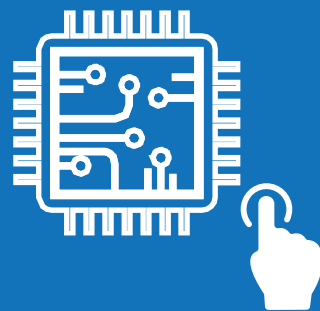


类比半导体 产/品/选/型/手/册

Product selection guide



6月
2022

上海类比半导体技术有限公司
Analog Semiconductor Technology Co., Ltd.

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公司简介

About us

类比半导体为一家模拟及数模混合芯片和解决方案供应商，公司成立于 2018 年，由一批来自于国际顶尖半导体公司的本土工程师创建。总部位于上海，在上海张江、临港、苏州、深圳、西安、北京分别设有研发和技术支持中心。公司专注于信号链、电源管理、MCU/DSP 等领域的芯片设计，产品主要面向工业、通讯、医疗、汽车等市场，类比的愿景和使命是成为一家靠谱的芯片设计公司，为世界科技化智能化提供最底层的芯片支持。

AnalogySemi is a supplier of analog and digital-analog hybrid chips and solutions. Established in 2018 by a group of local engineers from top international semiconductor companies, the company is headquartered in Shanghai, and has R&D and technical support centers in Shanghai Zhangjiang, Shanghai Lingang, Suzhou, Shenzhen, Xi'an, and Beijing. The company is dedicated to chip design in the signal chain, power management, MCU/DSP, and other fields. The products aim for industrial, communication, medical, automotive, and other markets. AnalogySemi's vision and mission is to become a reliable chip design company and provides the lowest level chip support for the world technology and intelligence.

电流采样放大器



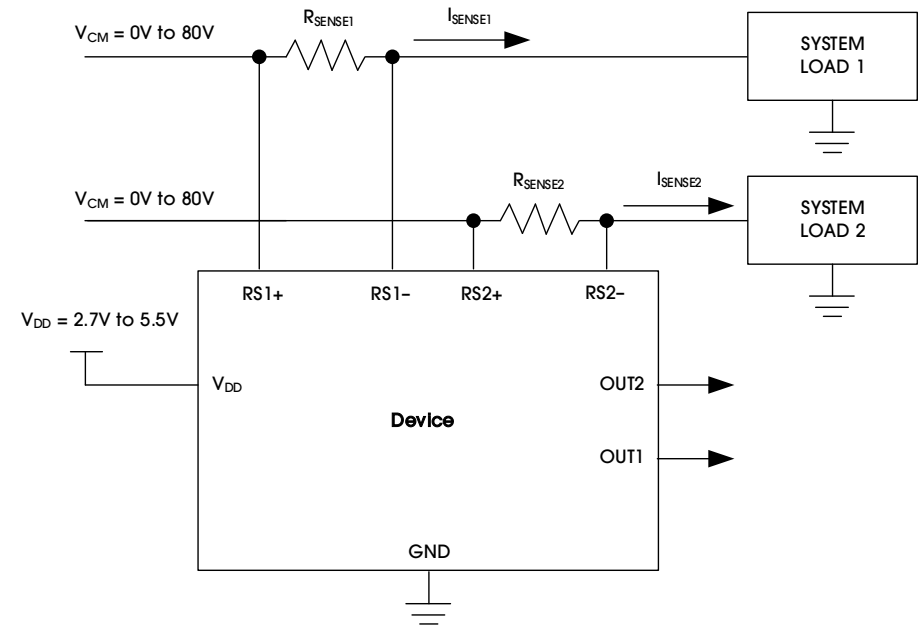
Current Sense Amplifier

Overview

Current sense amplifier (CSA) has precision accuracy specifications of V_{OS} less than $10\mu V$ (typ) and gain error less than 0.1% (max). Varied between both single and dual channels, the CSA features a wide input common-mode voltage range from 0V to 80V, sensing both directional and bidirectional current with 90kHz of small signal bandwidth, which makes it ideal for interfacing with a SAR ADC for multichannel multiplexed data acquisition systems.

电流采样放大器具有高精度，典型失调 10 微伏，最大增益误差 0.1%。提供单通道或者双通道产品，宽共模范围达 0-80 伏，能测量单向和双向电流，小信号带宽 90 千赫兹，是多通道逐次转换型数模转换器构成的数据采集系统理想的选择。

Block Diagram





电流采样放大器

Current Sense Amplifier

Order Number 供货型号	CH (#) 通道	Input Bias (Max) (μA) 输入偏置电流	V _{os} (Typ) (μV) 失调电压	Common-Mode Range (V) 共模电压输入范围	CMRR (Min) (dB) 共模抑制比	V _{cc} (V) 供电电压	I _q /CH (Typ) (μA) 每通道静态电流	BW (kHz) 带宽	Gain (Typ) 增益	Gain Error (Max) (%) 增益误差	OP. Temp (°C) 工作温度范围	Bidirectional 双向电流检测	Package 封装	Rating 等级	Status 状态
CSA2102LAMSOP8	2	0.2	10	0-80	125	2.7-5.5	300	60	10	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2102MAMSOP8	2	0.2	10	0-80	125	2.7-5.5	300	60	20	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2102NAMSOP8	2	0.2	10	0-80	125	2.7-5.5	300	60	50	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2102PAMSOP8	2	0.2	10	0-80	125	2.7-5.5	300	60	100	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2202LAMSOP8	2	0.2	10	0-76	125	2.7-5.5	300	60	10	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2202MAMSOP8	2	0.2	10	0-76	125	2.7-5.5	300	60	20	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2202NAMSOP8	2	0.2	10	0-76	125	2.7-5.5	300	60	50	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2202PAMSOP8	2	0.2	10	0-76	125	2.7-5.5	300	60	100	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2302LAMSOP8	2	0.2	10	0-76	125	2.7-5.5	500	90	10	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2302MAMSOP8	2	0.2	10	0-76	125	2.7-5.5	500	90	20	0.1	-40-125	No	MSOP-8	Industry	Production
CSA2302NAMSOP8	2	0.2	10	0-76	125	2.7-5.5	500	90	50	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2302PAMSOP8	2	0.2	10	0-76	125	2.7-5.5	500	90	100	0.1	-40-125	No	MSOP-8	Industry	Sample
CSA2402LAMSOP8	2	0.2	10	0-80	125	2.7-5.5	500	90	10	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2402MAMSOP8	2	0.2	10	0-80	125	2.7-5.5	500	90	20	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2402NAMSOP8	2	0.2	10	0-80	125	2.7-5.5	500	90	50	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA2402PAMSOP8	2	0.2	10	0-80	125	2.7-5.5	500	90	100	0.1	-40-125	No	MSOP-8	Industry	Develop
CSA220LASOT235	1	0.2	10	0-76	130	2.7-5.5	300	60	10	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA220MASOT235	1	0.2	10	0-76	130	2.7-5.5	300	60	20	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA220NASOT235	1	0.2	10	0-76	130	2.7-5.5	300	60	50	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA220PASOT235	1	0.2	10	0-76	130	2.7-5.5	300	60	100	0.1	-40-125	No	SOT23-5	Industry	Sample



电流采样放大器

Current Sense Amplifier

Order Number 供货型号	CH (#) 通道	Input Bias (Max) (μA) 输入偏置电流	V _{os} (Typ) (μV) 失调电压	Common-Mode Range (V) 共模电压输入范围	CMRR (Min) (dB) 共模抑制比	V _{cc} (V) 供电电压	I _q /CH (Typ) (μA) 每通道静态电流	BW (kHz) 带宽	Gain (Typ) 增益	Gain Error (Max) (%) 增益误差	OP. Temp (°C) 工作温度范围	Bidirectional 双向电流检测	Package 封装	Rating 等级	Status 状态
CSA221LASOIC8	1	0.2	10	0-76	130	2.7-5.5	300	60	10	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA221MASOIC8	1	0.2	10	0-76	130	2.7-5.5	300	60	20	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA221NASOIC8	1	0.2	10	0-76	130	2.7-5.5	300	60	50	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA221PASOIC8	1	0.2	10	0-76	130	2.7-5.5	300	60	100	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA221LATSSOP8	1	0.2	10	0-76	130	2.7-5.5	300	60	10	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA221MATSSOP8	1	0.2	10	0-76	130	2.7-5.5	300	60	20	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA221NATSSOP8	1	0.2	10	0-76	130	2.7-5.5	300	60	50	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA221PATSSOP8	1	0.2	10	0-76	130	2.7-5.5	300	60	100	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA230LASOT235	1	0.2	10	0-76	130	2.7-5.5	500	90	10	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA230MASOT235	1	0.2	10	0-76	130	2.7-5.5	500	90	20	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA230NASOT235	1	0.2	10	0-76	130	2.7-5.5	500	90	50	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA230PASOT235	1	0.2	10	0-76	130	2.7-5.5	500	90	100	0.1	-40-125	No	SOT23-5	Industry	Sample
CSA231LASOIC8	1	0.2	10	0-76	130	2.7-5.5	500	90	10	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA231MASOIC8	1	0.2	10	0-76	130	2.7-5.5	500	90	20	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA231NASOIC8	1	0.2	10	0-76	130	2.7-5.5	500	90	50	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA231PASOIC8	1	0.2	10	0-76	130	2.7-5.5	500	90	100	0.1	-40-125	Yes	SOIC-8	Industry	Sample
CSA231LATSSOP8	1	0.2	10	0-76	130	2.7-5.5	500	90	10	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA231MATSSOP8	1	0.2	10	0-76	130	2.7-5.5	500	90	20	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA231NATSSOP8	1	0.2	10	0-76	130	2.7-5.5	500	90	50	0.1	-40-125	Yes	TSSOP8	Industry	Sample
CSA231PATSSOP8	1	0.2	10	0-76	130	2.7-5.5	500	90	100	0.1	-40-125	Yes	TSSOP8	Industry	Sample



电流功率监视器

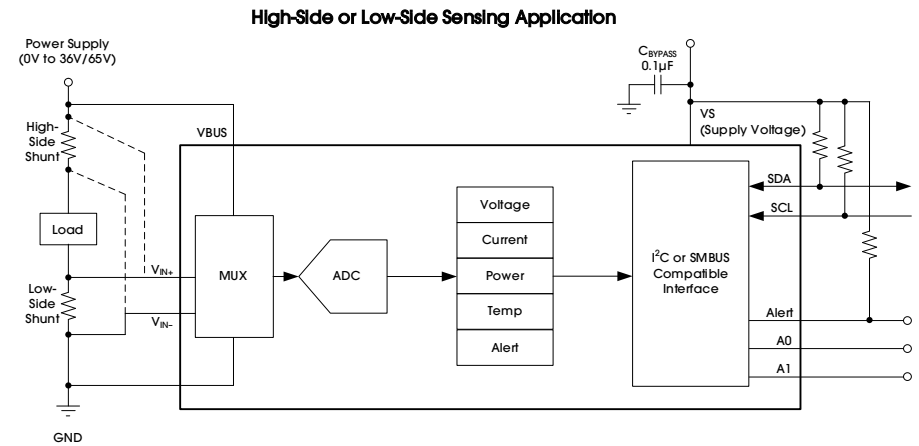
Current Power Monitor

Overview

The CSD20x senses the bi-directional current on a high common-mode bus and monitors the bus voltage with an I²C™- or SMBUS-compatible digital interface. The programmable calibration value, conversion times, averaging, and an internal multiplier make it easy to read out current, bus voltage, and power values directly from registers. All these features make it perfect for applications like servers, telecom equipment, and test equipment, etc.

CSD20x 是一款同时监控高共模电压总线上的双向电流和总线电压的数字型 (I²C™或 SMBUS) 监控器。其可编程的校准值、转换时间、平均值和内部乘法器可以轻松地直接从寄存器中读出电流、总线电压和功率值。所有这些特性使其非常适合服务器、电信设备和测试设备等应用。

Block Diagram





电流功率监视器

Current Power Monitor

Order Number	Bits (#)	Bus Width (Bits)	Conversion Time (μs)	Interface	V _{CM} (V)	V _s (V)	I _q (Typ) (μA)	Shunt V _{OS} (Typ) (μV)	Shunt Gain Error Drift (Typ) (ppm/°C)	Shunt PSRR (Typ) (μV/V)	CMRR (min) (dB)	Temp Sensor	OP. Temp (°C)	Rating	Package	Status
供货型号	分辨率	总线电压位宽	转换时间	接口	输入共模电压	供电电压	静态电流	Shunt 偏移电压	Shunt 增益误差温漂	Shunt 电源抑制比	共模抑制比	温度传感器	工作温度范围	等级	封装	状态
CSD201AMSOP10	12	11	84-532	I ² C or SMBus	0-26	2.7-5.5	350	±1.4	10	2	120	N	-40-125	Industry	MSOP-10	Sample
CSD202AMSOP10	16	15	140-8244	I ² C or SMBus	0-36	2.7-5.5	347	±1.4	6	0.36	140	N	-40-125	Industry	MSOP-10	Sample
CSD203LAMSOP10	16	15	140-8261	I ² C or SMBus	0-36	2.7-5.5	347	±1.21	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD203MAMSOP10	20	19	148-8276	I ² C or SMBus	0-36	2.7-5.5	347	±0.7	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD203HAMSOP10	16	15	140-8261	I ² C or SMBus	0-65	2.7-5.5	359	±1.21	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD203PAMSOP10	20	19	148-8276	I ² C or SMBus	0-65	2.7-5.5	359	±0.7	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD205KAMSOP10	16	15	140-8244	SPI	0-36	2.7-5.5	347	±1.4	6	0.36	140	N	-40-125	Industry	MSOP-10	Sample
CSD205LAMSOP10	16	15	140-8261	SPI	0-36	2.7-5.5	355	±1.21	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD205MAMSOP10	20	19	148-8276	SPI	0-36	2.7-5.5	355	±0.7	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD205HAMSOP10	16	15	140-8261	SPI	0-65	2.7-5.5	365	±1.21	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample
CSD205PAMSOP10	20	19	148-8276	SPI	0-65	2.7-5.5	365	±0.7	6	0.36	140	Y	-40-125	Industry	MSOP-10	Sample



低功耗放大器

Low-Power Amplifier

Overview

The lowest power operational amplifiers in the industry!

With just 240nA of quiescent current and operating voltage ranged between 1.6V and 5.5V, the AnalogSemi operational amplifiers are applicable to most battery-powered circumstances and stable even without additional boost topology. Additionally, the Enable feature allows greater power saving.

Keeping low power consumption and 4kHz of bandwidth, the amplifiers work rather well with equipment such as CO detectors, smoke detectors, and PIR motion detectors. In addition, the low power operational amplifiers have CMOS input stages with typically femto-amp bias currents.

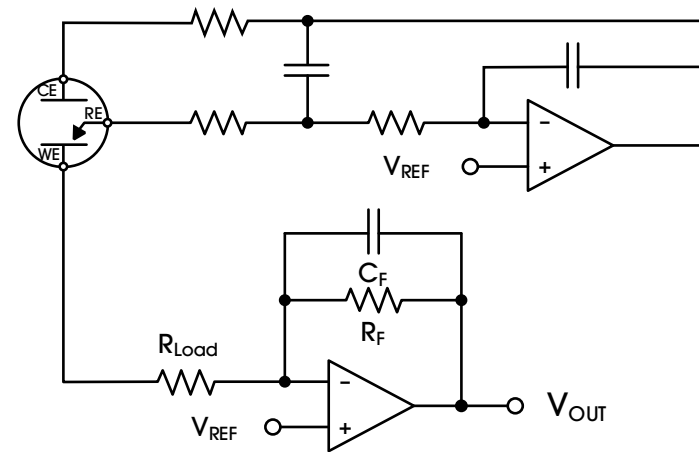
业界最低功耗的运算放大器!

工作电压范围 1.6 伏到 5.5 伏，静态功耗仅 240 纳安，此运放可用在电池供电系统中且无需升压电路。同时提供使能功能，进一步节省电量。

在超低功耗的同时达到 4 千赫兹带宽，适用于一氧化碳检测、烟感检测、红外释热检测。此外，低功耗运放采用互补金属氧化物场效应晶体管作为输入级，具备飞安级输入偏置电流。

Block Diagram

Nanopower Amplifier in Electrochemical Sensor





低功耗放大器

Low-Power Amplifier

Order Number	CH (#)	I _Q /CH (Typ) (μA)	Input Bias (Typ) (pA)	V _{OS} (Max) (μV)	V _{OS} Drift (Typ) (μV/°C)	CMRR (Typ) (dB)	V _{CC} (V)	GBW (MHz)	Slew Rate (Typ) (V/μs)	Gain (Typ) (dB)	V _n (Typ) (nV/√Hz)	Rail-to-Rail	Features	OP. Temp (°C)	Rating	Package	Status
供货型号	通道	静态电流/通道	输入偏置电流	失调电压	失调电压漂移	共模抑制比	供电电压	带宽	压摆率	增益	噪声谱密度	轨到轨	特性	工作温度范围	等级	封装	状态
OPA501BSOT235	1	0.24	0.1	2200	3.5	95	1.6-5.5	0.004	0.0013	120	347	IN/OUT		-40-125	Industry	SOT23-5	Production
OPA503ASOT235	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOT23-5	Production
OPA504ASOT236	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	SOT23-6	Production
OPA505ASOT235	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOT23-5	Production
OPA506ASOT236	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	SOT23-6	Production
OPA501BSOIC8	1	0.24	0.1	2200	3.5	95	1.6-5.5	0.004	0.0013	120	347	IN/OUT		-40-125	Industry	SOIC8	Develop
OPA503ASOIC8	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOIC8	Develop
OPA504ASOIC8	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	SOIC8	Develop
OPA505ASOIC8	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOIC8	Develop
OPA506ASOIC8	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	SOIC8	Develop
OPA501BMSOP8	1	0.24	0.1	2200	3.5	95	1.6-5.5	0.004	0.0013	120	347	IN/OUT		-40-125	Industry	MSOP8	Develop
OPA503AMSOP8	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	MSOP8	Develop
OPA504AMSOP8	1	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	MSOP8	Develop
OPA505AMSOP8	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	MSOP8	Develop
OPA506AMSOP8	1	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	MSOP8	Develop
OPL503ASOT235	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOT23-5	Sample
OPL504ASOT236	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	SOT23-6	Sample
OPL505ASOT235	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOT23-5	Sample
OPL506ASOT236	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	SOT23-6	Sample
OPL503ASOIC8	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOIC8	Develop



低功耗放大器

Low-Power Amplifier

Order Number	CH (#)	I _Q /CH (Typ) (μA)	Input Bias (Typ) (pA)	V _{os} (Max) (μV)	V _{os} Drift (Typ) (μV/°C)	CMRR (Typ) (dB)	V _{CC} (V)	GBW (MHz)	Slew Rate (Typ) (V/μs)	Gain (Typ) (dB)	V _n (Typ) (nV/rtHz)	Rail-to-Rail	Features	OP. Temp (°C)	Rating	Package	Status
供货型号	通道	静态电流/通道	输入偏置电流	失调电压	失调电压漂移	共模抑制比	供电电压	带宽	压摆率	增益	噪声谱密度	轨到轨	特性	工作温度范围	等级	封装	状态
OPL504ASOIC8	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	SOIC8	Develop
OPL505ASOIC8	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOIC8	Develop
OPL506ASOIC8	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	SOIC8	Develop
OPL503AMSOP8	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	MSOP8	Develop
OPL504AMSOP8	1	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT	Enable	-40-125	Industry	MSOP8	Develop
OPL505AMSOP8	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	MSOP8	Develop
OPL506AMSOP8	1	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT	Enable	-40-125	Industry	MSOP8	Develop
OPA5012BSOIC8	2	0.24	0.1	2200	3.5	95	1.6-5.5	0.004	0.0013	120	347	IN/OUT		-40-125	Industry	SOIC8	Develop
OPA5032ASOIC8	2	0.57	0.1	210	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOIC8	Develop
OPA5052ASOIC8	2	3.2	0.1	260	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOIC8	Develop
OPL5032ASOIC8	2	0.57	0.1	2000	1.2	95	1.6-5.5	0.011	0.003	120	214	IN/OUT		-40-125	Industry	SOIC8	Develop
OPL5052ASOIC8	2	3.2	0.1	2000	1	95	1.6-5.5	0.065	0.02	120	100	IN/OUT		-40-125	Industry	SOIC8	Develop



零温漂放大器

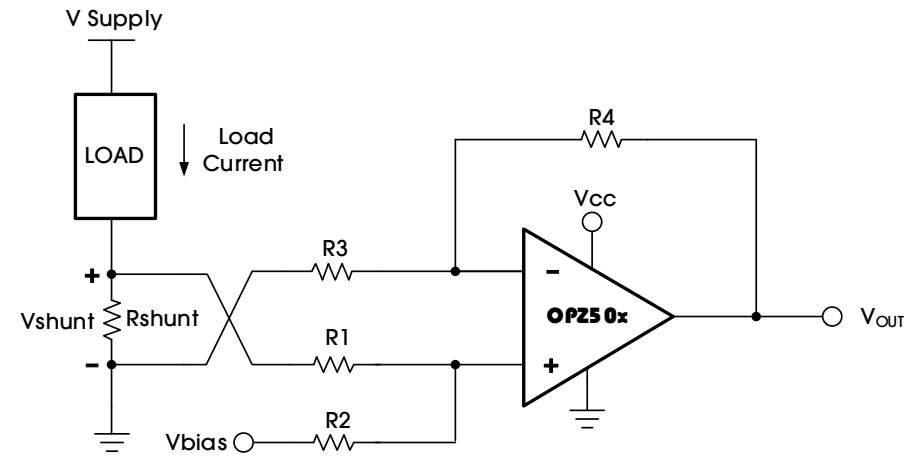
Zero-Drift Amplifier

Overview

AnalogSemi's zero-drift operational amplifier probably provides the best combination of accuracy ($10\mu\text{V}$ offset voltage) and power consumption (680nA /channel quiescent current) in the industry. It makes AnalogSemi's zero-drift operational amplifier ideal for high-precision, low-voltage sensor applications like gas detector, pressure sense, and current sense, etc.

类比半导体公司的零漂温运算放大器可能提供业内精度($10\mu\text{V}$ 偏移电压)和功耗(每通道 680nA 静态电流)的最佳组合。这使得类比半导体的零漂温运算放大器是高精度、低压传感器应用的理想选择，例如气体检测、压力检测和电流检测等应用。

Block Diagram





零温漂放大器

Zero-Drift Amplifier

Order Number	CH (#)	EN Pin	V _{OS} (Max) (μV)	V _{OS} Drift (Typ) (μV/°C)	CMRR (Min) (dB)	V _{CC} (V)	I _Q per CH (Typ) (μA)	GBW (kHz)	Slew Rate (Typ) (V/ms)	Noise (Typ) (nV/√Hz)	Rail-to-Rail	OP. Temp (°C)	Rating	Package	Status
供货型号	通道	使能管脚	偏移电压	温漂	共模抑制比	供电电压	静态电流	带宽	压摆率	噪声谱密度	轨到轨	工作温度范围	等级	封装	状态
OPZ501ASOT235	1	No	±10	±0.02	100	1.6-5.5	0.68	9	12	352	IN/OUT	-40-125	Industry	SOT23-5	Production
OPZ502ASOT236	1	Yes	±10	±0.02	100	1.6-5.5	0.68	9	12	352	IN/OUT	-40-125	Industry	SOT23-6	Production
OPZ503ASOT235	1	No	±10	±0.02	100	1.6-5.5	3.6	63	12	129	IN/OUT	-40-125	Industry	SOT23-5	Production
OPZ504ASOT236	1	Yes	±10	±0.02	100	1.6-5.5	3.6	63	12	129	IN/OUT	-40-125	Industry	SOT23-6	Production



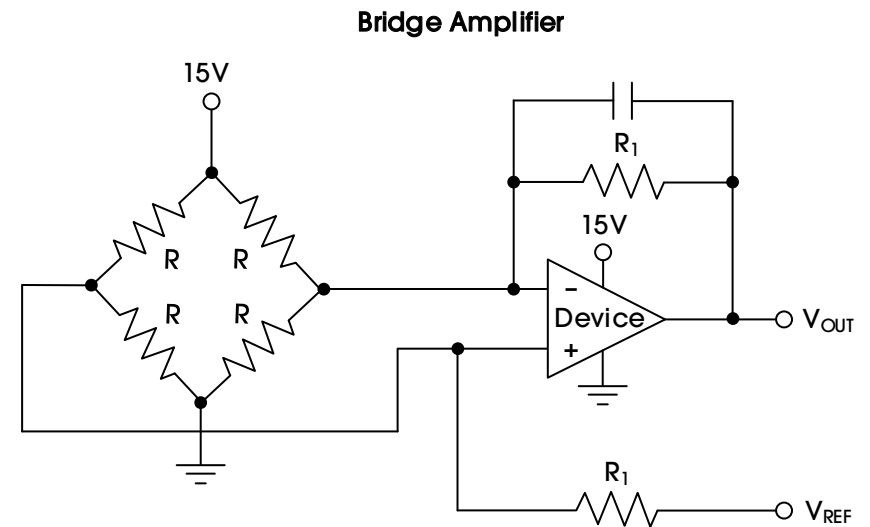
零温漂放大器

Overview

The OPZx02 is a high-performance, zero-drift operational amplifiers that supports 4V-40V supply range. With extremely low input offset voltage of 10 μ V (maximum) and a 150dB CMRR, the OPZx02 operational amplifiers provide excellent initial accuracy and rail-to-rail output. The OPZx02 family provides up to 3MHz bandwidth, 6.8V/ μ s slew rate and outstanding DC performance like ultralow broadband noise and zero flicker noise.

OPZx02 是一款高性能、零漂移运算放大器，支持 4V-40V 电源范围。凭借最大 10 μ V 的极低输入失调电压和 150dB CMRR，OPZx02 运算放大器可提供出色的初始精度和轨到轨输出。OPZx02 系列提供高达 3MHz 的带宽、6.8V/ μ s 的压摆率和出色的直流性能，如超低宽带噪声和零闪烁噪声。

Block Diagram





零温漂放大器

Zero-Drift Amplifier

Order Number	CH (#)	V _{OS} (Max) (μV)	V _{OS} Drift (Typ) (μV/°C)	CMRR (Min) (dB)	V _{CC} (V)	I _Q per CH (Typ) (μA)	GBW (kHz)	Slew Rate (Typ) (V/μs)	Noise (Typ) (nV/rtHz)	Rail-to-Rail	OP. Temp (°C)	Rating	Package	Status
供货型号	通道	偏移电压	温漂	共模抑制比	供电电压	静态电流	带宽	压摆率	噪声谱密度	轨到轨	工作温度范围	等级	封装	状态
OPZ102ASOT235	1	±10	±0.01	135	4-40	113	355	0.7	30	IN/OUT	-40-125	Industry	SOT23-5	Develop
OPZ102ASOIC8	1	±10	±0.01	135	4-40	113	355	0.7	30	IN/OUT	-40-125	Industry	SOIC-8	Develop
OPZ102AMSOP8	1	±10	±0.01	135	4-40	113	355	0.7	30	IN/OUT	-40-125	Industry	MSOP-8	Develop
OPZ1022ASOIC8	2	±10	±0.01	135	4-40	226	355	0.7	30	IN/OUT	-40-125	Industry	SOIC-8	Develop
OPZ202ASOT235	1	±10	±0.01	135	4-40	275	1000	3.4	26	IN/OUT	-40-125	Industry	SOT23-5	Develop
OPZ202ASOIC8	1	±10	±0.01	135	4-40	275	1000	3.4	26	IN/OUT	-40-125	Industry	SOIC-8	Develop
OPZ202AMSOP8	1	±10	±0.01	135	4-40	275	1000	3.4	26	IN/OUT	-40-125	Industry	MSOP8-8	Develop
OPZ2022ASOIC8	2	±10	±0.01	135	4-40	550	1000	3.4	26	IN/OUT	-40-125	Industry	SOIC-8	Develop
OPZ302ASOT235	1	±10	±0.01	135	4-40	550	3000	6.8	13	IN/OUT	-40-125	Industry	SOT23-5	Develop
OPZ302ASOIC8	1	±10	±0.01	135	4-40	550	3000	6.8	13	IN/OUT	-40-125	Industry	SOIC-8	Sample
OPZ302AMSOP8	1	±10	±0.01	135	4-40	550	3000	6.8	13	IN/OUT	-40-125	Industry	MSOP8-8	Develop
OPZ3022ASOIC8	2	±10	±0.01	135	4-40	1100	3000	6.8	13	IN/OUT	-40-125	Industry	SOIC-8	Sample

Sigma-Delta ADC



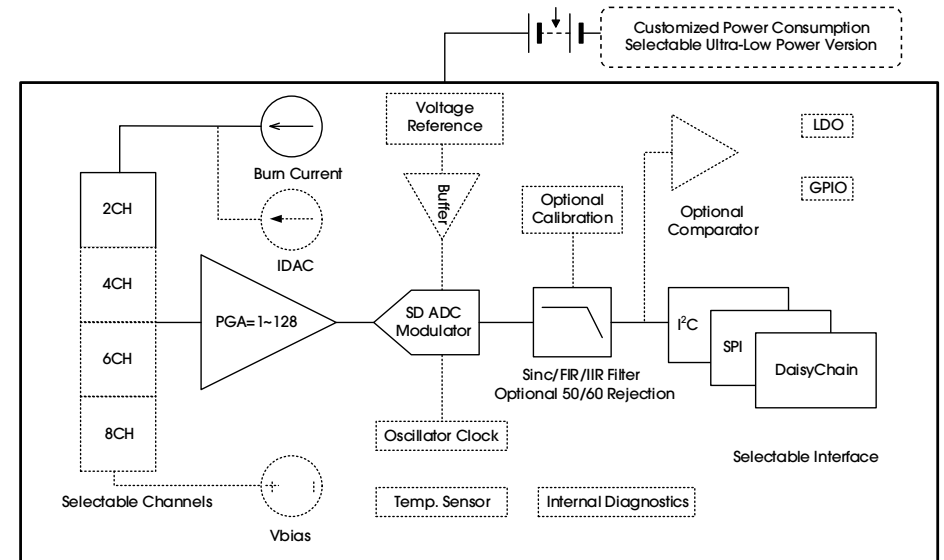
Σ - Δ ADC

Overview

AnalogySemi provides an unrivalled portfolio for precision Sigma-Delta analog-to-digital converters. These converters make industry-leading combinations in performance, power, size, and resolution with 8-32 bits. All Sigma-Delta converters are easy to use. Usually an RC filter is good enough to be configured as an anti-aliasing filter, which means it is easier for engineer. Many of the combinations have reference and PGA inside, simplifying the circuits.

类比半导体提供了一系列无与伦比的高精度西格玛德尔塔模拟到数字转换器。这些转换器在 8-32 位的性能、功率、尺寸和分辨率方面的组合都是业界领先的。所有的西格玛德尔塔转换器都很容易使用。通常，一阶电阻电容滤波器可以配置为抗混叠滤波器，这意味着它对工程师来说更容易。许多组合有内部参考和可编程增益放大器，简化了电路。

Block Diagram



12-Bit to 32-Bit Sigma-Delta ADC Diagram



Sigma-Delta ADC

Σ-Δ ADC

Order Number 供货型号	CH (#) 通道	Resolution (Bit) 分辨率	Output Data Rate 数据输出速率	Interface 接口	Power (Typ) (mW) 功耗	Reference 基准	INL (Typ) (LSB) 积分非线性	Input Type 输入类型	PGA 可编程增益放大器	Temp. Sensor 温度传感器	Features 特性	OP. Temp (°C) 工作温度范围	Rating 等级	Package 封装	Status 状态
ADX111AMSOP10	2(4)	16	860	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No		-40-125	Industry	MSOP-10	Production
ADX111AQFN10	2(4)	16	860	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No		-40-125	Industry	QFN-10	Production
ADX112AMSOP10	2(4)	16	860	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes		-40-125	Industry	MSOP-10	Production
ADX112AQFN10	2(4)	16	860	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes		-40-125	Industry	QFN-10	Production
ADX113AMSOP10	2(4)	16	860	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX114AMSOP10	2(4)	16	3571	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX121AMSOP10	2(4)	20	3571	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX121AQFN10	2(4)	20	3571	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	QFN-10	Sample
ADX122AMSOP10	2(4)	20	3571	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX122AQFN10	2(4)	20	3571	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	QFN-10	Sample
ADX128AMSOP10	2(4)	20	7143	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	MSOP-10	Develop
ADX128AQFN10	2(4)	20	7143	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	QFN-10	Sample
ADX125AMSOP10	2(4)	20	3571	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX126AMSOP10	2(4)	20	3571	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	MSOP-10	Production
ADX125AQFN10	2(4)	20	3571	I ² C	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	QFN-10	Develop
ADX126AQFN10	2(4)	20	3571	SPI	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	QFN-10	Develop
ADX131AQFN10	2(4)	20	440	I ² C	0.22	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	QFN-10	Sample
ADX132AQFN10	2(4)	20	440	SPI	0.22	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	No	50/60 Rejection	-40-125	Industry	QFN-10	Sample
ADX123AMSOP10	2(4)	20	3571	Daisy Chain	0.478	Internal	0.5	Differential/Single-Ended	8/4/2/1/0.5/0.33	Yes	50/60 Rejection	-40-125	Industry	MSOP-10	Develop



稳压器

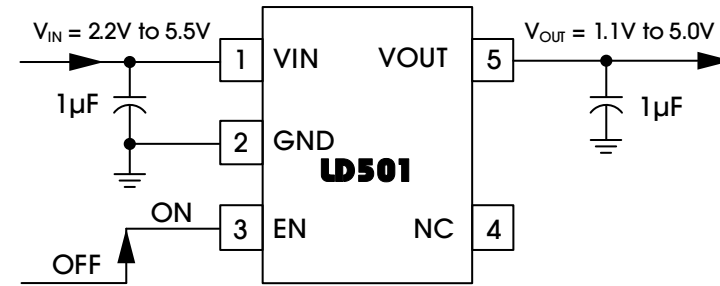
Regulator

Overview

The LD501 is an ultra-low noise ($15\mu\text{Vrms}$), low dropout (LDO) linear regulator providing output current up to 250mA. The low quiescent current ($160\mu\text{A}$), high power supply rejection ratio (70dB PSRR), transient line and load performance make it perfectly suitable for image sensor, RF and low-power portable application.

LD501 是一款超低噪声($15\mu\text{Vrms}$)、低压差 (LDO) 线性稳压器，可提供高达 250mA 的输出电流。LD501 的低静态电流($160\mu\text{A}$)、高电源抑制比 (70dB PSRR)、瞬态线路和负载性能使其非常适合图像传感器、射频和低功耗便携式应用。

Block Diagram





稳压器

Regulator

Order Number	Vin Range (V)	Vout_range (V)	Vdropout @Imax (mV)	Iout Max (mA)	PSRR (dB)	RMS Noise (μVrms)	Quiescent Current (μA)	OP. Temp (°C)	Rating	Package	Status
供货型号	输入电压范围	输出电压	输出压差	最大输出电流	电源抑制比	均方根噪声	静态电流	工作温度范围	等级	封装	状态
LD501PCSOT-12	2.2-5.5	1.2	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Production
LD501PCSOT-18	2.2-5.5	1.8	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Production
LD501PCSOT-25	2.2-5.5	2.5	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Production
LD501PCSOT-30	2.2-5.5	3.0	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Production
LD501PCSOT-33	2.2-5.5	3.3	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Production
LD501LCSOT-11-50*	2.2-5.5	1.1-5.0	85	150	70	15.5	12	-40-125	Industry	SOT23-5	Sample
LD501MCSOT-11-50*	2.2-5.5	1.1-5.0	120	200	70	15.5	12	-40-125	Industry	SOT23-5	Sample
LD501PCSOT-11-50*	2.2-5.5	1.1-5.0	150	250	70	15.5	12	-40-125	Industry	SOT23-5	Sample

* 11-50 means 1.1V to 5.0V with a 0.1V increment. Besides, 2.75V and 2.85V are also supported.



变压器驱动器

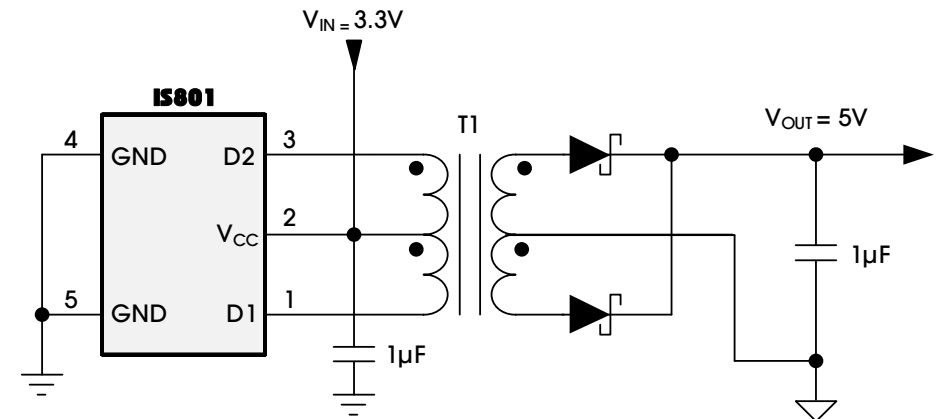
Transform Driver

Overview

The IS80x is a transformer driver designed for low-cost, small form-factor, isolated DC-DC converters utilizing the push-pull topology. The integrated break-before-make logic, V_{CC} undervoltage protect and thermal shutdown protection help to improve the system robustness. In addition, the spread spectrum scheme is also added in oscillator of IS80x to pass EMI tests easier. All these features make it perfect for isolated interface power supply and medical equipment applications.

IS80x 是一款专为采用推挽式拓扑的低成本、小尺寸、隔离式 DC-DC 转换器而设计的变压器驱动器。其内置的 break-before-make 逻辑、 V_{CC} 欠压保护和热关断保护有助于提高系统的鲁棒性。此外，IS80x 的振荡器还加入了扩频方案，可以更容易通过 EMI 测试。所有这些特性使其非常适合隔离接口电源和医疗设备应用。

Block Diagram





变压器驱动器

Transform Driver

Order Number	CH (#)	Vin (V)	EN	Soft-Start	High Primary-Side Current Drive (Max) (mA)	Switching Frequency (kHz)	EMI Improvement	External Clock	New Protection	OP. Temp (°C)	Rating	Package Option	Status
供货型号	通道	输入电压	使能	软启动	主边最大驱动电流	开关频率	EMI 提升	外部时钟	新保护功能	工作温度范围	等级	封装	状态
IS801	1	2.5-5.5	No	Yes	500	300-500	Spread Spectrum	Support	UVLO OTP	-40-125	Industry	SOT23-5	Sample
IS802	1	2.5-5.5	Yes	Yes	500	300-500	Spread Spectrum	Support	UVLO OTP	-40-125	Industry	SOT23-6	Sample



Overview

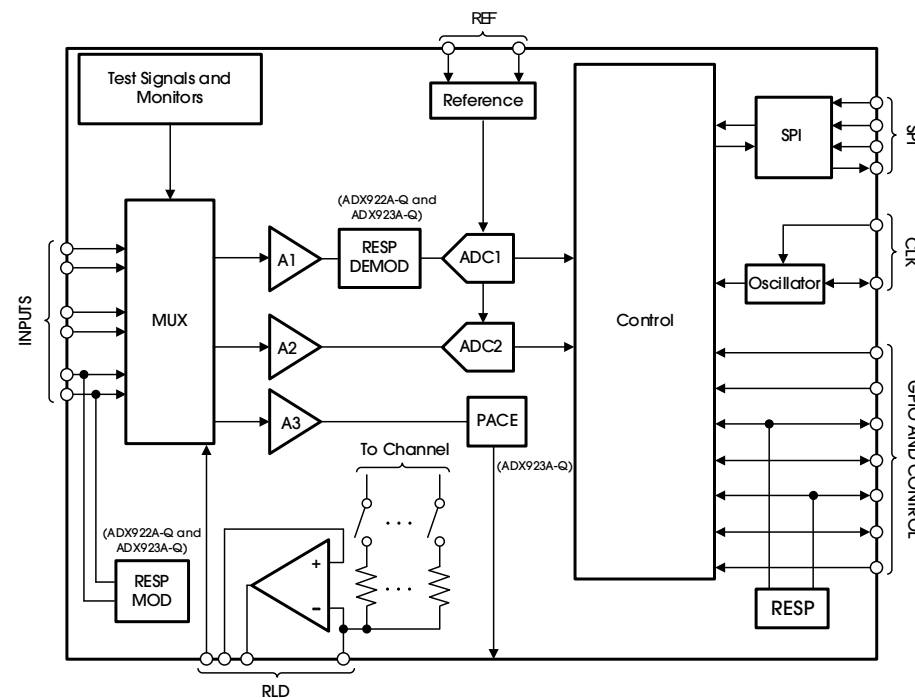
The ADX9xx are multichannel, simultaneous sampling, 24-bit, delta-sigma ($\Delta\Sigma$) analog-to-digital converters (ADCs) with a built-in programmable gain amplifier (PGA), internal reference, and an oscillator. The ADX9xx incorporate all features commonly required in auto-ECG, portable, low-power medical electrocardiogram (ECG), sports, and fitness applications. The ADX9xx version includes a fully integrated respiration impedance and analog PACE measurement function. The package size is 4mm x 4mm.

ADX9xx 是多通道、同步采样、24 位、Delta-Sigma ($\Delta\Sigma$) 模数转换器(ADC)内置可编程增益放大器(PGA)，内部参考和振荡器。ADX9xx 包含自动心电图、便携式、低功耗医疗心电图(ECG)、运动和健身应用中通常需要的所有功能模块。ADX9xx 版本包括一个完全集成的呼吸阻抗和模拟起搏测量功能。封装尺寸为 4mm x 4mm。

Applications

- Medical treatment: Electrocardiogram
医疗：心电图
- Wearable medicine: Electrocardiogram
可穿戴医疗：心电检测
- Car: ECG monitoring
汽车：心电监测

Block Diagram





ECG

ECG

Order Number 供货型号	CH (#) 通道	Resolution (Bit) 分辨率	Respiration 呼吸	Analog Pace 模拟起搏器	AC Lead-Off 交流断线检测	ERM 电极轮转	Digital High-Pass Filter 数字高通滤波器	FIFO 缓冲器	Function Safety 功能安全	CRC/ECC 冗余校验	OP. Temp (°C) 工作温度范围	Package 封装	Rating 等级	Status 状态
ADX923QAQFN32	2	24	Y	Y	Y	Y	Y	Y	Y	Y	-40-125	QFN-32	Auto	Sample
ADX923AQFN32	2	24	Y	Y	Y	Y	Y	Y	Y	Y	-40-85	QFN-32	Industry	Sample
ADX922QAQFN32	2	24	Y	Y	Y				Y	Y	-40-125	QFN-32	Auto	Sample
ADX922AQFN32	2	24	Y	Y	Y				Y	Y	-40-85	QFN-32	Industry	Sample
ADX921QAQFN32	2	24		Y	Y				Y	Y	-40-125	QFN-32	Auto	Sample
ADX921AQFN32	2	24		Y	Y				Y	Y	-40-85	QFN-32	Industry	Sample
ADX920QAQFN32	1	24			Y			Y	Y	Y	-40-125	QFN-32	Auto	Sample
ADX920AQFN32	1	24			Y			Y	Y	Y	-40-85	QFN-32	Industry	Sample
ADX912QAQFN32	2	16			Y				Y	Y	-40-125	QFN-32	Auto	Sample
ADX912AQFN32	2	16									-40-85	QFN-32	Industry	Sample
ADX911QAQFN32	1	16			Y				Y	Y	-40-125	QFN-32	Auto	Sample
ADX911AQFN32	1	16									-40-85	QFN-32	Industry	Sample



AISG

AISG

Overview

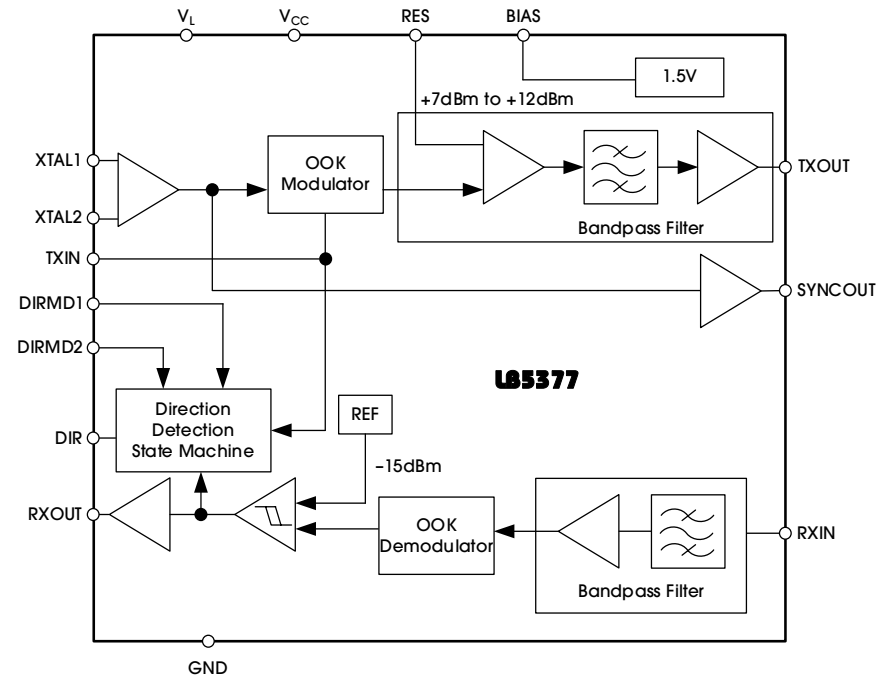
AnalogSemi provides fully-integrated transceiver compliant with AISG. Its receiver provides a 20dB typical dynamic range and integrates a bandpass filter operating in the 2.176MHz frequency with a narrow 200kHz bandwidth. Its transmitter integrates a bandpass filter compliant with the AISG spectrum emission profile. The transmitter can modulate OOK signals up to 115.2kbps. With external resistors, the output power can vary from +7dBm to +12dBm to compensate for loss in the external circuitry and cabling.

类比提供与电调天线设备标准组织兼容的全集成收发器。它的接收机提供 **20** 分贝的典型动态范围，并集成了一个工作在 **2.176** 兆赫兹频率和狭窄的 **200** 千赫兹带宽的带通滤波器。它的发射机集成了一个符合电调天线设备标准组织发射频谱的带通滤波器。发射机可调制的二进制启闭键控信号最高可达 **115.2** 千比特每秒。使用外部电阻，输出功率可以从 **+7** 分贝毫瓦到 **+12** 分贝毫瓦，以补偿外部电路和电缆的损失。

Applications

- Communication base station and antenna
通信基站与天线
- ATG airborne platform
ATG 机载台

Block Diagram





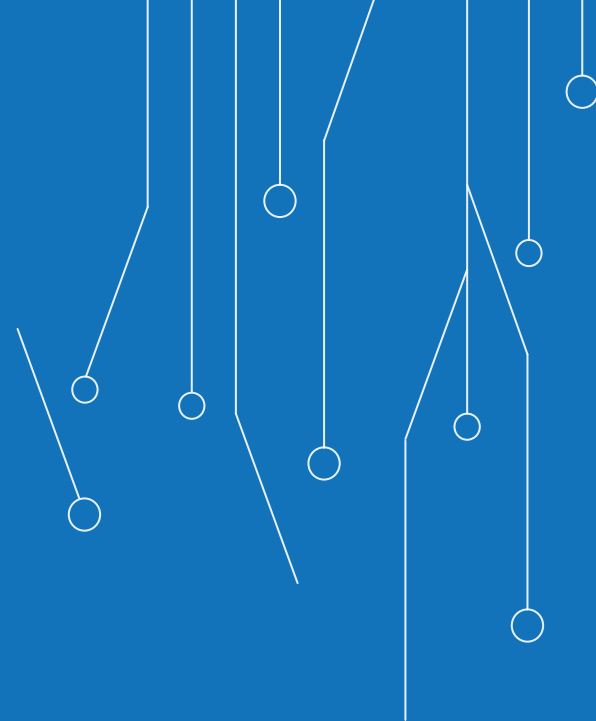
AISG

AISG

Order Number 供货型号	End Equipment 终端设备	TX ON Power (dBm) 发射机功率	RX Threshold (dBm) 接收机功率	V _{CC} (V) 供电范围	I _{supply} (Typ) (mA) 供电电流	OP. Temp (°C) 工作温度	Rating 等级	Package 封装	Status 状态
LB5377AQFN16	AISG	7-12	-18 to -12	3-5.5	24.5	-40-120	Industry	QFN-16	Production

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