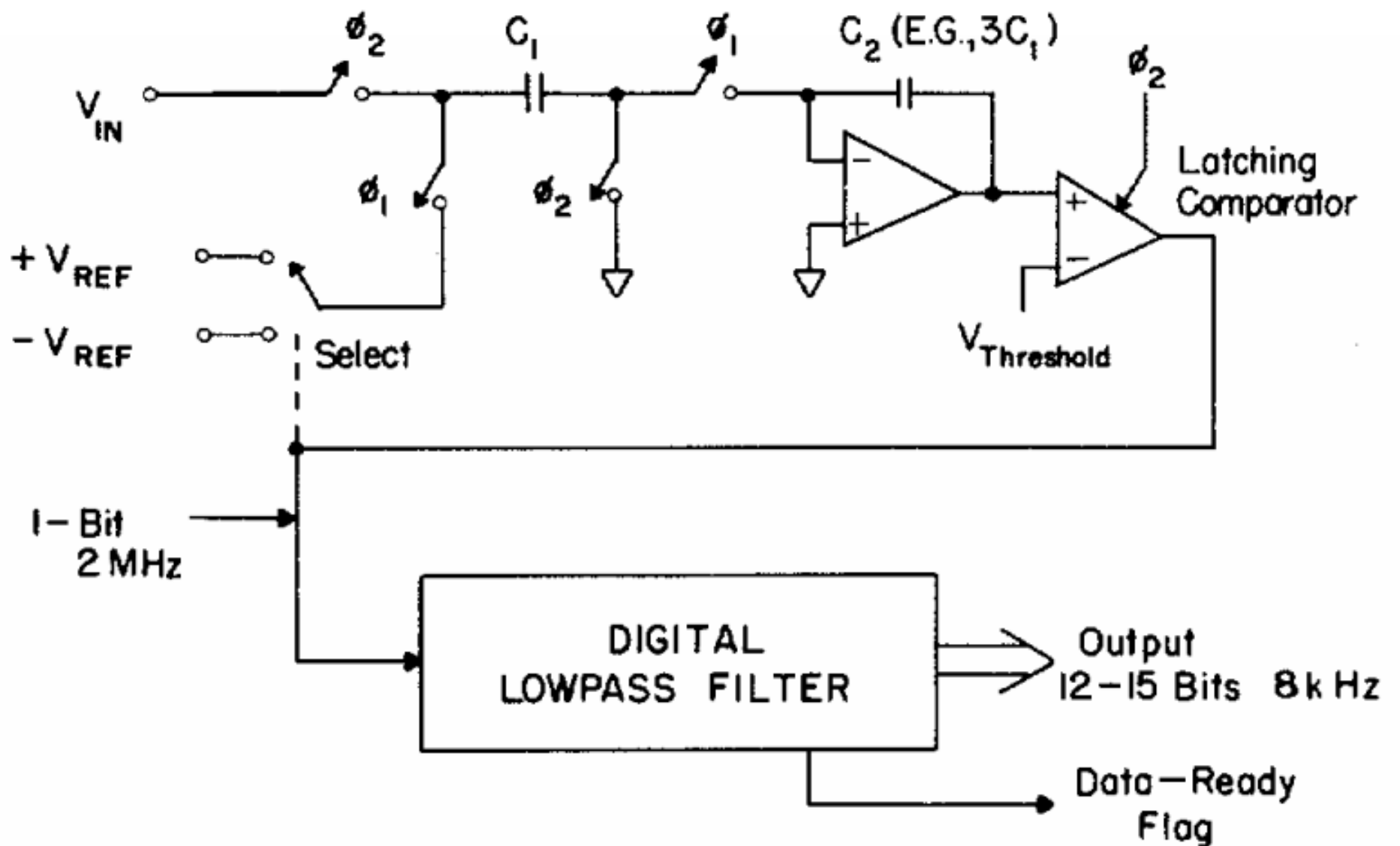


DELTA SIGMA ARRIVES AT ISSCC

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MOS ADC-Filter Combination That Does Not Require Precision Analog Components

WHILE EARLIER IMPLEMENTATIONS of delta-sigma modulators used discrete, bipolar, or passive grounded-capacitor MOS devices, this implementation is the first realized with a parasitic-insensitive switched-capacitor integrator. It achieves high resolution and dynamic range without precision analog components, thus allowing its implementation in a standard 5V digital MOS technology, with no special capacitor structure. Complex analog filtering is replaced with built-in mask-programmable digital filtering that benefits from continued technology scaling. Idle tones are attenuated with squarewave dither placed in the stopband of the decimation filter.

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