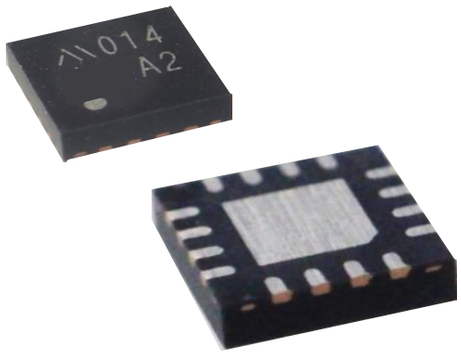
MITSUMI

PRELIMINARY

16-, 14-, 12-bit 2-ch successive approximation analog-to-digital converter IC (1000 Ksps)

MM4032A16/14/12



Outline

MM4032 is a sophisticated successive approximation analog-to-digital converter IC with a built-in reference voltage supply, supporting pseudo-differential inputs.
Three types (16-, 14-, and 12-bit) are provided depending on the intended use.
Simultaneous sampling of analog inputs through two channels is available.
The maximum data sampling rate is 1000 Ksps, controlled by an external clock.
This IC supports a serial interface.

Applications

- Industrial equipment
- Measuring instrument
- Motor control
- Medical equipment
- Robot

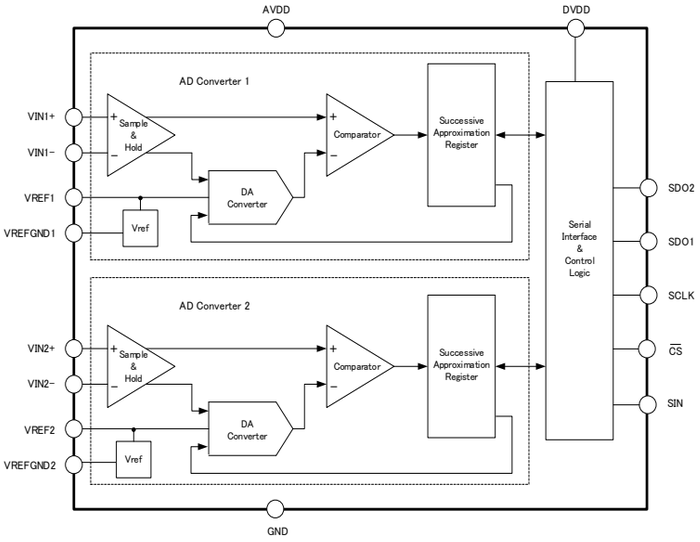
Features

① Power supply for analog 5V,Power supply for digital: 1.8 to 5 V
② 16-, 14-, and 12-bit successive approximation ADC
③ Simultaneous sampling and conversion through two channels
④ Two channels of pseudo-differential analog input
⑤ Sampling rate: 1000 ksps at the maximum
⑥ Use of internal / external reference voltage
⑦ AVDD current consumption: 8.5mA typ.
(use of internal reference voltage for conversion)
⑧ Conversion mode setting (setting of input range, selection of output sequence)

Specification

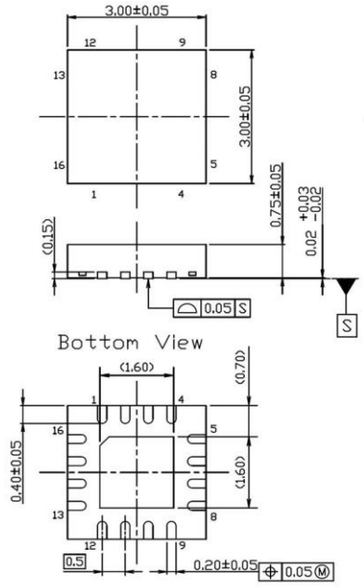
Item	Specification	Unit
Operation temperature	-40～125	℃
AVDD power supply	4.5～5.5	V
DVDD power supply	1.65～5.5	V
Internal reference power supply	2.5 (internal)	V
Current consumption (Normal)	8.5	mA
Current consumption (Standby)	5.5	mA
Differential nonlinearity error	12bit:±1, 14bit:±1, 16bit:-1~2	LSB
Integral nonlinearity error	12bit:±1, 14bit:±1.5, 16bit:±2.5	LSB
Offset error	12bit:±2, 14bit:±1, 16bit:±1	mV
Gain error	±0.1	%FS

Block diagram



Package

- Dimensions (SQFN-16A)



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December 2021 Rev.2