

High-performance op amps sample kit

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High-performance
Op Amps sample kit



Maturity status link

[KIT24OPAMP](#)

Features

- Immediate evaluation of high-performance op amps with:
 - Samples of fifteen operational amplifiers
 - Samples of three current sense amplifiers
 - Samples of one comparator
- The sample kit includes a printed card providing:
 - An overview of the product portfolio including information regarding precision op amps, micro and nanopower op amps, comparators, and current sensing
 - Recommended products
 - ST op amps naming rules
 - Resources: simulation tools like eDesignSuite and eDSim, evaluation training boards, ST op amps mobile applications, and more

Applications

- Implementation of signal conditioning and current sensing functions
- 5 V to 36 V applications
- IC toolbox allowing quick setup

Description

The **KIT24OPAMP** provides a selection of high-performance operational amplifiers, comparators, and current sense amplifiers useful for the evaluation and promotion of the product family.

1 Overview

STMicroelectronics offers a wide analog portfolio including high-performance operational amplifiers, comparators, and current sense amplifiers dedicated to the challenging industrial, automotive, and consumer markets.

The product range is developed to meet specific requirements such as:

- **Precision:** with remarkably low current consumption, our op amps enable highly accurate current measurements with an excellent stability over a wide temperature range. Without calibration, it is exceptionally accurate.
- **Low power:** with extremely low current consumption, our op amps enable longer battery life and are designed for a large diversity of applications.
- **High voltage:** featuring an extended supply voltage range from 2.7 V up to 36 V, our high voltage op amps simplify the design of a wide variety of automotive and industrial applications. Our current sense amplifiers can work in high voltage applications avoiding additional external protection components and simplifying the final schematic.
- **Tiny packages:** our portfolio provides high-performance products including space-saving packages like CSP, DFN, QFN, SOT23, and SC70.

ST's operational amplifier portfolio is designed to work down to 1.5 V and up to 44 V. Similarly, it is qualified from -40 °C up to +125°C typically, and even +150°C or +175 °C for some specific product lines.

The range of products allows easy and fast integration of analog products inside signal conditioning, monitoring, and control solutions.

Table 1. Devices summary

Product	Description	Channel	Package
Nanopower			
TSU102IST	5 V, 580 nA, rail-to-rail input and output, CMOS op amp	Dual	MiniSO8
TSU111IQ1T	5 V, 900 nA, rail-to-rail input and output, CMOS op amp	Single	DFN6
TS883IST	0.9 V, 250 nA, rail-to-rail input, open drain output, comparator	Dual	MiniSO8
16 V/36 V rail-to-rail			
TSX562IST	16 V, 600 μ V, 235 μ A, 900 kHz, op amp	Dual	MiniSO8
TSB512IST	36 V, 2 mV, 2.3 mA, 6 MHz, op amp	Dual	MiniSO8
TSB622IST	36 V, 1.6 mV, 375 μ A, 1.7 MHz, op amp	Dual	MiniSO8
TSB7191AILT	36 V, 300 μ V, 3 mA, 22 MHz, op amp	Dual	SOT23-5L
Accuracy / Speed			
TSZ121ICT	5 V, 5 μ V, 400 kHz, zero-drift, rail-to-rail input and output, op amp	Single	SC70-5
TSZ151ICT	5 V, 7 μ V, 1.6 MHz, zero-drift, rail-to-rail input and output, op amp	Single	SC70-5
TSZ181ILT	5 V, 25 μ V, 3 MHz, zero-drift, rail-to-rail input and output, op amp	Single	SOT23-5L
TSV772IST	5 V, 200 μ V, 20 MHz, rail-to-rail input and output, op amp	Dual	MiniSO8
TSV782IST	5 V, 200 μ V, 30 MHz, rail-to-rail input and output, op amp	Dual	MiniSO8
TSV792IST	5 V, 200 μ V, 50 MHz, rail-to-rail input and output, op amp	Dual	MiniSO8
TSB182IST	36 V, 20 μ V, 3 MHz, zero-drift, rail-to-rail output, op amp	Dual	MiniSO8
High output current			
TSB582IDT	36 V, 200 mA output current, 3.1 MHz, op amp	Dual	SO8 exposed pad
Current sensing			
TSC200IST	High voltage (80 V), current sense with open-drain comp and ref, gain 20 V/V	Unidir	MiniSO8
TSC210ICT	26 V, zero-drift, current sense, gain 200 V/V	Bidir	SC70-6
TSC2020IST	High voltage (100 V), precision current sense (\pm 150 μ V max), gain 20 V/V	Bidir	MiniSO8
TSV7721ILT	High bandwidth (22 MHz) low offset (200 μ A), low-rail 5 V op amp	Single	SOT23-5L

2 Ordering information

Table 2. Order code

Order code	Description
KIT24OPAMP	High-performance op amps sample kit

Revision history

Table 3. Document revision history

Date	Revision	Changes
02-Apr-2024	1	Initial release.

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