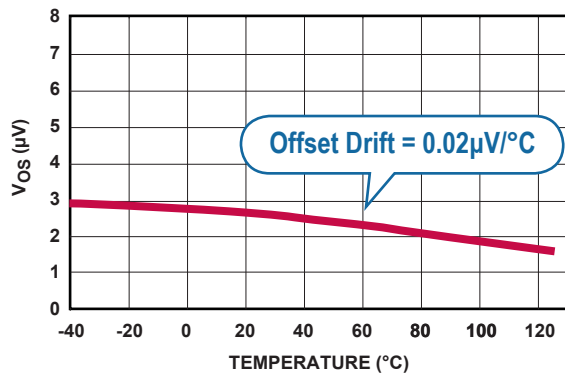


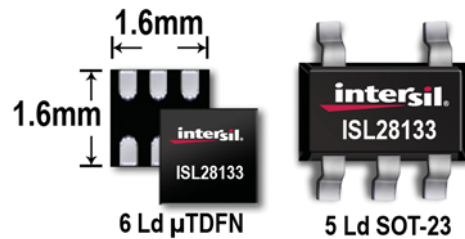
# 5V Single Precision, Low Drift, Low Power Op Amp in Tiny $\mu$ TDFN

Intersil's ISL28133 is an extremely accurate precision op amp, delivering ultra low offset and low drift offset at low power in the industry's leading smallest package, micro-TDFN (6-lid TDFN 1.6mm x 1.6mm x 0.55mm height).

## Ultra Low Offset Drift



## Smallest Package in Industry



Excellent for tiny sensors where board space and height is critical along with ultra low power consumption make this amplifier ideal for sensor amplifiers gain of small signals with 16-to-24-bit accuracy.

### Key Features

- Low Input Offset Voltage.....8µV, Max
- Low Offset Drift..... 0.075µV/°C, Max
- Quiescent Current ..... 18µA/Typ
- Wide Supply Range ..... 1.65V to 5.5V
- Low Output Noise (0.01Hz to 10Hz) ..... 1.1µVp-p, Typ
- Rail to Rail Inputs & Output

### Applications

- Industrial / Process Control
- Data Acquisition
- Instrumentation
- Portable Medical and other Diagnostic
- Precision regulation
- Sensor Front Ends
- Wireless Sensors



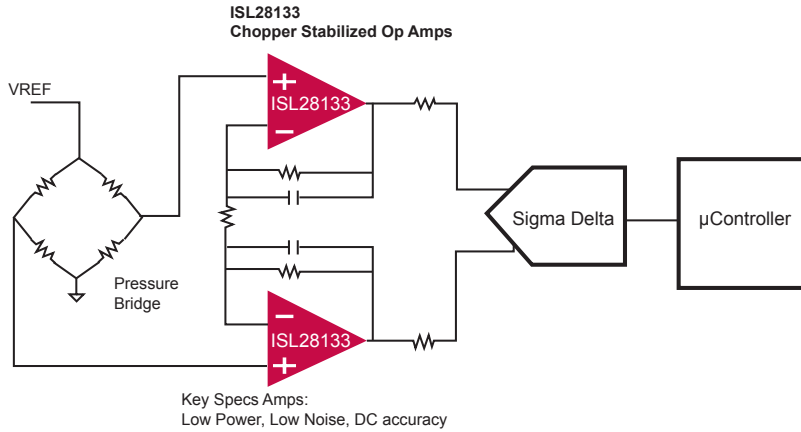
### Low Noise, Chopper Stabilized Amplifier

Part	# Amp	In/Out	V <sub>S</sub> Min (V)	V <sub>S</sub> Max (V)	I <sub>SS</sub> /Amp Max	V <sub>OS</sub> Max	V <sub>OS</sub> Drift (µV/°C typ)	I <sub>B</sub> Max	V <sub>N</sub> (0.1Hz to 10Hz)	V <sub>N</sub> @1kHz (nV/√Hz)	GBW	CMRR Min (dB)	Slew Rate (V/µs)	PSRR Min (dB)	Package
ISL28133	1	RRIO	1.65	5.5	25µA	8µV	0.02	300pA	1.1µV <sub>pp</sub>	65	400kHz	118	0.2	110	5 Ld SC70, 5 Ld SOT-23, 6 Ld $\mu$ TDFN



# Applications for Low Drift Op Amps – ISL28133 Chopper Stabilized Op Amps

## ISL28133 Used for Difference Amps for Sensor Frontends

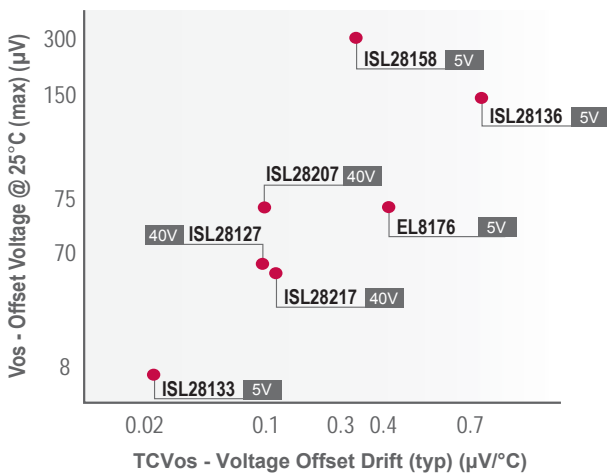


### Applications

- Low Power Pressure Sensors
- Thermopile or Thermocouple temp sensors
- Low Ohmic Current Sense
- Two stage load cell, Single supply (force or weight)
- High impedance charge amps (medical, industrial)
- Precision REF buffers or current, sources for active sources for load cells (IN-Amp, Chopper Amp, VREF)
- Accelerometer Sensor Buffer/Driver

## Other Alternative Precision Operational Amplifiers

### Precision Amps by DC Offset and Drift Over Temperature



### Ultra Precision: Low Voltage Offset, Low Offset Drift, High CMRR, High PSRR

Part	# Amp	V <sub>S</sub> Min (V)	V <sub>S</sub> Max (V)	I <sub>SS</sub> /Amp Max	V <sub>OS</sub> Max	V <sub>OS</sub> Drift (μV/°C typ)	CMRR Min (dB)	PSRR Min (dB)	Package
ISL28133	1	1.65	5.5	25μA	8μV	0.02	118	110	SC-70, SOT-23, μTDFN-6
ISL28233*	2	1.65	5.5	25μA	8μV	0.02	118	110	MSOP-8, μTDFN-10
ISL28117B*	1	4.5	40	450μA	50μV	0.1	120	120	DFN, SOIC
ISL28217B*	2	4.5	40	450μA	50μV	0.1	120	120	DFN, SOIC, MSOP
ISL28127*	1	4.5	40	2.8mA	70μV	0.1	115	115	SOIC, TDFN, MSOP
ISL28227*	2	4.5	40	2.8mA	70μV	0.1	115	115	DFN, SOIC
ISL28107*	1	4.5	40	290μA	75μV	0.1	115	115	DFN, SOIC
ISL28207*	2	4.5	40	290μA	75μV	0.1	115	115	DFN, SOIC, MSOP
ISL28117C*	1	4.5	40	450μA	100μV	0.1	120	120	DFN, SOIC
ISL28217C*	2	4.5	40	450μA	100μV	0.1	120	120	DFN, SOIC, MSOP
EL8176	1	2.4	5.5	75μA	100μV	0.7	90	90	SOIC8, WLCSP, SOT-23

\* Coming soon.



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