

Signal conditioning for automotive sample kit

Signal conditioning for automotive

Operational amplifiers, current sense amplifiers, and comparators - Sample kit



Maturity status link

[KIT2407AUTOSC](#)

Features

- Immediate evaluation of AEC-Q100 Grade compliant signal conditioning devices with:
 - Samples of twelve operational amplifiers
 - Samples of three current sense amplifiers
 - Samples of three comparators
- The sample kit includes a printed card providing:
 - Overview of signal conditioning products for automotive applications
 - Key featured families of op amp, comparator, and current sense amplifier
 - Description and illustration of wettable flanks (WF) structure, and internal layers
 - Resources: design and simulation tools like eDesignSuite and eDSim and ST op amps' mobile app

Applications

- Car body
- Electromobility
- ADAS
- Infotainment
- Steering resolver
- Exhaust system
- Engine control
- Brakes

Description

The **KIT2407AUTOSC** provides a selection of AEC-Q100 Grade compliant amplifiers, comparators, and current sense amplifiers useful for evaluation and promotion of the product family.

1 Overview

STMicroelectronics provides a wide analog portfolio of operational amplifiers, comparators, and current sense amplifiers for the challenging and demanding automotive market.

ST offers high-performance devices that meet the specific requirements of the rigorous AEC-Q100 standard thanks to innovative design techniques and a continuous focus on improving quality.

Each application has a suitable signal condition device. Discover our ever-increasing product families available in a wide range of options including packages like wettable flanks with exposed pad:

- **Operational amplifiers** (precision, nano and micropower, and fast families)
- **Current sense amplifiers** (unidirectional and bidirectional families)
- **Comparators** (fast, nano and micropower, and high-voltage families)

Table 1. Devices summary

Product	Description	Package
Precision operational amplifiers		
TSZ151IYLT	Very high accuracy (7 μ V), high bandwidth (1.6 MHz), zero-drift, 5 V op amp	SOT23-5
TSZ181IYLT	Very high accuracy (25 μ V), high bandwidth (3 MHz), zero-drift, 5 V op amp	SOT23-6
TSB182IYST	Very high accuracy (20 μ V), zero-drift, rail-to-rail output, 3 MHz, 36 V op amp	MiniSO8
Nano and micropower operational amplifiers		
TSU112IYQ3T	Nanopower (900 nA), high accuracy (150 μ V), 5 V CMOS op amp	DFN8 (2x2, WF)
TSB622IYQ3T	Low power (375 μ A), high bandwidth (1.7 MHz), rail-to-rail output, 36 V op amp	DFN8 (3x3, WF)
TSX631AIYLT	Micropower (60 μ A), low offset voltage, rail-to-rail, 16 V CMOS op amp	SOT23-5
Fast operational amplifiers		
TSB952IYQ2T	High bandwidth (52 MHz), rail-to-rail output, 36 V op amp	DFN8 (3x3, WF)
TSV992AIYST	High bandwidth (20 MHz), rail to rail input/output, 5 V CMOS op amp	MiniSO8
TSX9292IYDT	High bandwidth (16 MHz), rail-to-rail, 16 V CMOS op amp	SO8
TSV772IYST	High bandwidth (20 MHz), low offset (200 μ V), rail-to-rail, 5 V op amp	MiniSO8
TSV782IYST	High bandwidth (30 MHz), low offset (200 μ V), rail-to-rail, 5 V op amp	MiniSO8
TSV792IYST	High bandwidth (50 MHz), low offset (200 μ V), rail-to-rail, 5 V op amp	MiniSO8
Current sense amplifiers		
TSC2020IYST	High voltage (100 V), precision, bidirectional, current sense amplifier	MiniSO8
TSC210IYCT	26 V, bidirectional, zero-drift, current sense amplifier	SC70-6
TSC200IYST	High voltage (80 V), unidirectional current sense amplifier with open drain comparator and ref	MiniSO8
Comparators		
TS882IYST	Rail-to-rail 1.1 V nanopower, push-pull dual comparator	MiniSO8
TS3022IYST	Rail-to-Rail 1.8 V high-speed micropower comparator	MiniSO8
LM2903BYQ3T	Low power, 36 V, dual voltage comparator	DFN8 (2x2, WF)

2 Ordering information

Table 2. Order code

Order code	Description
KIT2407AUTOSC	Signal conditioning for automotive sample kit

Revision history

Table 3. Document revision history

Date	Revision	Changes
14-Oct-2024	1	Initial release.

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