

## NCS213R

# Current Sense Amplifier, 26V, Low-/High-Side Voltage Out, Bidirectional Current Shunt Monitor

## Product Overview

For complete documentation, see the data sheet.



The NCS213R and NCV213R (AEC- Q100 qualified) are voltage output, current sense amplifiers that can measure voltage across shunts at common-mode voltages from -0.3 V to 26 V, independent of supply voltage. With a fixed gain of 50 V/V, the low offset of the zero-drift architecture enables current sensing across the shunt with maximum voltage drops as low as 10 mV full-scale. These devices can operate from a single +2.2 V to +26 V power supply, drawing a maximum of 80  $\mu$ A of supply current. Available in SC70-6 package. Additional gain options are available: NCS214R (100 V/V), NCS210R (200 V/V), NCS211R (500 V/V)

### Similar Products:

	<a href="#">NCS210R</a>	<a href="#">NCS211R</a>	<a href="#">NCS213R</a>	<a href="#">NCS214R</a>
Gain (V/V)	200	500	50	100
Gain Error (%)	1	1	1	1
Offset Voltage ( $\mu$ V)	35	35	100	60

### Features

- Wide Common Mode Input Range: -0.3 to 26V
- Low Offset Voltage:  $\pm$ 100  $\mu$ V max.
- Low Offset Drift: 0.5  $\mu$ V/ $^{\circ}$ C max.
- Supply Voltage: 2.2 to 26V

### Applications

- Power Monitoring
- Power Adapters
- LED Power Supply
- Over Current Protection
- Automotive









### Benefits

- High-side current sensing for high voltage systems
- Low Ohm value current sense resistors
- High accuracy over temperature leading to better power efficiency
- Wide supply voltage range provides system flexibility

### End Products

- White Goods
- Automotive
- Lighting
- Laptop/Notebooks PC
- Fast Chargers - Smartphones

## Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Channels	Gain (V/V)	Gain Error Max (%)	V <sub>s</sub> Min (V)	V <sub>s</sub> Max (V)	V <sub>CM</sub> (V)	I <sub>q</sub> Typ (mA)	Bandwidth Typ (-3dB)	V <sub>ps</sub> Max (mV)	V <sub>os</sub> Drift Max (μV/°C)	Operating Temperature Range (°C)	CMRR Typ (dB)	Package Type
NCS213RMUTAG	0.234	 	Active	1	50	±1	2.2	26	-0.3 to 26	0.04	0.09	±0.100	0.5	-40 to 125	120	UQFN-10
NCS213RSQT2G	0.222	 	Active	1	50	±1	2.2	26	-0.3 to 26	0.04	0.09	±0.100	0.5	-40 to 125	120	SC-88-6 / SC-70-6 / SOT-363-6
NCV213RSQT2G	0.291	   	Active	1	50	±1.5	2.2	26	-0.3 to 26	0.04	0.09	±0.15	1.5	-40 to 125	115	SC-88-6 / SC-70-6 / SOT-363-6