

TSZ series ultra precision amplifiers



When the highest precision matters

The TSZ amplifier series offers low-power, zero-drift operational amplifiers in space-saving packages. They use chopper-stabilized architecture that provides very low offset voltages (8 μV max over the full operating temperature range) and near-zero drift.

These miniature, ultra-precision and low quiescent current amplifiers offer high-impedance inputs that have a common-mode range 100 mV beyond the rails and rail-to-rail output that swings within 50 mV of the rails. TSZ amplifiers are optimized for low-voltage operation with single or dual supplies as low as +1.8 V (± 0.9 V) up to +5.5 V (± 2.75 V). The chopper architecture rejects the high $1/f$ noise typically found in CMOS input op amps, making it suited for a wide variety of low-frequency measurement applications.

FEATURES

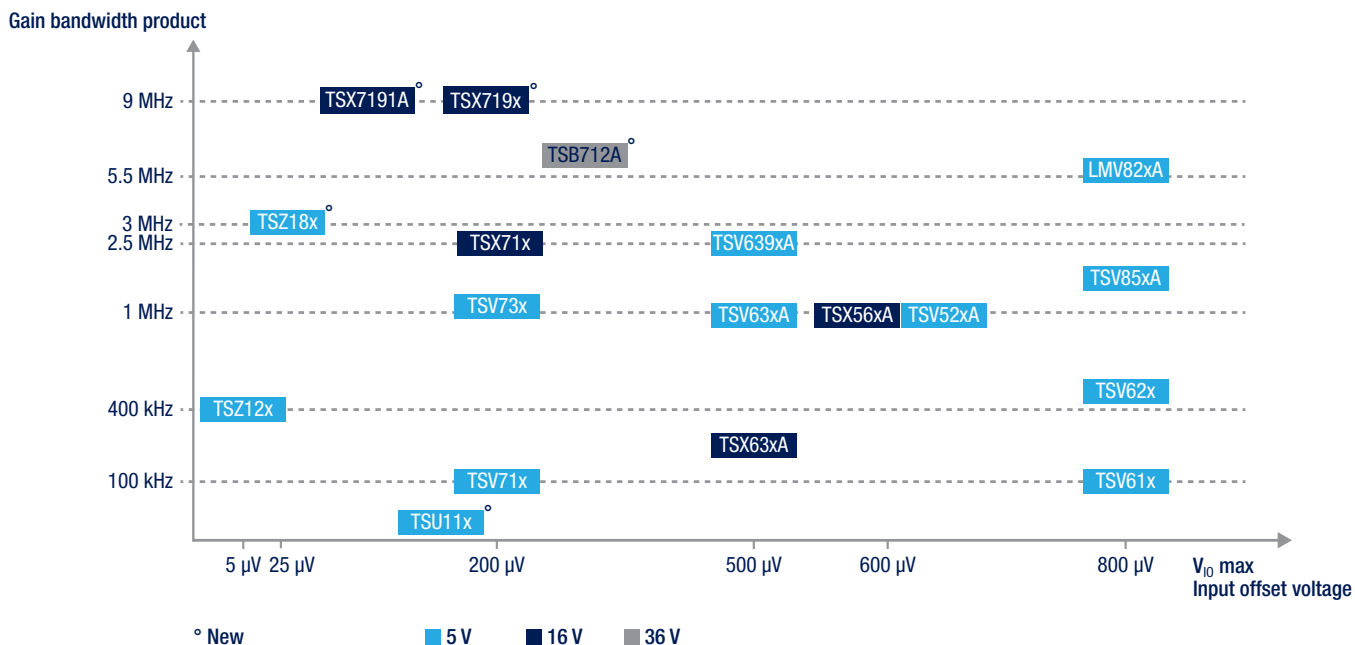
- Offset: (TSZ12x)
+/- 1 μV typ
+/- 8 μV worst case
- Offset drift: (TSZ12x)
10 nV/ $^{\circ}\text{C}$ typ
30 nV/ $^{\circ}\text{C}$ max
- 400 kHz GBW (TSZ12x)
- 3 MHz GBW (TSZ18x)
- Operating range: 1.8 to 5.5 V
- Temperature range: -40 to 125 $^{\circ}\text{C}$
- Rail-to-rail input and output
- ESD: 4kV HBM
- Qualified for automotive applications
- Available in tiny packages:
 - SOT23 and SC70, DFN6 1,2x1,3 for single
 - MiniSO8, SO8, DFN8 2x2 for dual
 - QFN16 3x3, TSSOP14 for quad

APPLICATIONS

- Portable instrumentation
- Battery-powered devices
- Sensor interfaces
- Medical instrumentation
- Electronic scales
- Temperature measurement
- Automotive current measurement



HIGH-PRECISION AMPLIFIER PORTFOLIO



TSZ FAMILY

Order code	Type	Package	Automotive grade
TSZ121ICT	Single	SC70-5	No
TSZ121ILT		SOT23-5	No
TSZ121IYLT			Yes
TSZ181ILT			No
TSZ181IYLT			Yes
TSZ181IQ1T		DFN6 1.2x1.3	No
TSZ122IQ2T	Dual	DFN8 2x2	No
TSZ122IST		MiniS08	No
TSZ122IYST			Yes
TSZ182IST			No
TSZ182IYST			Yes
TSZ122IDT		S08	No
TSZ182IDT			No
TSZ182IYDT			Yes
TSZ182IQ2T	DFN8 2x2		No
TSZ124IQ4T	Quad	QFN16 3x3	No
TSZ124IPT		TSSOP14	No
TSZ124IYPT			Yes



X-NUCLEO-IKA01A1



P-NUCLEO-IKA02A1



STEVAL-CCA022V1

Evaluation board for SOT23 and SC70 available at www.st.com



Scan this QR code to get access to documentation and applications notes

