



Product/Process Change Notice - PCN 23_0010 Rev. -

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This notice is to inform you of a change that will be made to certain ADI products (see Appendix A) that you may have purchased in the last 2 years. **Any inquiries or requests with this PCN (additional data or samples) must be sent to ADI within 30 days of publication date.** ADI contact information is listed below.

PCN Title:	ADG5208F, ADG5209F, ADG5243F, ADG5248F, ADG5249F Datasheet Specification Change
Publication Date:	06-Mar-2023
Effectivity Date:	08-Jun-2023 <i>(the earliest date that a customer could expect to receive changed material)</i>
Revision Description:	Initial Release

Description Of Change:

Changes to the datasheet specification and/or Test conditions regarding the following parameters:

- 1) On Resistance
- 2) On-Resistance Match Between Channels
- 3) On Resistance Flatness
- 4) Power Requirements

The following product datasheets are affected: ADG5208F, ADG5209F, ADG5243F, ADG5248F, ADG5249F.
Please see attachment for full change details

Reason For Change:

To accurately reflect the capability of the devices.

Impact of the change (positive or negative) on fit, form, function & reliability:

There will be no impact on form, fit, function, quality or reliability of any of the products.

Product Identification *(this section will describe how to identify the changed material)*

The change over date code will be advised in a later revision of this PCN

Summary of Supporting Information:

These specification changes will be outlined in
Rev.B of the ADG5208F/ADG5209F datasheet
Rev.B of the ADG5248F/ADG5249F datasheet
Rev.C of the ADG5243F datasheet

Supporting Documents

Attachment 1: Type: Datasheet Specification Comparison

[ADI_PCN_23_0010_Rev_-ADG5208F Family On resistance Power Supply PCN D...](#)

Note: If applicable, the device material declaration will be updated due to material change.

ADI Contact Information:

For questions on this PCN, please send an email to the regional contacts below or contact your local ADI sales representatives.

Americas:

Europe:

Japan:

Rest of Asia:

Appendix A - Affected ADI Models:

Added Parts On This Revision - Product Family / Model Number (15)

ADG5208F / ADG5208FBCPZ-RL7	ADG5208F / ADG5208FBRUZ	ADG5208F / ADG5208FBRUZ-RL7	ADG5209F / ADG5209FBCPZ-RL7	ADG5209F / ADG5209FBRUZ
ADG5209F / ADG5209FBRUZ-RL7	ADG5243F / ADG5243FBCPZ-RL7	ADG5243F / ADG5243FBRUZ	ADG5243F / ADG5243FBRUZ-RL7	ADG5248F / ADG5248FBCPZ-RL7
ADG5248F / ADG5248FBRUZ	ADG5248F / ADG5248FBRUZ-RL7	ADG5249F / ADG5249FBCPZ-RL7	ADG5249F / ADG5249FBRUZ	ADG5249F / ADG5249FBRUZ-RL7

Appendix B - Revision History:			
Rev	Publish Date	Effectivity Date	Rev Description
Rev. -	06-Mar-2023	08-Jun-2023	Initial Release



ADG5208F, ADG5209F, ADG5243F, ADG5248F, ADG5249F PCN 23_0010

Datasheet Comparaison

ADG5208F ADG5209F ± 15 V DUAL SUPPLY

$V_{DD} = 15\text{ V} \pm 10\%$, $V_{SS} = -15\text{ V} \pm 10\%$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 1.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +13.5\text{ V}$, $V_{SS} = -13.5\text{ V}$,
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	$V_S = \pm 10\text{ V}$, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
	250			Ω typ	$V_S = \pm 9\text{ V}$, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	2.5			Ω typ	$V_S = \pm 10\text{ V}$, $I_S = -1\text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
	2.5			Ω typ	$V_S = \pm 9\text{ V}$, $I_S = -1\text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	6.5			Ω typ	$V_S = \pm 10\text{ V}$, $I_S = -1\text{ mA}$
	8 -> 8.5	9 -> 9.5	9 -> 9.5	Ω max	
	1.5			Ω typ	$V_S = \pm 9\text{ V}$, $I_S = -1\text{ mA}$
	3.5	4	4	Ω max	
POWER REQUIREMENTS					$V_{DD} = +16.5\text{ V}$; $V_{SS} = -16.5\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.3			mA typ	
	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.25 -> 1.4		1.25 -> 1.4	mA max	
I_{SS}	0.65			mA typ	
	0.8 -> 0.95		0.85 -> 1	mA max	
Fault Mode					$V_S = \pm 55\text{ V}$
I_{DD}	1.6			mA typ	
	2.2 -> 2.5		2.3 -> 2.6	ma max	
I_{GND}	0.9			ma typ	
	1.6 -> 1.8		1.7 -> 1.9	ma max	
I_{SS}	0.65			ma typ	
	1.0 -> 1.2		1.1 -> 1.3	mA max	

Rev. A

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ADG5208F ADG5209F ± 20 V DUAL SUPPLY

$V_{DD} = 20 \text{ V} \pm 10\%$, $V_{SS} = -20 \text{ V} \pm 10\%$, $GND = 0 \text{ V}$, $C_{DECOUPLING} = 0.1 \mu\text{F}$, unless otherwise noted.

Table 2.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments	
ANALOG SWITCH						
Analog Signal Range			V _{DD} to V _{SS}	V	V _{DD} = +18 V, V _{SS} = −18 V	
On Resistance, R _{ON}	260			Ω typ	V _S = ±15 V, I _S = −1 mA	
	280 -> 290	345 -> 355	405 -> 415	Ω max		
	250			Ω typ	V _S = ±13.5 V, I _S = −1 mA	
	270	335	395	Ω max		
On-Resistance Match Between Channels, ΔR _{ON}	2.5			Ω typ	V _S = ±15 V, I _S = −1 mA	
	6 -> 8	12 -> 14	13 -> 15	Ω max		
	2.5			Ω typ	V _S = ±13.5 V, I _S = −1 mA	
	6 -> 8	12 -> 14	13 -> 15	Ω max		
On-Resistance Flatness, R _{FLAT(ON)}	12.5			Ω typ	V _S = ±15 V, I _S = −1 mA	
	14	15	15	Ω max		
	1.5			Ω typ	V _S = ±13.5 V, I _S = −1 mA	
	3.5	4	4	Ω max		
POWER REQUIREMENTS						
Normal Mode						
I _{DD}	1.3			mA typ	V _{DD} = +22 V; V _{SS} = −22 V; GND = 0 V; digital inputs = 0 V, 5 V, or V _{DD} V _S = ±55 V	
	2 -> 2.15		2 -> 2.15	mA max		
I _{GND}	0.75			mA typ		
	1.25 -> 1.4		1.25 -> 1.4	mA max		
I _{SS}	0.65			mA typ		
	0.8 -> 0.95		0.85 -> 1	mA max		
Fault Mode						
I _{DD}	1.6			mA typ		
	2.2 -> 2.5		2.3 -> 2.6	mA max		
I _{GND}	0.9			mA typ		
	1.6 -> 1.8		1.7 -> 1.9	mA max		
I _{SS}	0.65			mA typ		
	1.0 -> 1.2		1.1 -> 1.3	mA max		

Data Sheet Comparison

ADG5208F ADG5209F 12 V SINGLE SUPPLY

$V_{DD} = 12\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 3.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					
Analog Signal Range			0 V to V_{DD}	V	$V_{DD} = 10.8\text{ V}$, $V_{SS} = 0\text{ V}$
On Resistance, R_{ON}	630			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	690	710	730	Ω max	
	270			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	290	355	410	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	6			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	17 $\rightarrow$ 19	19 $\rightarrow$ 21	19 $\rightarrow$ 21	Ω max	
	3			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	6.5 $\rightarrow$ 8	11 $\rightarrow$ 12.5	12 $\rightarrow$ 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	380			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	440	460	460	Ω max	
	25			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	27 $\rightarrow$ 28	28 $\rightarrow$ 29	28 $\rightarrow$ 29	Ω max	
POWER REQUIREMENTS					
Normal Mode					
I_{DD}	1.3			mA typ	$V_{DD} = 13.2\text{ V}$; $V_{SS} = 0\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
	2 $\rightarrow$ 2.15		2 $\rightarrow$ 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.4		1.4	mA max	
I_{SS}	0.5			mA typ	
	0.65 $\rightarrow$ 0.95		0.7 $\rightarrow$ 1	mA max	
Fault Mode					
I_{DD}	1.6			mA typ	$V_S = \pm 55\text{ V}$
	2.2 $\rightarrow$ 2.5		2.3 $\rightarrow$ 2.6	mA max	
I_{GND}	0.9			mA typ	Digital inputs = 5 V
	1.6 $\rightarrow$ 1.8		1.7 $\rightarrow$ 1.9	mA max	
I_{SS}	0.65			mA typ	
	1.0 $\rightarrow$ 1.2		1.1 $\rightarrow$ 1.3	mA max	$V_S = \pm 55\text{ V}$, $V_D = 0\text{ V}$

ADG5208F ADG5209F 36 V SINGLE SUPPLY

$V_{DD} = 36\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 4.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = 32.4\text{ V}$, $V_{SS} = 0\text{ V}$
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	335	415	480	Ω max	
	250			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	62			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	70	85	100	Ω max	
	1.5			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					$V_{DD} = 39.6\text{ V}$; $V_{SS} = 0\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.3			mA typ	
	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.4		1.4	mA max	
I_{SS}	0.5			mA typ	
	0.65 -> 0.95		0.7 -> 1	mA max	
Fault Mode					$V_S = +55\text{ V}$, -40 V
I_{DD}	1.6			mA typ	
	2.2 -> 2.5		2.3 -> 2.6	mA max	
I_{GND}	0.9			mA typ	
	1.6 -> 1.8		1.7 -> 1.9	mA max	
I_{SS}	0.65			mA typ	
	1.0 -> 1.2		1.1 -> 1.3	mA max	

Data Sheet Comparison

ADG5243F ± 15 V DUAL SUPPLY

$V_{DD} = 15 \text{ V} \pm 10\%$, $V_{SS} = -15 \text{ V} \pm 10\%$, $GND = 0 \text{ V}$, $C_{DECOUPLING} = 0.1 \mu\text{F}$, unless otherwise noted.

Table 5.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +13.5 \text{ V}$, $V_{SS} = -13.5 \text{ V}$
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	$V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	270	335	395	Ω max	
	250			Ω typ	$V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	1			Ω typ	$V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	4 -> 8	5 -> 9	5 -> 9	Ω max	
	1			Ω typ	$V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	4 -> 8	5 -> 9	5 -> 9	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	7			Ω typ	$V_{DD} = +15 \text{ V}$, $V_{SS} = -15 \text{ V}$, $V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	8.5	9.5	9.5	Ω max	
	1.5			Ω typ	$V_{DD} = +15 \text{ V}$, $V_{SS} = -15 \text{ V}$, $V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	3.5	4.5	4.5	Ω max	
POWER REQUIREMENTS					$V_{DD} = \text{POSFV} = +16.5 \text{ V}$, $V_{SS} = \text{NEGFV} = -16.5 \text{ V}$, $GND = 0 \text{ V}$, digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.3			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2 -> 2.15		2.1 -> 2.25	mA max	
I_{GND}	0.75			mA typ	
	1.25 -> 1.4		1.4 -> 1.55	mA max	
I_{SS}	0.65			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	0.95		1.0	mA max	
Fault Mode					$V_S = \pm 55 \text{ V}$, all channels in fault
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2.5		2.8	mA max	
I_{GND}	0.9			mA typ	
	1.8		1.9	mA max	
I_{SS}	0.55			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0 -> 1.2		1.1 -> 1.3	mA max	

ADG5243F ±20 V DUAL SUPPLY

$V_{DD} = 20\text{ V} \pm 10\%$, $V_{SS} = -20\text{ V} \pm 10\%$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 6.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +18\text{ V}$, $V_{SS} = -18\text{ V}$
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	270			Ω typ	$V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	290	355	410	Ω max	
	250			Ω typ	$V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	1			Ω typ	$V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	4 -> 8	5 -> 9	5 -> 9	Ω max	
	1			Ω typ	$V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	4 -> 8	5 -> 9	5 -> 9	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	27			Ω typ	$V_{DD} = +20\text{ V}$, $V_{SS} = -20\text{ V}$, $V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	29.5	29.5	29.5	Ω max	
	5			Ω typ	$V_{DD} = +20\text{ V}$, $V_{SS} = -20\text{ V}$, $V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	6.5	8.5	8.5	Ω max	
POWER REQUIREMENTS					$V_{DD} = \text{POSFV} = +22\text{ V}$, $V_{SS} = \text{NEGFV} = -22\text{ V}$, $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.3			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2 -> 2.15		2.1 -> 2.25	mA max	
I_{GND}	0.75			mA typ	
	1.25 -> 1.4		1.4 -> 1.55	mA max	
I_{SS}	0.65			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0		1.0	mA max	
Fault Mode					$V_S = \pm 55\text{ V}$, all channels in fault
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2.5		2.8	mA max	
I_{GND}	0.9			mA typ	
	1.8		1.9	mA max	
I_{SS}	0.55			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0 -> 1.2		1.1 -> 1.3	mA max	
V_{DD}/V_{SS}			± 5	V min	$GND = 0\text{ V}$
			± 22	V max	$GND = 0\text{ V}$

Data Sheet Comparison

ADG5243F 12 V SINGLE SUPPLY

$V_{DD} = 12\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 7.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					
Analog Signal Range			0 V to V _{DD}	V	V _{DD} = 10.8 V, V _{SS} = 0 V
On Resistance, R _{ON}	630			Ω typ	V _S = 0 V to 10 V, I _S = −1 mA → V _S = 0 V to 8.5 V, I _S = −1 mA
	690	710	730	Ω max	
	270			Ω typ	V _S = 3.5 V to 8.5 V, I _S = −1 mA
	290	355	410	Ω max	
On-Resistance Match Between Channels, ΔR _{ON}	6			Ω typ	V _S = 0 V to 10 V, I _S = −1 mA → V _S = 0 V to 8.5 V, I _S = −1 mA
	19	19	19	Ω max	
	1			Ω typ	V _S = 3.5 V to 8.5 V, I _S = −1 mA
	5 -> 8	5 -> 8	5 -> 8	Ω max	
On-Resistance Flatness, R _{FLAT(ON)}	380			Ω typ	V _S = 0 V to 10 V, I _S = −1 mA → V _S = 0 V to 8.5 V, I _S = −1 mA
	440	460	460	Ω max	
	25			Ω typ	V _S = 3.5 V to 8.5 V, I _S = −1 mA
	27 -> 28	28 -> 29	28 -> 29	Ω max	
POWER REQUIREMENTS					
Normal Mode					
I _{DD}	1.3			mA typ	V _{DD} = POSFV = 13.2 V, V _{SS} = NEGFV = 0 V, GND = 0 V, digital inputs = 0 V, 5 V, or V _{DD}
I _{POSFV}	0.15			mA typ	
I _{DD} + I _{POSFV}	2 -> 2.15		2.1 -> 2.25	mA max	
I _{GND}	0.75			mA typ	
	1.4		1.5	mA max	
I _{SS}	0.55			mA typ	
I _{NEGFV}	0.2			mA typ	
I _{SS} + I _{NEGFV}	0.95		1.0	mA max	
Fault Mode					
I _{DD}	1.4			mA typ	V _S = ±55 V, all channels in fault
I _{POSFV}	0.2			mA typ	
I _{DD} + I _{POSFV}	2.5		2.8	mA max	
I _{GND}	0.9			mA typ	
	1.8		1.9	mA max	Digital inputs = 5 V
I _{SS}	0.55			mA typ	
I _{NEGFV}	0.2			mA typ	
I _{SS} + I _{NEGFV}	1.0 -> 1.2		1.1 -> 1.3	mA max	
					V _S = ±55 V, V _D = 0 V

ADG5243F 36 V SINGLE SUPPLY

$V_{DD} = 36\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 8.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = 32.4\text{ V}$, $V_{SS} = 0\text{ V}$
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	335	415	480	Ω max	
	250			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	62			Ω typ	$V_S = 0\text{ V}$ to 30 V, $I_S = -1\text{ mA}$
	70	85	100	Ω max	
	1.5			Ω typ	$V_S = 4.5\text{ V}$ to 28 V, $I_S = -1\text{ mA}$
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					$V_{DD} = \text{POSFV} = 39.6\text{ V}$, $V_{SS} = \text{NEGFV} = 0\text{ V}$, $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.3			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2 -> 2.15		2.1 -> 2.25	mA max	
I_{GND}	0.75			mA typ	
	1.4		1.5	mA max	
I_{SS}	0.55			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	0.95		1.0	mA max	
Fault Mode					$V_S = +55\text{ V}$, -40 V , all channels in fault
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2.5		2.8	mA max	
I_{GND}	0.9			mA typ	
	1.8		1.9	mA max	
I_{SS}	0.55			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0 -> 1.2		1.1 -> 1.3	mA max	

Data Sheet Comparison

ADG5248F ADG5249F ± 15 V DUAL SUPPLY

$V_{DD} = 15 \text{ V} \pm 10\%$, $V_{SS} = -15 \text{ V} \pm 10\%$, $GND = 0 \text{ V}$, $C_{DECOUPLING} = 0.1 \mu\text{F}$, unless otherwise noted.

Table 9.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +13.5 \text{ V}$, $V_{SS} = -13.5 \text{ V}$
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	$V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	270	335	395	Ω max	
	250			Ω typ	$V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	2.5			Ω typ	$V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
	2.5			Ω typ	$V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	6.5			Ω typ	$V_S = \pm 10 \text{ V}$, $I_S = -1 \text{ mA}$
	8 -> 8.5	9 -> 9.5	9 -> 9.5	Ω max	
	1.5			Ω typ	$V_S = \pm 9 \text{ V}$, $I_S = -1 \text{ mA}$
	3.5	4	4	Ω max	
POWER REQUIREMENTS					$V_{DD} = \text{POSFV} = +16.5 \text{ V}$; $V_{SS} = \text{NEGFV} = -16.5 \text{ V}$; $GND = 0 \text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.15			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.25 -> 1.4		1.25 -> 1.4	mA max	
I_{SS}	0.45			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	0.8 -> 0.95		0.85 -> 1	mA max	
Fault Mode					$V_S = \pm 55 \text{ V}$
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2.2 -> 2.5		2.3 -> 2.6	mA max	
I_{GND}	0.9			mA typ	
	1.6 -> 1.8		1.7 -> 1.9	mA max	
I_{SS}	0.45			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0 -> 1.2		1.1 -> 1.3	mA max	
V_{DD}/V_{SS}			± 5	V min	$GND = 0 \text{ V}$
			± 22	V max	$GND = 0 \text{ V}$

ADG5248F ADG5249F ± 20 V DUAL SUPPLY

$V_{DD} = 20\text{ V} \pm 10\%$, $V_{SS} = -20\text{ V} \pm 10\%$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 10.

Parameter	+25°C	-40°C to +85°C	-40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +18\text{ V}$, $V_{SS} = -18\text{ V}$
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	260			Ω typ	$V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	280 -> 290	345 -> 355	405 -> 415	Ω max	
	250			Ω typ	$V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	2.5			Ω typ	$V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
	2.5			Ω typ	$V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	6 -> 8	12 -> 14	13 -> 15	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	12.5			Ω typ	$V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$
	14	15	15	Ω max	
	1.5			Ω typ	$V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$
	3.5	4	4	Ω max	
POWER REQUIREMENTS					$V_{DD} = \text{POSFV} = +22\text{ V}$; $V_{SS} = \text{NEGFV} = -22\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.15			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.25 -> 1.4		1.25 -> 1.4	mA max	
I_{SS}	0.45			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	0.8 -> 0.95		0.85 -> 1	mA max	
Fault Mode					$V_S = \pm 55\text{ V}$
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{\text{POSFV}}$	2.2 -> 2.5		2.3 -> 2.6	mA max	
I_{GND}	0.9			mA typ	
	1.6 -> 1.8		1.7 -> 1.9	mA max	
I_{SS}	0.45			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{\text{NEGFV}}$	1.0 -> 1.2		1.1 -> 1.3	mA max	

Data Sheet Comparison

ADG5248F ADG5249F 12 V SINGLE SUPPLY

$V_{DD} = 12\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 11.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					
ANALOG SWITCH					$V_{DD} = 10.8\text{ V}$, $V_{SS} = 0\text{ V}$
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	630			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	690	710	730	Ω max	
	270			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	290	355	410	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	6			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	17 -> 19	19 -> 21	19 -> 21	Ω max	
	3			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	380			Ω typ	$V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	440	460	460	Ω max	
	25			Ω typ	$V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$
	27 -> 28	28 -> 29	28 -> 29	Ω max	
POWER REQUIREMENTS					
POWER REQUIREMENTS					$V_{DD} = 13.2\text{ V}$; $V_{SS} = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.15			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{POSFV}$	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.4		1.4	mA max	
I_{SS}	0.3			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{NEGFV}$	0.65 -> 0.95		0.7 -> 1	mA max	
Fault Mode					$V_S = \pm 55\text{ V}$
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{POSFV}$	2.2 -> 2.5		2.3 -> 2.6	mA max	
I_{GND}	0.9			mA typ	
	1.6 -> 1.8		1.7 -> 1.9	mA max	
I_{SS}	0.45			mA typ	Digital inputs = 5 V
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{NEGFV}$	1.0 -> 1.2		1.1 -> 1.3	mA max	$V_S = \pm 55\text{ V}$, $V_D = 0\text{ V}$

ADG5248F ADG5249F 36 V SINGLE SUPPLY

$V_{DD} = 36\text{ V} \pm 10\%$, $V_{SS} = 0\text{ V}$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, unless otherwise noted.

Table 12.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = 32.4\text{ V}$, $V_{SS} = 0\text{ V}$
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	$V_S = 0\text{ V to }30\text{ V}$, $I_S = -1\text{ mA}$
	335	415	480	Ω max	
	250			Ω typ	$V_S = 4.5\text{ V to }28\text{ V}$, $I_S = -1\text{ mA}$
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	$V_S = 0\text{ V to }30\text{ V}$, $I_S = -1\text{ mA}$
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	$V_S = 4.5\text{ V to }28\text{ V}$, $I_S = -1\text{ mA}$
On-Resistance Flatness, $R_{FLAT(ON)}$	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
	62			Ω typ	$V_S = 0\text{ V to }30\text{ V}$, $I_S = -1\text{ mA}$
	70	85	100	Ω max	
	1.5			Ω typ	$V_S = 4.5\text{ V to }28\text{ V}$, $I_S = -1\text{ mA}$
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					$V_{DD} = 39.6\text{ V}$; $V_{SS} = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD}
Normal Mode					
I_{DD}	1.15			mA typ	
I_{POSFV}	0.15			mA typ	
$I_{DD} + I_{POSFV}$	2 -> 2.15		2 -> 2.15	mA max	
I_{GND}	0.75			mA typ	
	1.4		1.4	mA max	
I_{SS}	0.3			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{NEGFV}$	0.65 -> 0.95		0.7 -> 1	mA max	
Fault Mode					$V_S = +55\text{ V}$, -40 V
I_{DD}	1.4			mA typ	
I_{POSFV}	0.2			mA typ	
$I_{DD} + I_{POSFV}$	2.2 -> 2.5		2.3 -> 2.6	mA max	
I_{GND}	0.9			mA typ	
	1.6 -> 1.8		1.7 -> 1.9	mA max	
I_{SS}	0.45			mA typ	
I_{NEGFV}	0.2			mA typ	
$I_{SS} + I_{NEGFV}$	1.0 -> 1.2		1.1 -> 1.3	mA max	
V_{DD}			8	V min	$GND = 0\text{ V}$
			44	V max	$GND = 0\text{ V}$