

Product Overview

NCS214R: Current Sense Amplifier, 26V, Low-/High-Side Voltage Out, Bidirectional Current Shunt Monitor

For complete documentation, see the data sheet.



The NCS214R and NCV214R (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 100V/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 μ A of supply current. Available in SC70-6 and UQFN10 packages.

Additional gain options are available:

NCS213R (50 V/V), NCS210R (200 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 26V
- Low Offset Voltage: \pm 100 μ V max.
- Low Offset Drift: 0.5 μ V/ $^{\circ}$ C max.
- Supply Voltage: 2.2 to 26 V

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 _{os} Max (mV)	V _{os} Drift Max (μ V/ $^{\circ}$ C)	Operating Temperature Range ($^{\circ}$ C)	CMR R Typ (dB)	Package Type
NCS214RMUTAG	0.234	Pb-free Halide free non AEC-Q and PPAP	Active	1	100	\pm 1	2.2	26	-0.3 to 26	0.04	0.06	\pm 0.06	0.5	-40 to 125	125	UQFN-10
NCS214RSQT2G	0.222	Pb-free Halide free non AEC-Q and PPAP	Active	1	100	\pm 1	2.2	26	-0.3 to 26	0.04	0.06	\pm 0.06	0.5	-40 to 125	125	SC-88-6 / SC-70-6 / SOT-363-6
NCV214RSQT2G	0.291	AEC Qualified PPAP Capable Pb-free Halide free	Active	1	100	\pm 1.5	2.2	26	-0.3 to 26	0.04	0.06	\pm 0.09	1.5	-40 to 125	135	SC-88-6 / SC-70-6 / SOT-363-6

For more information please contact your local sales support at www.onsemi.com.

Created on: 10/26/2021