ADG5208F ADG5209F ±15 V DUAL SUPPLY

V_{DD} = 15 V ± 10%, V_{SS} = −15 V ± 10%, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = −13.5 V,
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	V_S = ±10 V, I_S = −1 mA
	270	335	395	Ω max	
	250			Ω typ	V_S = ±9 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	2.5			Ω typ	V_S = ±10 V, I_S = −1 mA
	6 -> 8	12 ->14	13 ->15	Ω max	
	2.5			Ω typ	V_S = ±9 V, I_S = −1 mA
	6 -> 8	12 ->14	13 ->15	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	6.5			Ω typ	V_S = ±10 V, I_S = −1 mA
	8 -> 8.5	9 -> 9.5	9 -> 9.5	Ω max	
	1.5			Ω typ	V_S = ±9 V, I_S = −1 mA
	3.5	4	4	Ω max	
POWER REQUIREMENTS					V_{DD} = +16.5 V; V_{SS} = −16.5 V; GND = 0 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 = ±55 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	

ADG5208F ADG5209F ±20 V DUAL SUPPLY

V_{DD} = 20 V ± 10%, V_{SS} = −20 V ± 10%, GND = 0 V, $C_{DECOUPLING}$ = 0.1 μF, unless otherwise noted.

Table 2.

Parameter	+25℃	−40℃ to +85℃	−40℃ to +125℃	Unit	Test Conditions/Comments
ANALOG SWITCH					V_{DD} = +18 V, V_{SS} = −18 V
Analog Signal Range			V_{DD} to V_{SS}	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					V_{DD} = +22 V; V_{SS} = −22 V; GND = 0 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 = ±55 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	

ADG5208F ADG5209F 12 V SINGLE SUPPLY

V_{DD} = 12 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, unless otherwise noted.

Table 3.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					V_{DD} = 10.8 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	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
	17 -> 19	19 -> 21	19 -> 21	Ω max	
	3			Ω typ	V_S = 3.5 V to 8.5 V, I_S = −1 mA
	6.5 -> 8	11 -> 12.5	12 -> 13.5	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					V_{DD} = 13.2 V; V_{SS} = 0 V; GND = 0 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 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	Digital inputs = 5 V
	1.0 −> 1.2		1.1 -> 1.3	mA max	V_S = ±55 V, V_D = 0 V

ADG5208F ADG5209F 36 V SINGLE SUPPLY

V_{DD} = 36 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	335	415	480	Ω max	
	250			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	62			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	70	85	100	Ω max	
	1.5			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					V_{DD} = 39.6 V; V_{SS} = 0 V; GND = 0 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 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	

ADG5243F ±15 V DUAL SUPPLY

V_{DD} = 15 V ± 10%, V_{SS} = −15 V ± 10%, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = −13.5 V
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	V_S = ±10 V, I_S = −1 mA
	270	335	395	Ω max	
	250			Ω typ	V_S = ±9 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	1			Ω typ	V_S = ±10 V, I_S = −1 mA
	4 -> 8	5 -> 9	5 -> 9	Ω max	
	1			Ω typ	V_S = ±9 V, I_S = −1 mA
	4 -> 8	5 -> 9	5 -> 9	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	7			Ω typ	~~V_{DD} = +15 V, V_{SS} = −15 V,~~ V_S = ±10 V, I_S = −1 m
	8.5	9.5	9.5	Ω max	
	1.5			Ω typ	~~V_{DD} = +15 V, V_{SS} = −15 V,~~ V_S = ±9 V, I_S = −1 mA
	3.5	4.5	4.5	Ω max	
POWER REQUIREMENTS					V_{DD} = POSFV = +16.5 V, V_{SS} = NEGFV = −16.5 V, GND = 0 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_{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_{NEGFV}	0.95		1.0	mA max	
Fault Mode					V_S = ±55 V, all channels in fault
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	

ADG5243F ±20 V DUAL SUPPLY

V_{DD} = 20 V ± 10%, V_{SS} = −20 V ± 10%, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = −18 V
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	270			Ω typ	V_S = ±15 V, I_S = −1 mA
	290	355	410	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}	1			Ω typ	V_S = ±15 V, I_S = −1 mA
	4 -> 8	5 -> 9	5 -> 9	Ω max	
	1			Ω typ	V_S = ±13.5 V, I_S = −1 mA
	4 -> 8	5 -> 9	5 -> 9	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	27			Ω typ	~~V_{DD} = +20 V, V_{SS} = −20 V,~~ V_S = ±15 V, I_S = −1 mA
	29.5	29.5	29.5	Ω max	
	5			Ω typ	~~V_{DD} = +20 V, V_{SS} = −20 V,~~ V_S = ±13.5 V, I_S = −1 mA
	6.5	8.5	8.5	Ω max	
POWER REQUIREMENTS					V_{DD} = POSFV = +22 V, V_{SS} = NEGFV = −22 V, GND = 0 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_{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_{NEGFV}	1.0		1.0	mA max	
Fault Mode					V_S = ±55 V, all channels in fault
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	
V_{DD}/V_{SS}		±5		V min	GND = 0 V
		±22		V max	GND = 0 V

ADG5243F 12 V SINGLE SUPPLY

V_{DD} = 12 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, unless otherwise noted.

Table 7.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					V_{DD} = 10.8 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	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					V_{DD} = POSFV = 13.2 V, V_{SS} = NEGFV = 0 V, GND = 0 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_{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					V_S = ±55 V, all channels in fault
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	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 = ±55 V, V_D = 0 V

ADG5243F 36 V SINGLE SUPPLY

V_{DD} = 36 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 μF, 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 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	335	415	480	Ω max	
	250			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	62			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	70	85	100	Ω max	
	1.5			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					V_{DD} = POSFV = 39.6 V, V_{SS} = NEGFV = 0 V, GND = 0 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_{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					V_S = +55 V, −40 V, all channels in fault
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 V ± 10%, V_{SS} = −15 V ± 10%, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = −13.5 V
Analog Signal Range			V_{DD} to V_{SS}	V	
On Resistance, R_{ON}	250			Ω typ	V_S = ±10 V, I_S = −1 mA
	270	335	395	Ω max	
	250			Ω typ	V_S = ±9 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	2.5			Ω typ	V_S = ±10 V, I_S = −1 mA
	6 -> 8	12 ->14	13 ->15	Ω max	
	2.5			Ω typ	V_S = ±9 V, I_S = −1 mA
	6 -> 8	12 ->14	13 ->15	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	6.5			Ω typ	V_S = ±10 V, I_S = −1 mA
	8 -> 8.5	9 -> 9.5	9 -> 9.5	Ω max	
	1.5			Ω typ	V_S = ±9 V, I_S = −1 mA
	3.5	4	4	Ω max	
POWER REQUIREMENTS					V_{DD} = POSFV = +16.5 V; V_{SS} = NEGFV = −16.5 V; GND = 0 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	
	1.25 -> 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					V_S = ±55 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}/V_{SS}			±5	V min	GND = 0 V
			±22	V max	GND = 0 V

ADG5248F ADG5249F ±20 V DUAL SUPPLY

$V_{DD} = 20$ V ± 10%, $V_{SS} = -20$ V ± 10%, GND = 0 V, $C_{DECOUPLING} = 0.1$ µF, unless otherwise noted.

Table 10.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					$V_{DD} = +18$ V, $V_{SS} = -18$ V
Analog Signal Range			V_{DD} to V_{SS}	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					$V_{DD} = POSFV = +22$ V; $V_{SS} = NEGFV = -22$ 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	
	1.25 -> 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					$V_S = ±55$ 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	

ADG5248F ADG5249F 12 V SINGLE SUPPLY

V_{DD} = 12 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 μF, unless otherwise noted.

Table 11.

Parameter	+25°C	−40°C to +85°C	−40°C to +125°C	Unit	Test Conditions/Comments
ANALOG SWITCH					V_{DD} = 10.8 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	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
	17 -> 19	19 -> 21	19 -> 21	Ω max	
	3			Ω typ	V_S = 3.5 V to 8.5 V, I_S = −1 mA
	6.5 -> 8	11 -> 12.5	12 -> 13.5	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					V_{DD} = 13.2 V; V_{SS} = 0 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 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 = ±55 V, V_D = 0 V

ADG5248F ADG5249F 36 V SINGLE SUPPLY

V_{DD} = 36 V ± 10%, V_{SS} = 0 V, GND = 0 V, $C_{DECOUPLING}$ = 0.1 µF, 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 V, V_{SS} = 0 V
Analog Signal Range			0 V to V_{DD}	V	
On Resistance, R_{ON}	310			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	335	415	480	Ω max	
	250			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	270	335	395	Ω max	
On-Resistance Match Between Channels, ΔR_{ON}	3			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	7 -> 8	16 -> 17	18 -> 19	Ω max	
	3			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	6.5 -> 8	11 -> 12.5	12 -> 13.5	Ω max	
On-Resistance Flatness, $R_{FLAT(ON)}$	62			Ω typ	V_S = 0 V to 30 V, I_S = −1 mA
	70	85	100	Ω max	
	1.5			Ω typ	V_S = 4.5 V to 28 V, I_S = −1 mA
	3.5 -> 4.5	4 -> 5	4 -> 5	Ω max	
POWER REQUIREMENTS					V_{DD} = 39.6 V; V_{SS} = 0 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 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 V
			44	V max	GND = 0 V