

9.3. Analog Performance

Standard Test Conditions

- $T_{\text{ambient}}=25^{\circ}\text{C}$, DVDD-CORE=3.3V $\pm 5\%$, AVDD=5.0V $\pm 5\%$
- 1kHz input sine wave; Sampling frequency=48kHz; 0dB=1Vrms
- 10K Ω /50pF load; Test bench Characterization BW:10Hz~22kHz

Table 84. Analog Performance

Parameter	Min	Typ	Max	Units
Full-Scale Input Voltage All ADC (Gain=0dB)	-	1.5	-	Vrms
Full-Scale Output Voltage All DAC (Gain=+1dB)	-	1.5	-	Vrms
Dynamic Range with 1kHz Tone, DR (A Weighted)				
ADC	-	98	-	dB FSA
DAC	-	98	-	dB FSA
Headphone Out @32 Ω Load	-	95	-	dB FSA
Total Harmonic Distortion Plus Noise, THD+N				
ADC	-	-85	-	dB FS
DAC	-	-90	-	dB FS
Headphone Out @32 Ω Load	-	-70	-	dB FS
Frequency Response				
ADC (-3dB lower edge, -1dB higher edge)	10	-	0.454*Fs	Hz
DAC (-3dB lower edge, -1dB higher edge)	10	-	0.454*Fs	Hz
Power Supply Rejection Ratio	-	-60	-	dB
Total Out-of-Band Noise (28.8kHz~100kHz)	-	-60	-	dB
Amplifier Gain Step				
ADC	-	1.0	-	dB
DAC	-	1.0	-	dB
Crosstalk Between Input Channels	-	-80	-	dB
Input Impedance (Gain=0dB)	-	32	-	K Ω
Output Impedance				
Amplified Output	-	1	-	Ω
Non-Amplified Output	-	200	-	Ω
Digital Power Supply Current (Normal Operation) DVDD=3.3V, DVDD-IO=3.3V	-	50	-	mA
Digital Power Supply Current (Power Down Mode) DVDD=3.3V, DVDD-IO=3.3V	-	2	-	mA
Analog Power Supply Current (Normal Operation) AVDD1, AVDD2=5.0V	-	48	-	mA
Analog Power Supply Current (Power Down Mode) AVDD1, AVDD2=5.0V	-	7	-	mA
VREFOUTx Output Voltage	0	2.50	4.20	V
VREFOUTx Output Current	-	5	-	mA

Note: FSA=Full-Scale with A-weighting filter.

FS=Full-Scale.