



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

Datasheet Comparison

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 | | | | | | |
| Analog Signal Range | | | V_{DD} to V_{SS} | V | $V_{DD} = +13.5\text{ V}$, $V_{SS} = -13.5\text{ V}$, | |
| 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = +16.5\text{ V}$; $V_{SS} = -16.5\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} | |
| | 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 | | |

Rev. A

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ADG5208F ADG5209F ±20 V DUAL SUPPLY

$V_{DD} = 20\text{ V} \pm 10\%$, $V_{SS} = -20\text{ V} \pm 10\%$, $GND = 0\text{ V}$, $C_{DECOUPLING} = 0.1\text{ }\mu\text{F}$, 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 | $V_{DD} = +18\text{ V}$, $V_{SS} = -18\text{ V}$ | |
| 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 | | |
| On-Resistance Match Between Channels, ΔR_{ON} | 250 | | | Ω typ | $V_S = \pm 13.5\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 270 | 335 | 395 | Ω max | | |
| | 2.5 | | | Ω typ | | |
| On-Resistance Flatness, $R_{FLAT(ON)}$ | 6 -> 8 | 12 -> 14 | 13 -> 15 | Ω max | $V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 2.5 | | | Ω typ | | |
| | 6 -> 8 | 12 -> 14 | 13 -> 15 | Ω max | | |
| | 12.5 | | | Ω typ | | |
| | 14 | 15 | 15 | Ω max | $V_S = \pm 15\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 1.5 | | | Ω typ | | |
| | 3.5 | 4 | 4 | Ω max | | |
| | | | | | | |
| POWER REQUIREMENTS | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = +22\text{ V}$; $V_{SS} = -22\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} | |
| | 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 | | | | | |
| $V_{DD} = 13.2\text{ V}$; $V_{SS} = 0\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} | | | | | |
| Normal Mode | | | | | |
| I_{DD} | 1.3 | | | mA typ | |
| | 2 \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 | | | | | $V_S = \pm 55\text{ V}$ |
| I_{DD} | 1.6 | | | mA typ | |
| | 2.2 \rightarrow 2.5 | | 2.3 \rightarrow 2.6 | mA max | |
| I_{GND} | 0.9 | | | mA typ | |
| | 1.6 \rightarrow 1.8 | | 1.7 \rightarrow 1.9 | mA max | |
| I_{SS} | 0.65 | | | mA typ | Digital inputs = 5 V |
| | 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 | | | | | |
| 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 | $V_S = 4.5\text{ V to }28\text{ V}$, $I_S = -1\text{ mA}$ |
| | 6.5 -> 8 | 11 -> 12.5 | 12 -> 13.5 | Ω max | |
| On-Resistance Flatness, $R_{FLAT(ON)}$ | 62 | | | Ω typ | $V_S = 0\text{ V to }30\text{ V}$, $I_S = -1\text{ mA}$ |
| | 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 | | | | | |
| Normal Mode | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = 39.6\text{ V}$; $V_{SS} = 0\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0V, 5V, or V_{DD} |
| | 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 | | | | | |
| I_{DD} | 1.6 | | | mA typ | $V_S = +55\text{ V}$, -40 V |
| | 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

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

Table 5.

| Parameter | +25°C | -40°C to +85°C | -40°C to +125°C | Unit | Test Conditions/Comments | |
|---|-------------|----------------|----------------------|--------------|--|--|
| ANALOG SWITCH | | | | | | |
| Analog Signal Range | | | V_{DD} to V_{SS} | V | $V_{DD} = +13.5\text{ V}$, $V_{SS} = -13.5\text{ V}$ | |
| 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = \text{POSFV} = +16.5\text{ V}$, $V_{SS} = \text{NEGFV} = -16.5\text{ V}$ $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD} | |
| 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 | | | | | | |
| 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 | | | | | | |
| 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = \text{POSFV} = +22\text{ V}$, $V_{SS} = \text{NEGFV} = -22\text{ V}$, $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD} | |
| 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 | | | | | | |
| I_{DD} | 1.4 | | | mA typ | | $V_S = \pm 55\text{ V}$, all channels in fault |
| 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 | $V_{DD} = 10.8\text{ V}$, $V_{SS} = 0\text{ V}$ | |
| 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 | $V_S = 0\text{ V to }10\text{ V}$, $I_S = -1\text{ mA} \rightarrow$ $V_S = 0\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 19 | 19 | 19 | Ω max | | |
| | 1 | | | Ω typ | $V_S = 3.5\text{ V to }8.5\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 5 -> 8 | 5 -> 8 | 5 -> 8 | 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = \text{POSFV} = 13.2\text{ V}$, $V_{SS} = \text{NEGFV} = 0\text{ V}$, $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD} | |
| 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 | | | | | | |
| I_{DD} | 1.4 | | | mA typ | | $V_S = \pm 55\text{ V}$, all channels in fault |
| 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 | Digital inputs = 5 V | |
| I_{NEGFV} | 0.2 | | | mA typ | | |
| $I_{SS} + I_{\text{NEGFV}}$ | 1.0 -> 1.2 | | 1.1 -> 1.3 | mA max | $V_S = \pm 55\text{ V}$, $V_D = 0\text{ V}$ | |

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 | | | | | | |
| Analog Signal Range | | | 0 V to V_{DD} | V | $V_{DD} = 32.4\text{ V}$, $V_{SS} = 0\text{ V}$ | |
| 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.3 | | | mA typ | $V_{DD} = POSFV = 39.6\text{ V}$, $V_{SS} = NEGFV = 0\text{ V}$, $GND = 0\text{ V}$, digital inputs = 0 V, 5 V, or V_{DD} $V_S = +55\text{ V}$, -40 V, all channels in fault | |
| 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 | | |
| 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 | | |
| 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 | | |

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 | | | | | |
| Analog Signal Range | | | V_{DD} to V_{SS} | V | $V_{DD} = +13.5\text{ V}$, $V_{SS} = -13.5\text{ V}$ |
| 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 | | | | | |
| Normal Mode | | | | | |
| I_{DD} | 1.15 | | | mA typ | $V_{DD} = POSFV = +16.5\text{ V}$; $V_{SS} = NEGfV = -16.5\text{ V}$; $GND = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} |
| I_{POSFV} | 0.15 | | | mA typ | |
| $I_{DD} + I_{POSFV}$ | 2 -> 2.15 | | 2 -> 2.15 | mA max | |
| I_{GND} | 0.75 | | | mA typ | |
| | 1.25 -> 1.4 | | 1.25 -> 1.4 | mA max | |
| I_{SS} | 0.45 | | | mA typ | |
| I_{NEGfV} | 0.2 | | | mA typ | |
| $I_{SS} + I_{NEGfV}$ | 0.8 -> 0.95 | | 0.85 -> 1 | mA max | |
| Fault Mode | | | | | |
| I_{DD} | 1.4 | | | mA typ | $V_S = \pm 55\text{ V}$ |
| 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}/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 | | | | | | |
| Analog Signal Range | | | V_{DD} to V_{SS} | V | $V_{DD} = +18\text{ V}$, $V_{SS} = -18\text{ V}$ | |
| 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.15 | | | mA typ | $V_{DD} = \text{POSFV} = +22\text{ V}$; $V_{SS} = \text{NEGFV} = -22\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} $V_S = \pm 55\text{ V}$ | |
| 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 | | | | | | |
| 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 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 -> 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 | | | | | |
| Normal Mode | | | | | |
| I_{DD} | 1.15 | | | mA typ | $V_{DD} = 13.2\text{ V}$; $V_{SS} = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} |
| 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 | | | | | |
| I_{DD} | 1.4 | | | mA typ | $V_S = \pm 55\text{ V}$ |
| 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 | | | | | | |
| Analog Signal Range | | | 0 V to V_{DD} | V | $V_{DD} = 32.4\text{ V}$, $V_{SS} = 0\text{ V}$ | |
| 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 | | |
| On-Resistance Flatness, $R_{FLAT(ON)}$ | 3 | | | Ω typ | $V_S = 4.5\text{ V to }28\text{ V}$, $I_S = -1\text{ mA}$ | |
| | 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 | | | | | | |
| Normal Mode | | | | | | |
| I_{DD} | 1.15 | | | mA typ | $V_{DD} = 39.6\text{ V}$; $V_{SS} = 0\text{ V}$; digital inputs = 0 V, 5 V, or V_{DD} | |
| 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 | | | | | | |
| I_{DD} | 1.4 | | | mA typ | | $V_S = +55\text{ V}$, -40 V |
| 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 | $GND = 0\text{ V}$ | |