

TSZ SERIES

ultra-precision operational amplifiers



When the highest precision matters

The TSZ series offers low-power, zero-drift operational amplifiers in space-saving packages. They use a chopper-stabilized architecture that provides very low offset voltages and near-zero drift.

These miniature, ultra-precision and low quiescent current amplifiers offer high-impedance inputs with 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 qualified for automotive applications at 125°C, 150°C or 175°C to address that operate under high temperatures.

KEY FEATURES & BENEFITS

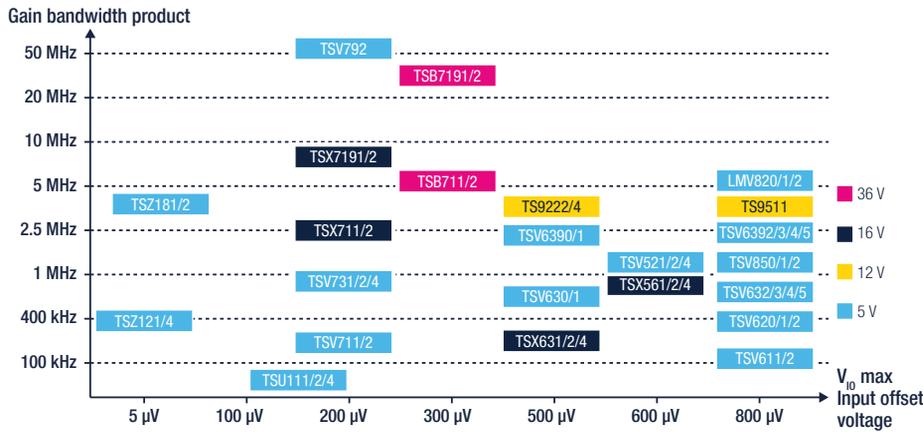
- Offset: (TSZ12x)
 - +/- 1 μ V typ
 - +/- 8 μ V worst case
- Offset drift: (TSZ12x)
 - 10 nV/°C typ
 - 30 nV/°C max
- 400 kHz GBW (TSZ12x)
- 3 MHz GBW (TSZ18x)
- Operating range: 1.8 to 5.5 V
- Temperature range: -40 to 175 °C
- Rail-to-rail input and output
- ESD: 4kV HBM
- Qualified for automotive applications
- Available in tiny packages:
 - SOT23 and SC70, DFN6 1.2x1.3 for single
 - MiniS08, S08, DFN8 2x2 for dual
 - QFN16 3x3, TSSOP14 for quad

KEY APPLICATIONS

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



High-precision amplifier portfolio



X-NUCLEO-1KA01A1

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

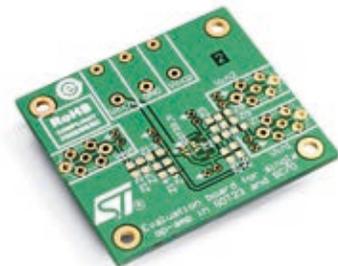
TSZ family

Order code	Gain bandwidth product	Package	Auto-grade	Temperature
Single				
TSZ121ICT	400 kHz	SC70-5	-	-40 to 125°C
TSZ121ILT		SOT23-5	-	
TSZ121IYLT			Yes	
TSZ181IQ1T	3 MHz	DFN6 1.2 x 1.3 mm	-	-40 to 125°C
TSZ181ILT		SOT23-5	-	
TSZ181IYLT			Yes	-40 to 150°C
TSZ181HYLT				
Dual				
TSZ122IQ2T	400 kHz	DFN8 2 x 2 mm	-	-40 to 125°C
TSZ122IST		MiniSO8	-	
TSZ122IYST			Yes	
TSZ122IDT		S08	-	
TSZ122IYDT	Yes			
TSZ182IQ2T	3 MHz	DFN8 2 x 2 mm	-	-40 to 125°C
TSZ182IST		MiniSO8	-	
TSZ182IYST			Yes	
TSZ182IDT			S08	-
TSZ182IYDT		Yes		-40 to 150°C
TSZ182HYDT				
TSZ182H1YDT		-40 to 175°C		
Quad				
TSZ124IQ4T	400 kHz	QFN16 3 x 3 mm	-	-40 to 125°C
TSZ124IPT		TSSOP14	-	
TSZ124IYPT			Yes	



P-NUCLEO-1KA02A1

STM32 Nucleo pack: electrochemical toxic gas sensor expansion board with CO sensor



STEVAL-CCA022V1

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



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