

A 300ksps, Single-supply, Low-Power 12-Bit Serial-output ADC

FEATURES

- ◆ Alternate Source for MAX1285 and higher-speed upgrade to MAX1240 and MAX1241
- ◆ Single-Supply Operation: +2.7V to +3.6V
- ◆ DNL & INL: ± 1 LSB (max)
- ◆ 300ksps Sampling Rate
- ◆ Low Conversion-Mode Supply Current: 2.5mA @ 300ksps
- ◆ Low Supply Current in Shutdown: 2 μ A
- ◆ Internal Track-and-Hold
- ◆ Internal +2.5V Reference
- ◆ SPI/QSPI/MICROWIRE 3-Wire Serial-Interface
- ◆ 8-Pin SOIC Package

APPLICATIONS

Process Control and Factory Automation
Data and Low-frequency Signal Acquisition
Portable Data Logging
Pen Digitizers & Tablet Computers
Medical Instrumentation
Battery-powered Instruments

DESCRIPTION

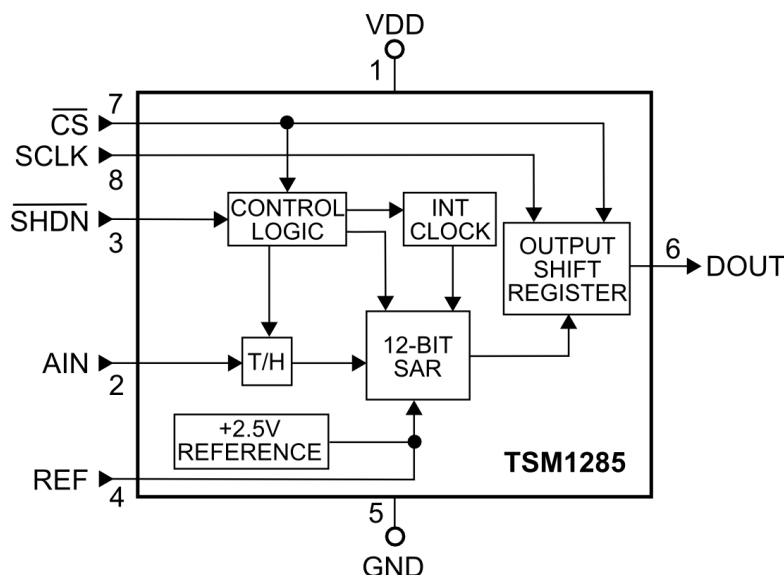
The TSM1285 – a single-supply, single-channel, 12-bit analog-to-digital converter (ADC) - is an alternate source for the MAX1285 and a higher-speed upgrade to the MAX1240 and MAX1240 ADCs. The TSM1285 combines a high-bandwidth track-and-hold (T/H), a high-speed serial digital interface, an internal +2.5V reference, and low conversion-mode power consumption. The TSM1285 operates from a single +2.7V to +3.6V supply and draws less than 2.5mA at 300ksps.

Connecting directly to any SPI™/QSPI™/MICROWIRE™ microcontrollers and other interface-compatible computing devices, the TSM1285's 3-wire serial interface is easy to use and doesn't require separate, external logic. An external serial-interface clock controls the TSM1285's conversion process and its output shift register operation.

In PCB-space-conscious, low-power remote-sensor and data-acquisition applications, the TSM1285 is an excellent choice for its low-power, ease-of-use, and small-package-footprint attributes.

The TSM1285BC is fully specified over the 0°C to +70°C temperature range. TSM1285BE is fully specified over the -40°C to +85°C temperature range. Both products are available in a 8-pin SOIC package.

FUNCTIONAL BLOCK DIAGRAM



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TSM1285 Product Brief



PACKAGE/ORDERING INFORMATION

<div>TOP VIEW</div> <div><div>VDD1</div><div>AIN2</div><div>SHDN3</div><div>REF4</div><div>TSM1285</div><div>8SCLK</div><div>7CS</div><div>6DOUT</div><div>5GND</div></div> <div>8-pin SOIC SA Package</div>				
ORDER NUMBER	PART MARKING	TEMPERATURE RANGE	CARRIER	QUANTITY
TSM1285BCSA+	T1285B	0°C to 70°C	Tube	97
TSM1285BCSA+T			Tape & Reel	2500
TSM1285BESA+	T1285BE	-40°C to +85°C	Tube	97
TSM1285BESA+T			Tape & Reel	2500

Lead-free Program: Touchstone Semiconductor supplies only lead-free packaging.

Consult Touchstone Semiconductor for products specified with wider operating temperature ranges.

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