

CONEXANT AD1884A Audio Codec Manual

<http://www.manuallib.com/conexant/ad1884a-audio-codec-manual.html>

The AD1884A audio codec and software provide superior high definition audio quality and performance. The AD1884A has two 192 kHz DAC pairs, two 192 kHz ADC pairs, an S/PDIF output, and digital and analog PCBeep. These features make the AD1884A the right choice for embedded systems where performance is key. The AD1884A is available in a 48-lead, RoHS compliant lead frame chip scale package in both reels and trays.

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Table 1. Performance Characteristics

Parameter	Min	Typ	Max	Unit
Line-Out Drive (10 k Ω Loads—DAC to Pin)				
Total Harmonic Distortion (THD + N)		-84		dB
Dynamic Range (-60 dB in Ref to f_S A-Weighted)		90		dB
Signal-to-Noise Ratio		90		dB
Headphone Drive (32 Ω Loads—DAC to Pin)				
Total Harmonic Distortion (THD + N)		-74		dB
Dynamic Range (-60 dB in Ref to f_S A-Weighted)		90		dB
Signal-to-Noise Ratio		90		dB
Microphone/Line-In (Pin to ADC, Mic Boost = 0 dB)				
Total Harmonic Distortion (THD + N)		-78		dB
Dynamic Range (-60 dB in Ref to f_S A-Weighted)		85		dB
Signal-to-Noise Ratio		85		dB

Table 2. Specifications

Parameter	Min	Typ	Max	Unit
Analog-to-Digital Converters				
Resolution		24		Bits
Gain Error (Full-Scale Span Relative to Nominal Input Voltage)			± 10	%
Interchannel Gain Mismatch (Difference of Gain Errors)		± 0.2	± 0.5	dB
ADC Offset Error			± 5	mV
ADC Crosstalk				
Line Inputs (Input L, Ground R, Read R; Input R, Ground L, Read L)		-85		dB
Line_In to Other		-100	-80	dB
Digital to Analog Converters				
Resolution		24		Bits
Gain Error (Full-Scale Span Relative to Nominal Input Voltage)			± 10	%
Interchannel Gain Mismatch (Difference of Gain Errors)			± 0.5	dB
Total Audible Out-of-Band Energy (Measured from 0.6 x f_S to 20 kHz)		-85		dB
DAC Crosstalk (Input L, Zero R, Measure R_OUT; Input R, Zero L, Measure L_OUT)		-95		dB
Analog Mixer				
Signal-to-Noise Ratio Input to Output—Ports B, C, E, or F to Port D Output	90			dB
Step Size: All Mixer Inputs		1.5		dB
Input Gain/Attenuation Range: All Mixer Inputs	-34.5		+12.0	dB

Ordering Information

Device Set Order ID	Package Type	Package	Operating Temperature
AD1884AJCPZ*	QFN	48-Lead QFN, 7 x 7 mm	0°C to 70°C
*Lead-free (Pb Free) and RoHS compliant			

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