Superior V_{IO} & its Drift, C-MOS OPAmp can save real cost of your ADC design

- ✓ **No calibration required**
  V_{IO}: 15µV max.
- ✓ **Virtually insensitive to temperature changes**
  Zero Drift: 50nV/°C max.
- ✓ **High EMI Immunity**

■ Why does the above matters?

If the OPAmp is not chosen carefully, all the cost spent on 12-bits (or higher) ADC is lost. The **NJU7098A**' V_{IO} is 15µA (max.) and equivalent ADC might be 14-bits or similar. However, if you select other products (higher V_{IO} of A, B, C or another), your equivalent ADC goes lower bit. Its drift performance is also important, and **NJU7098A** does not required temperature compensation circuit because of its zero drift.

This means V_{IO} and its drift is the key parameters for your ADC design.

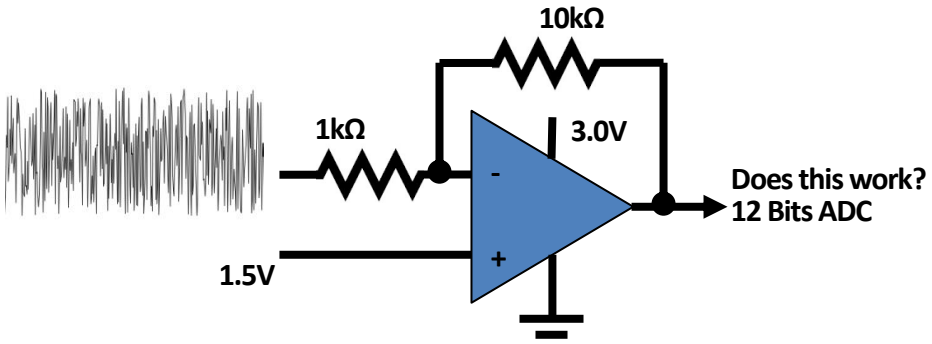
These excellent performances of the **NJU7098A**, it's suitable for sensing application, which is PLC, ATE sensor amplifier, solar inverter unit.

■ Features (V^+=5V typ.)

- Low Offset Voltage: 15µV max.
- Zero Drift: 0.05µV/°C max.
- Supply Voltage Range: 3V to 10V
- Rail-to-Rail Output (R_L=10kΩ): 20mV from rail
- Output Current (V_o=4.5V, V^+=5V): 30mA
- Package: SOT-23-6-1
- Ground sense
- DC Precision
  Open-Loop Voltage Gain: 140dB
  CMR, SVR: 130dB
- Supply Current: 0.6mA
- Shutdown circuit
- EMI immunity
- datasheet Link

■ Application Example of ADC

Max. V_{IO}	Max. offset of ADC	LSB of ADC	Equivalent ADC	Device
15µV	165µV	183µV = $3.0V/2^{14}$	≈ 14 Bits	***NJU7098A***
50µV	550µV	732µV = $3.0V/2^{12}$	≈ 12 Bits	Product A
500µV	5.5mV	5.86mV = $3.0V/2^{9}$	≈ 9 Bits	Product B
2.5mV	27.5mV	23.4mV = $3.0V/2^{7}$	≈ 7 Bits	Product C



* All information, specifications and product descriptions in this document are subject to change at any time, without prior notice.
* Contact your local NJR office or your distributor to obtain the latest specifications before placing your product order.

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