

NCS210R

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



Product Overview

For complete documentation, see the data sheet.

The NCS210R and NCV210R (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 200 V/V, the low offset of the zero-drift architecture enables current sensing with maximum drops across the shunt 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 μ A of supply current. Available in UQFN and SC70 packages Additional gain options are available: NCS213R (50 V/V), NCS214R (100 V/V), NCS211R (500 V/V)

Similar Products:

	NCS210R	NCS211R	NCS213R	NCS214R
Gain (V/V)	200	500	50	100
Gain Error (%)	1	1	1	1
Offset Voltage (μ V)	35	35	100	60

Features

- Wide common mode input range -0.3 to 26 V
- Low Offset Voltage: $\pm 35 \mu$ V max.
- Low Offset Drift: 0.5 μ 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 in Smartphones and Tablets

Part Electrical Specifications

Product	Pricing (\$/Unit)	Compliance	Status	Channels	Gain (V/V)	Gain Error Max (%)	$V_{s, Min}$ (V)	$V_{s, Max}$ (V)	V_{CM} (V)	I_q Typ (mA)	Bandwidth Typ (-3dB)	$V_{ps, Max}$ (mV)	$V_{os, Drift, Max}$ (μ V/ $^{\circ}$ C)	Operating Temperature Range ($^{\circ}$ C)	CMRR Typ (dB)	Package Type
NCS210RMUTAG	0.234	 	Active	1	200	± 1	2.2	26	-0.3 to 26	0.04	0.04	± 0.035	0.5	-40 to 125	125	UQFN-10
NCS210RSQT2G	0.235	 	Active	1	200	± 1	2.2	26	-0.3 to 26	0.04	0.04	± 0.035	0.5	-40 to 125	125	SC-88-6 / SC-70-6 / SOT-363-6
NCV210RSQT2G	0.291	   	Active	1	200	± 1.5	2.2	26	-0.3 to 26	0.04	0.04	± 0.05	1.5	-40 to 125	135	SC-88-6 / SC-70-6 / SOT-363-6