

NCS7041

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

Product Overview

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 commonmode 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:

	NCS7030	NCS7031	NCS7041
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 μ V
- 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

End Products

- Diesel Injection Control
- Drones
- Battery Management Systems
- Telecom
- On Board Charger

Part Electrical Specifications

Product	Status	Compliance	Channels	Gain (V/V)	Gain Error Max (%)	V _{Min} (V)	V _S Max (V)	V _C (V)	I _g Typ (mA)	Bandwidth Typ (-3dB)	V _{os} Max (mV)	V _{os} Drift Max (μV/°C)	Operating Temperature Range (°C)	CMRR Typ (dB)	Package Type	Case Outline	MSL Type	MSL Temp (°C)	Container Type	Container Qty.
NCS7041D3G100R2G	Active		1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
NCS7041DM3G050R2G	Active		1	50	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro8	846A-02.PDF	1	260	REEL	4000
NCV7041D3G050R2G	Active		1	50	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
NCS7041DM3G100R2G	Active		1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro8	846A-02.PDF	1	260	REEL	4000
NCV7041DM3G014R2G	Active		1	14	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro8	846A-02.PDF	1	260	REEL	4000
NCS7041D3G020R2G	Active		1	20	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
NCV7041D3G100R2G	Active		1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
NCV7041D3G020R2G	Active		1	20	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
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NCS7041D3G050R2G	Active		1	50	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	SOIC-8	751-07.PDF	1	260	REEL	2500
NCV7041DM3G100R2G	Active		1	100	±0.3	4.5	5.5	-5 to 80	3	0.1	0.3	3	-40 to 125	90	Micro8	846A-02.PDF	1	260	REEL	4000

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NCS7041D3G014R2G	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	751-07.PDF	1	260	REEL	2500
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