SILICON360

TDA8766G:

Single 10 Bits ADC, Up to 20 MHz

Product Feature Sheet

Features

- 10-bit resolution
- 3.0 V to 5.25 V operation
- Sampling rate up to 20 MHz
- DC sampling allowed
- High signal-to-noise ratio over a large analog input frequency range (9.3 effective bits at 1.0 MHz; full-scale input at fclk = 20 MHz)
- In-Range (IR) CMOS output
- CMOS/Transistor-Transistor Logic (TTL) compatible digital inputs and outputs
- External reference voltage regulator
- Power dissipation only 53 mW (typical value)
- Low analog input capacitance, no buffer amplifier required
- Standby mode
- No sample-and-hold circuit required

Typical Applications

- Video data digitizing
- Camera
- Camcorder
- Radio communication
- Barcode scanner

Device Overview

The TDA8766G is a 10-bit high-speed Analog-to-Digital Converter (ADC) for professional video and other applications. It converts with 3.0 V to 5.25 V operation the analog input signal into 10-bit binary-coded digital words at a maximum sampling rate of 20 MHz. All digital inputs and outputs are CMOS compatible. A standby mode allows a reduction of the device power consumption to 4 mW.

Absolute Maximum Ratings:

Analog Supply Voltage	-0.3 V to +7.0 V
Digital Supply Voltage	-0.3 V to +7.0 V
Output Supply Voltage	-0.3 V to +7.0 V
Supply Voltage difference	-0.1 V to +4.0 V
Input Voltage	-0.3 V to +7.0 V
Peak-to-Peak Analog Input Voltage	V_{DDD} V
Output Current	10 mA
Storage Temperature	-55 °C to +150 °C
Ambient Temperature	-20 °C to +75 °C
Junction Temperature	150 °C

Block Diagram