TSZ SERIES

High-precision, zero-drift op amp

Precision and low power consumption for high-accuracy sensor interfaces

The **TSZ series** of operational amplifiers offer low power consumption and zero-drift in compact packages. These amplifiers implement a chopper-stabilized architecture that minimizes offset voltages and drift, making them ideal for high-accuracy sensor interfaces. Despite their miniature size, these ultra-precise amplifiers offer high-impedance inputs with a common-mode range of 100 mV beyond the rails and rail-to-rail output that ranges within 50 mV of the rails. They are qualified for automotive applications at 125°C, 150°C, and 175°C maximum temperatures.

KEY FEATURE & BENEFITS

- Offset: (TSZ12 series)
  - ±1 µV typ.
  - ±8 µV max.
- Offset drift: (TSZ12 series)
  - 10 nV/°C typ.
  - 30 nV/°C max.
- 400 kHz GBW (TSZ12 series)
- 1.6 MHz GBW (TSZ15 series)
- 3 MHz GBW (TSZ18 series)
- 10 MHz GBW (TSZ901)
- Operating range: 1.8 to 5.5 V
- Temperature range: -40 to 125°C (optionally up to 175°C)
- Rail-to-rail input and output
- ESD: 4 kV HBM
- AEC-Q100 qualified

KEY APPLICATIONS

- Portable instrumentation
- Battery-powered devices
- Sensor interfaces
- Medical instrumentation
- Electronic scales
- Temperature measurement
- Automotive current measurement
- Gearbox, brake, and exhaust systems
- Engine controller unit (ECU)

LONGEVITY 10 YEARS COMMITMENT

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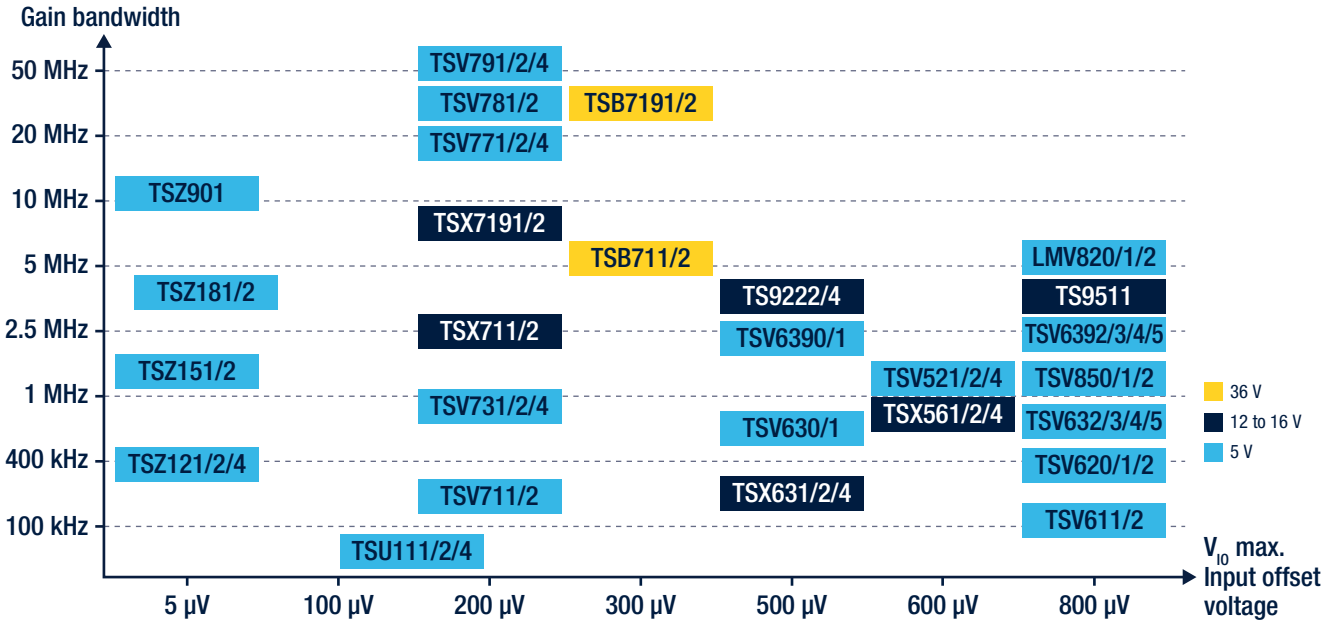
High-precision operational amplifiers



TSZ family portfolio

Part number	Automotive	Package	Icc (µA) typ.	SR (V/µs) typ.	N° channels	Temperature
Gain bandwidth product 400 kHz						
TSZ121	•	SC70-5	31	0.19	1	-40 to 125°C
TSZ122	•	SO8 MiniSO8 DFN8			2	
TSZ124	•	QFN16 TSSOP14			4	
Gain bandwidth product 1.6 MHz						
TSZ151	•	SC70-5 SOT23-5	210	0.8	1	-40 to 125°C
TSZ152	•	SO8 MiniSO8 DFN8			2	
Gain bandwidth product 3 MHz						
TSZ181	•	DFN6 SOT23-5	800	4.7	1	-40 to 125°C
TSZ181H	•	SO8 SOT23-5				-40 to 150°C
TSZ181H1	•					-40 to 175°C
TSZ182	•	SO8 MiniSO8 DFN8			2	-40 to 125°C
TSZ182H	•	SO8 SOT23-5				-40 to 150°C
TSZ182H1	•					-40 to 175°C
Gain bandwidth product 10 MHz						
TSZ901	•	SOT23-5	1500	6	1	-40 to 125°C

X-NUCLEO-IKA01A1
Multifunctional expansion board based on operational amplifiers (TSZ124, TSU104, TSV734) for STM32 Nucleo

P-NUCLEO-IKA02A1
STM32 Nucleo pack: electrochemical toxic gas sensor expansion board with CO sensor

STEVAL-CCA022V1
Evaluation board for SOT23 and SC70

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