

Single-Ended, Analog-Input 24Bit, 96kHz Stereo ADC

DESCRIPTION

The **FH1808** device is a high-performance, low-cost, single-chip, stereo analog-to-digital converter (ADC) with single-ended analog voltage input. The FH1808 device uses a delta-sigma modulator with 64-times over sampling and includes a digital decimation filter and high-pass filter that removes the dc component of the input signal. For various applications, the FH1808 device supports master and slave mode and two data formats in serial audio interface.

The device is available in TSSOP-14L package.

APPLICATIONS

- Digital TV
- MD Player
- CD Recorder
- DVD Recorder
- Multitrack Receiver
- AV Amplifier or Receiver
- Electric Musical Instrument



FEATURES

- 24Bit Delta-Sigma Stereo ADC
- Single-Ended Voltage Input: 3.0Vp-p
- High Performance
 - ▲ THD+N: -90dB (Typical)
 - ▲ SNR: 99dB (Typical)
 - ▲ Dynamic Range: 99dB (Typical)
- Flexible PCM Audio Interface
 - ▲ Master-or Slave-Mode Selectable
 - ▲ Data Formats: 24Bit I²S, 24Bit Left-Justified
- Power Down and Reset by Halting System Clock
- Analog Antialias LPF Included
- Sampling Rate: 8kHz - 96kHz
- System Clock: 256 f_s, 384 f_s, 512 f_s
- Resolution: 24Bits
- Dual Power Supplies
 - ▲ 5.0V for Analog
 - ▲ 3.3V for Digital
- Package type: TSSOP-14L

Typical Application

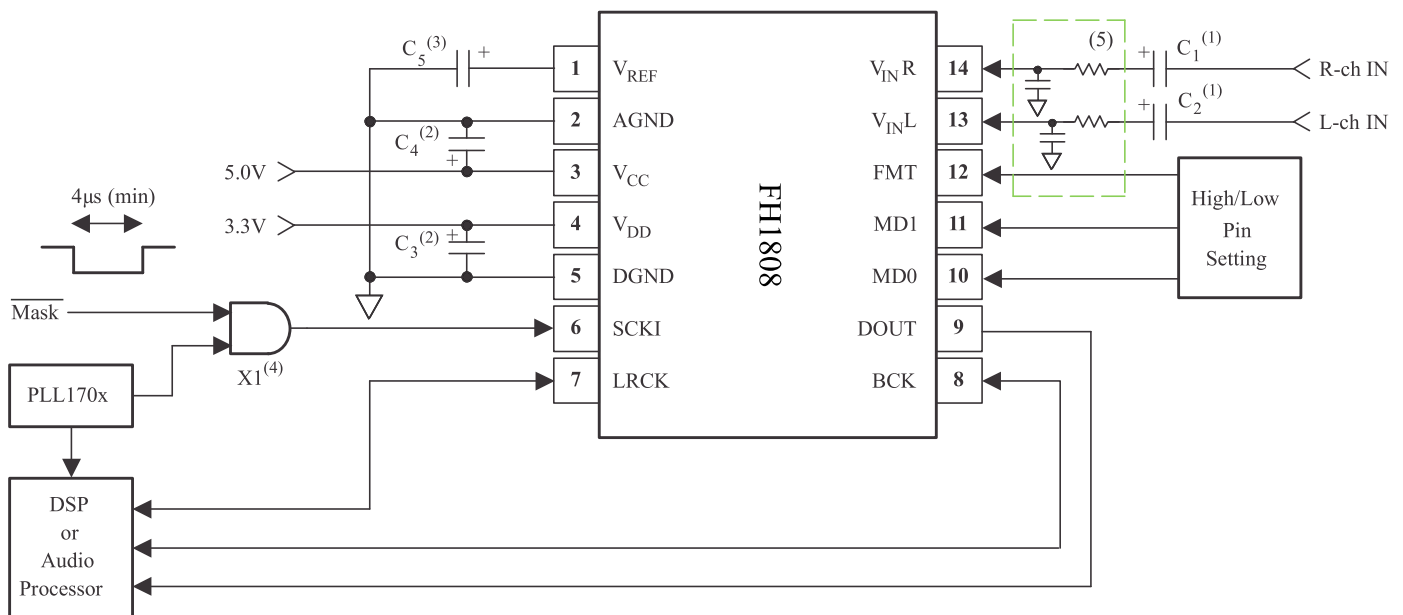
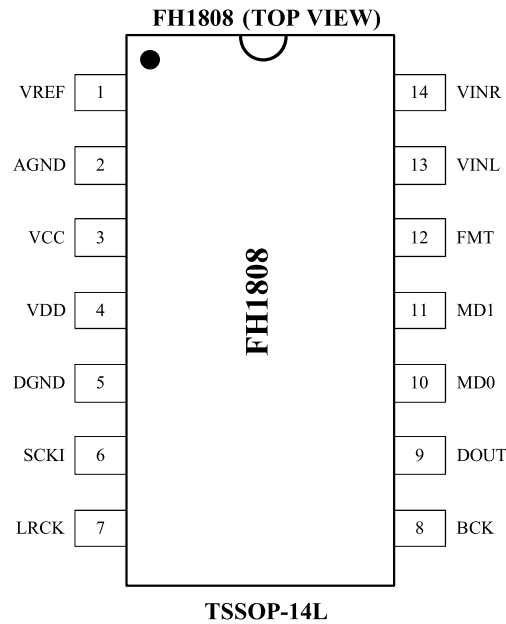


Figure 1. Typical Circuit Connection Diagram

PIN CONFIGURATION



PIN FUNCTION

PIN No.	NAME	I/O ¹	Description
1	VREF	-	Reference-voltage decoupling (= 0.5VCC).
2	AGND	-	Analog GND
3	VCC	-	Analog power supply, 5.0V
4	VDD	-	Digital power supply, 3.3V
5	DGND	-	Digital GND
6	SCKI	I	System clock input; 256 f _s , 384 f _s or 512 f _s ²
7	LRCK	I/O	Audio-data latch-enable input or output ³
8	BCK	I/O	Audio-data bit-clock input or output ³
9	DOUT	O	Audio-data digital output
10	MD0	I	Audio-interface mode select 0 ⁴
11	MD1	I	Audio-interface mode select 1 ⁴
12	FMT	I	Audio-interface format select ⁴
13	INL	I	Analog input, L-channel
14	INR	I	Analog input, R-channel

¹ I: input O: output G: GND P: Power

² Schmitt-trigger input, 5.0V tolerant

³ Schmitt-trigger input with internal pulldown (100-kΩ, typical)

⁴ Schmitt-trigger input with internal pulldown (100-kΩ, typical), 5V tolerant

ORDERING INFORMATION

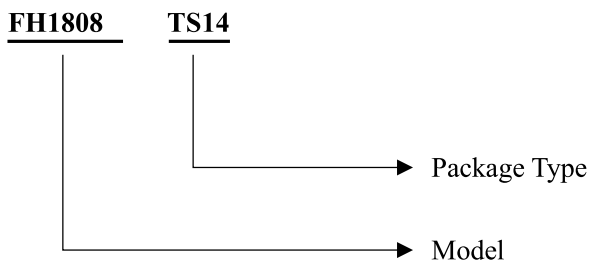
Part Number	Voltage Range	Features	Operating Temperature	Package Type	Top Mark	SPQ
FH1808TS14	4.5~5.0V(Analog) 2.7~3.6V(Digital)	<ul style="list-style-type: none"> • 24Bit ADC • THD+N: -90dB • SNR: 99dB • Dynamic Range: 99dB • Rate: 8kHz ~ 96kHz • Clock: 256fs/384fs/512fs 	-40°C to 85°C	TSSOP-14L	FH1808 YY MM LL	3000PCS/Reel

Note:

- **FH1808** devices are Pb-free and RoHs compliant.
- The surface prints of our semiconductor devices are subject to change during the production process and do not involve changes in electrical parameters, and we will not separately state the notice.
- If you have any other custom purchase needs, please contact our sales department.
- ForDevices reserves the right to amend and legally interpret the electrical parameters of this chip device.



Part Number



ESD SENSITIVITY CAUTION

ESD damage can range from subtle performance degradation to complete device failure. Precision integrated circuits may be more susceptible to damage because very small parametric changes could cause the device not to meet its published specifications.



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▲ Update by Aug.2021