

Product Overview

NCS7041: Current Sense Amplifier, 80V Common-Mode Voltage, Bidirectional

For complete documentation, see the data sheet.

The NCS7041 and NCV7041 are high voltage, high resolution, current sense amplifiers. They feature gain options of 14, 20, 50, and 100 V/V, with a maximum $\pm 0.3\%$ gain error over the entire temperature range. Each part consists of a preamplifier and buffer with access to output and input via A1 and A2 pins for an intermediate filter network or modified gain. These parts offer excellent input common-mode rejection from -6 V to 80 V . The NCS7041 can perform unidirectional or bidirectional current measurements across a sense resistor in a variety of applications. Automotive qualified options are available under NCV prefix. All versions are specified over the extended operating temperature range from -40°C to 150°C . Similar Products:

 NCS7030NCS7031NCS7041

Current

Unidirectional

Unidirectional

Bi-directional

Reference Input

No

No

Yes

Gain (V/V)

14

20

14,20,50,100

Features

- Bandwidth: 100 kHz
- Input Offset Voltage: 300 μV
- Gain Error: $\pm 0.3\%$
- Common-Mode Input Range: -6 to 80 V
- Multiple Gain Options: 14, 20, 50, 100 V/V
- CMRR: 90 dB

Applications

- Motor Control
- Power Supply
- Power Monitoring

Benefits

- Higher Speed
- Low error at the inputs
- Higher Accuracy
- Better transient response and wide dynamic range

End Products

- Diesel Injection Control
- Drones
- Battery Management Systems
- Telecom
- Server/ Telecom Power

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 (μV/°C)	Operating Temperature Range (°C)	CMR R Typ (dB)	Package Type
NCS7041D3G014R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	14	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCS7041D3G020R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	20	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCS7041D3G100R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCS7041DM3G014R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	14	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8
NCS7041DM3G050R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	50	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8
NCS7041DM3G100R2G		Pb-free Halide free non AEC-Q and PPAP	Product Preview	1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8
NCV7041D3G014R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	14	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCV7041D3G020R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	20	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCV7041D3G100R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8
NCV7041DM3G014R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	14	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8
NCV7041DM3G050R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	50	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8
NCV7041DM3G100R2G		AEC Qualified PPAP Capable Pb-free Halide free	Product Preview	1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro 8

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

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