TDA8764ATS/6:

Single 10 Bits 60 MHz

Product Feature Sheet

Features

- 10-bit resolution (binary or gray code)
- Sampling rate up to 60 MHz
- DC sampling allowed
- One clock cycle conversion only
- High signal-to-noise ratio over a large analog input frequency range (9.3 effective bits at 5 MHz full-scale input at fclk = 60 MHz)
- No missing codes guaranteed
- In-Range (IR) CMOS output
- TTL and CMOS levels compatible digital inputs
- 2.7 V to 3.6 V CMOS digital outputs
- Low-level AC clock input signal allowed
- External reference voltage regulator
- Power dissipation only 312 mW (typical)
- Low analog input capacitance, no buffer amplifier required
- No sample-and-hold circuit required

Typical Applications

- Video data digitizing
- Radar
- Transient signal analysis
- ΣΔ modulators
- Medical imaging
- Barcode scanner

Device Overview

The TDA8764ATS/6 is a 10-bit high-speed low-power Analog-to-Digital Converter (ADC) for professional video and other applications. It converts the analog input signal into 10-bit binary or gray coded digital words at a maximum sampling rate of 60 MHz. All digital inputs and outputs are Transistor-Transistor Logic (TTL) and CMOS compatible, although a low-level sine wave clock input signal is allowed.
The device requires an external source to drive its reference ladder.

Absolute Maximum Ratings:

Analog Supply Voltage	4.75 V to 5.25 V
Digital Supply Voltage	4.75 V to 5.25 V
Output Supply Voltage	2.7 V to 3.6 V
Analog Supply Current	37 mA
Digital Supply Current	40 mA
Output Supply Current	2.0 mA
Integral Non-Linearity	±0.8 LSB to ±2.0 LSB
Differential Non-Linearity	±0.35 LSB to ±0.9 LSB
Maximum Clock Frequency	60 MHz
Total Power Dissipation	411 mW

Block Diagram