

## Product Overview

### TL331: Comparator, Single Channel, Open Collector, Low Power, Wide Supply Range

For complete documentation, see the data sheet.

The TL331 is an open collector, low-power voltage comparator designed specifically to operate over a wide supply range from 2 V to 36 V single supply and  $\pm 1$  V to  $\pm 18$  V for split supplies. The input common-mode voltage range includes ground, even when operated from a single power supply voltage.

### Features

- Wide Single Supply Voltage Range or Dual Supplies
- Low Supply Current
- Low Input Bias Current: 25 nA
- Low Input Offset Current:  $\pm 5$  nA
- Low Input Offset Voltage:  $\pm 2$  mV
- Input Common Mode Voltage Range includes Ground
- Low Output Saturation Voltage: 150 mV typ at IO = 4 mA
- Differential Input Voltage Range Equal to the Supply Voltage

### Part Electrical Specifications

| Product      | Pricing (\$/Unit) | Compliance  | Status | Channels | V <sub>CC</sub> Min (V) | V <sub>CC</sub> Max (V) | I <sub>O</sub> Typ (mA) | I <sub>CC</sub> Typ (mA) | t <sub>res</sub> Typ (ns) | V <sub>IO</sub> Max (mV) | T <sub>A</sub> Min (°C) | T <sub>A</sub> Max (°C) | Package Type      |
|--------------|-------------------|---|--------|----------|-------------------------|-------------------------|-------------------------|--------------------------|---------------------------|--------------------------|-------------------------|-------------------------|-------------------|
| TL331SN4T3G  | 0.396             | Pb-free<br>Halide free<br>non AEC-Q and PPAP            | Active | 1        | 2                       | 36                      | 16                      | 0.5                      | 400                       | 9                        | -40                     | 125                     | TSOP-5 / SOT-23-5 |
| TL331VSN4T3G | 0.396             | AEC Qualified<br>PPAP Capable<br>Pb-free<br>Halide free | Active | 1        | 2                       | 36                      | 16                      | 0.6                      | 400                       | 9                        | -40                     | 125                     | TSOP-5 / SOT-23-5 |

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