Abstracts

A New A/D Converter Using Surface Acoustic Waves

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A new analog to digital (A/D) converter is described. The analog signal is first converted into a frequency swept modulated signal by means of a surface acoustic wave (SAW) voltage controlled oscillator. On the same substrate, the acouatic beam is scattered by a multistrip reflective array arranged in a N-track filter bank, with N = 2/sup n/ for a n - bit converter. The output transducers are arranged in order to use the Gray code and a cheap logic restores the binary code. The first experiments on a multitrack 3 bit-converter working in the frequency range 144.5-151 MHz are reported. Such a device meets the requirements of moderate precision and relatively fast A/D converter. At last, potential capabilities-number of bits, conversion time, power supply, size, etc. . .-of these new devices are discussed.

❑ Return to main document.