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## AD9233 12-Bit, 80 MSPS/105 MSPS/125 MSPS, 1.8 V Analog-to-Digital Converter

<b>Data Sheets</b> <ul style="list-style-type: none"> <li><a href="#">Rev A, 08/2006 (pdf, 1262K)</a> <a href="#">Email PDF</a></li> <li><a href="#">Lead(Pb) - Free Data</a> <a href="#">(Data Sheet Help)</a></li> </ul>	<b>Application Notes</b>	<b>Evaluation Boards</b>	<b>Price, Packaging, and Availability</b>
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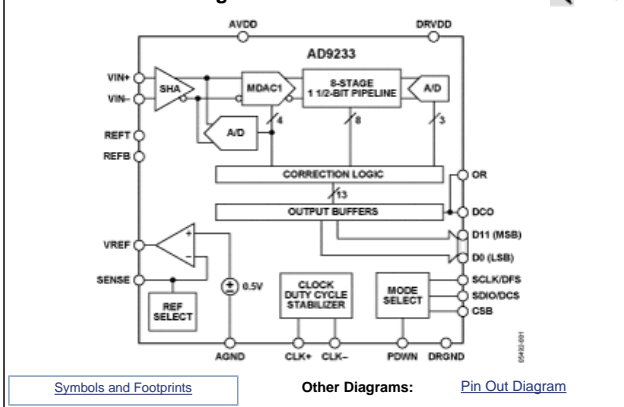
### Product Description

The AD9233 is a monolithic, single 1.8 V supply, 12-bit, 80 MSPS/ 105 MSPS/125 MSPS analog-to-digital converter (ADC), featuring a high performance sample-and-hold amplifier (SHA) and on-chip voltage ...[More](#)

### Specifications

<b>Resolution (Bits)</b>	12bit
<b>T-Put Rate</b>	125MSPS
<b># Chan</b>	1
<b>Supply V</b>	Multi(+1.8Anlg, +3.3Dig)
<b>Pwr Diss (max)</b>	425mW
<b>Interface</b>	Par
<b>Ain Range</b>	(2Vref) p-p, 2 V p-p
<b>SNR (dB)</b>	69.5dB
<b>Pkg Type</b>	CSP
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### Functional Block Diagram



### Features

- 1.8 V analog supply operation
- 1.8 V to 3.3 V output supply
- SNR = 69.5 dBc (70.5 dBFS) to 70 MHz input
- SFDR = 85 dBc to 70 MHz input
- Low power: 395 mW @ 125 MSPS
- Differential input with 650 MHz bandwidth
- On-chip voltage reference and sample-and-hold amplifier
- DNL =  $\pm 0.15$  LSB
- Flexible analog input: 1 V p-p to 2 V p-p range
- Offset binary, Gray code, or twos complement data format
- Data output clock and clock duty cycle stabilizer
- Serial port control
- Built-in selectable digital test pattern generation
- Programmable clock and data alignment

### New A/D Converters

- [AD7767](#) - 24-Bit, 8.5 mW, 109 dB, 128/64/32 kSPS ADCs
- [AD7980](#) - 16-Bit, 1 MSPS PuISAR<sup>®</sup> ADC in MSOP/QFN
- [AD7766](#) - 24-Bit, 8.5 mW, 109 dB, 128/64/32 kSPS ADCs
- [AD7366-5](#) - True Bipolar Input, 12-Bit, 2-Channel, Simultaneous Sampling SAR ADC

### Design Tools

- [ADIsimADC](#)
- [IBIS Models](#)
- [Evaluation Boards/Tools](#)

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- [Seminars & Webcasts](#)
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### Resources

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### Signal Chains

### Design Tools

#### [High-Speed ADC FIFO Evaluation Kit](#)

There are two [high speed ADC evaluation kits](#) available. The FIFO-based data acquisition board has a 32kB FIFO depth and acquires up to 133MSPs on each channel. The FPGA-based data acquisition board has a 64kB FIFO depth and acquires up to 800MSPs on each channel.

#### [ADIsimADC](#)

ADIsimADC simulates behavior using many critical specifications of data converters, including offset, gain, sample rate, bandwidth, jitter, latency, both AC and DC linearity. These models provide a way to validate performance of the converter at the system level to determine the applicability of a selected device. Users can run real-time FFT and time-domain analysis; analyze SNR, SINAD, SFDR, and harmonics; export data for additional analysis.

[Interactive Signal Chains](#)

### Price, Packaging, and Availability

 [Print Table](#)

#### AD9233 Model Options

Model	Status	Package	Pins	Temp Range	Price* (1000 pcs.)	Available	RoHS Compliant	Samples Cart	Purchase Cart
AD80141BCPZ-140	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	Ind	\$17.40	9/21/2007	Y <a href="#">Material Declaration</a>	<a href="#">Add to Cart</a>	<a href="#">Add to Cart</a>
AD9233-105EB	<b>LAST TIME BUY</b>	EVALUATION BOARDS	48	TBD	-	-	N	<a href="#">Contact ADI</a>	<a href="#">Contact ADI</a>
AD9233-105EBZ	Prodn	EVALUATION BOARDS	48	TBD	-	-	Y	<a href="#">Contact ADI</a>	<a href="#">Add to Cart</a>
AD9233-125EBZ	Prodn	EVALUATION BOARDS	48	TBD	\$200.00	9/21/2007	Y	<a href="#">Contact ADI</a>	<a href="#">Add to Cart</a>
AD9233BCPZ-105	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	Ind	\$22.75	9/21/2007	Y <a href="#">Material Declaration</a>	<a href="#">Add to Cart</a>	<a href="#">Add to Cart</a>
AD9233BCPZ-125	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	Ind	\$26.95	9/21/2007	Y <a href="#">Material Declaration</a>	<a href="#">Add to Cart</a>	<a href="#">Add to Cart</a>
AD9233BCPZ-80	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	TBD	\$16.70	9/21/2007	Y <a href="#">Material Declaration</a>	<a href="#">Add to Cart</a>	<a href="#">Add to Cart</a>
AD9233BCPZRL7-105	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	Ind	\$22.75	9/21/2007	Y <a href="#">Material Declaration</a>	<a href="#">Contact ADI</a>	<a href="#">Add to Cart</a>
AD9233BCPZRL7-125	Prodn	<a href="#">48 ld LFCSP (7x7x.85mm w/4.1mm Pad)</a>	48	Ind	\$26.95	10/12/2007	Y <a href="#">Material Declaration</a>	<a href="#">Contact ADI</a>	<a href="#">Add to Cart</a>

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#### Parametric Selection Table

Part#	Res	Throughput Rate	# of Inputs	Operating Pwr Diss
<a href="#">AD9233-125</a>	12	125MSPS	1	425mW
<a href="#">AD9230-170</a>	12	170MSPS	1	407mW
<a href="#">AD9211-200</a>	10	200MSPS	1	356mW
<a href="#">AD9230-250</a>	12	250MSPS	1	463mW
<a href="#">AD9430-170</a>	12	170MSPS	1	1.43W
<a href="#">AD9433-125</a>	12	125MSPS	1	1.5W
<a href="#">AD9233-105</a>	12	105MSPS	1	350mW
<a href="#">AD9430-210</a>	12	210MSPS	1	1.7W
<a href="#">AD9236</a>	12	80MSPS	1	411mW
<a href="#">AD9237-65</a>	12	65MSPS	1	270mW
<a href="#">AD9235-65</a>	12	65MSPS	1	350mW

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