APx Report: Valhalla 3

Notes:

This is a test of a representative sample. If you have measurements that differ significantly from these, first check your analyzer and setup carefully, and (ideally) see if you can replicate the results on another analyzer. If the odd results persist, contact info@schiit.com so we can have a look.

Summary

300 Ohm High Gain	
Level and Gain	PASSED
DC Level	PASSED
Signal Analyzer	PASSED
Frequency Response	PASSED
Signal to Noise Ratio	PASSED
THD+N	PASSED
IMD Level Sweep (CCIF)	PASSED
IMD Frequency Sweep (CCIF)	PASSED
Stepped Level Sweep	PASSED

32 Ohm Low With Multiplier	
Level and Gain	PASSED
DC Level	PASSED
Signal Analyzer	PASSED
Frequency Response	PASSED
Signal to Noise Ratio	PASSED
THD+N	PASSED
IMD Level Sweep (CCIF)	PASSED
IMD Frequency Sweep (CCIF)	PASSED
Stepped Level Sweep	PASSED

Sequence Result:

Sequence Result: PASSED

APx Instrument

Instrument ID:	100546525
Calibration Date:	2/10/2021
APx Version:	7.1.0.321

300 Ohm High Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Source Impedance:	20 ohm
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Measure:	Auto
Channels:	Auto (2 Channels)
Ch1	Data from Ch1, Sensitivity = 0.00 dB, Gain = 0.00 dB
Ch2	Data from Ch2, Sensitivity = 0.00 dB, Gain = 0.00 dB
Input Bandwidth:	AC (<10 Hz) - 20 kHz (44.1 kHz SR)
Input EQ:	None
Termination:	100 kohm
Input 2:	None
Device Delay:	0.000 s

• References

dBr G:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
Shared Frequency Reference:	1.00000 kHz

Analog Input

dBrA:	1.000 Vrms
dBrB:	1.000 Vrms
dBrA Offset:	0.000 dB
dBrB Offset:	0.000 dB
dBSPL1:	10.00 mVrms
dBSPL2:	10.00 mVrms
dBSPL1 Calibrator Level:	94.000 dBSPL
dBSPL2 Calibrator Level:	94.000 dBSPL
dBm (Input Power):	600.0 ohm
W(watts) (Input Power):	8.000 ohm

• DCX

DCX is not detected.

300 Ohm High Gain : Level and Gain

Waveform:	Sine
Generator Level:	180.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Low-pass Filter:	Signal Path

RMS Level (5/1/2025 12:43:55.899 PM)

Ch1 1.007 Vrms
Ch2 1.020 Vrms

300 Ohm High Gain : DC Level

Waveform:	Sine
Generator Level:	0.000 Vrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Delay Time:	100.0 ms
Acquisition Time:	333.0 ms

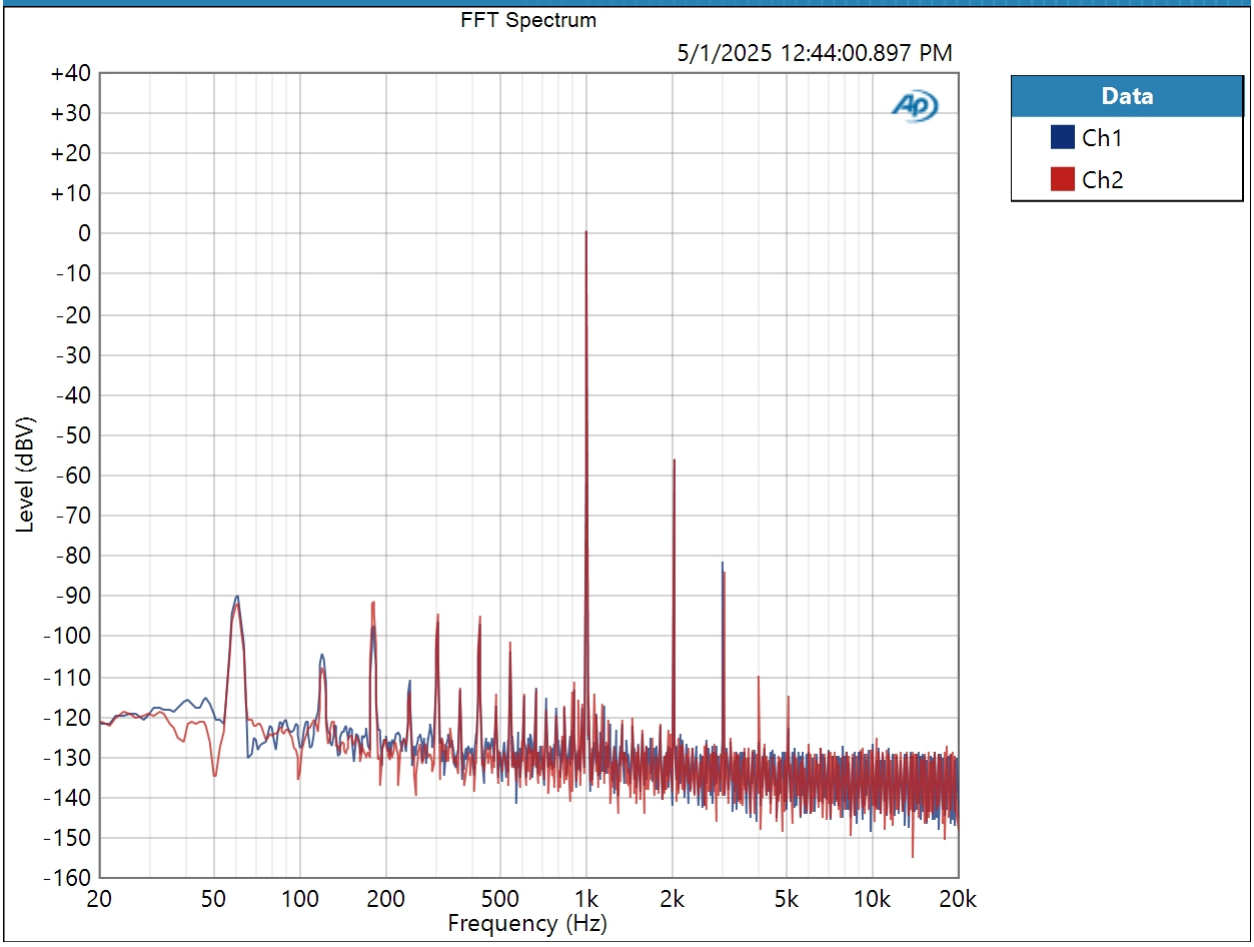
DC Level (5/1/2025 12:43:57.003 PM)

Ch1 -606.5 uV
Ch2 -1.761 mV

300 Ohm High Gain : Signal Analyzer

Waveform:	Sine
Generator Level:	180.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	5/1/2025 12:44:00 PM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32768
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (5/1/2025 12:44:00.897 PM)

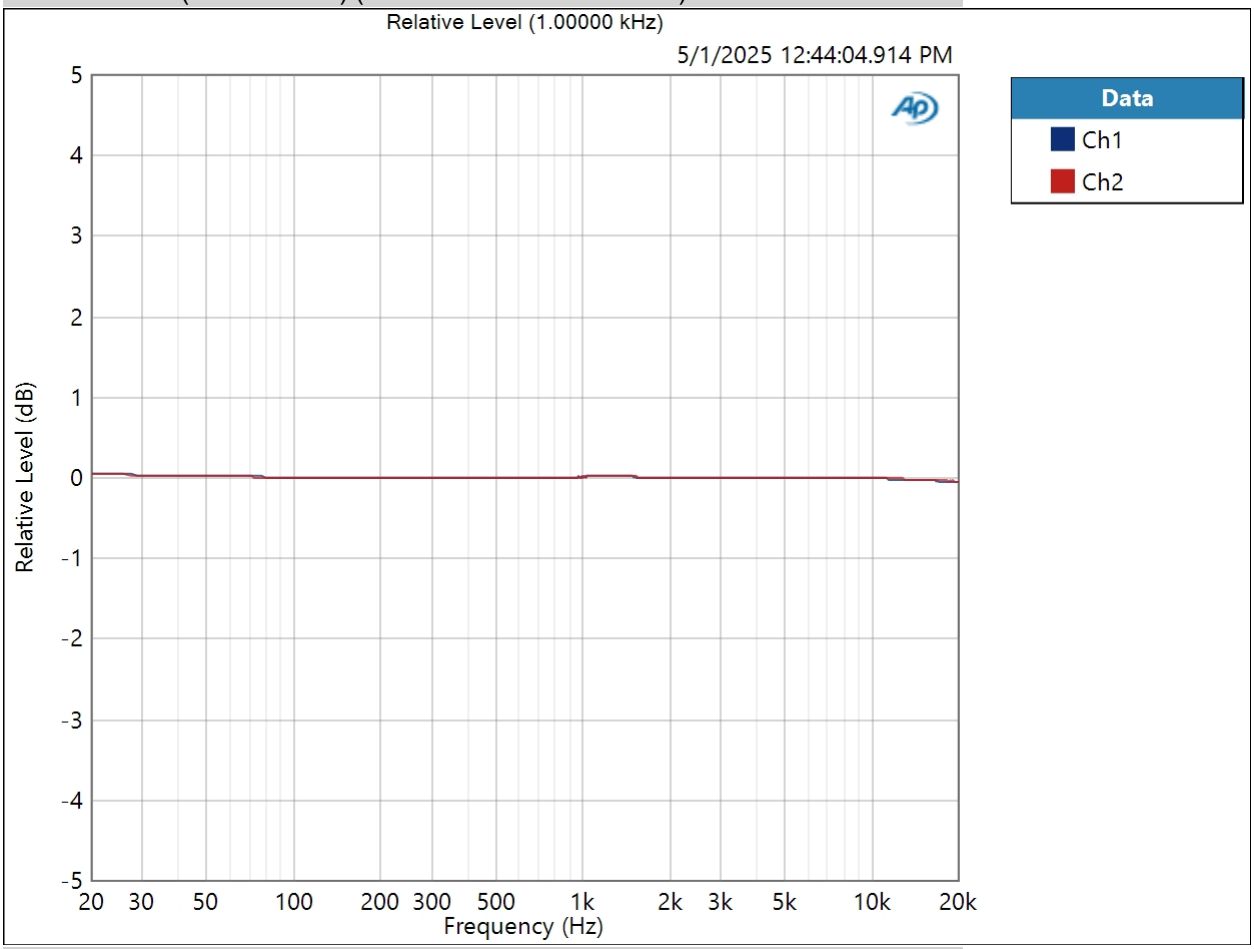


Result: PASSED

300 Ohm High Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	180.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	1.000 s
Secondary Source:	None
Measured 1	5/1/2025 12:44:04 PM

Relative Level (1.00000 kHz) (5/1/2025 12:44:04.914 PM)



Relative Level (1.00000 kHz) Parameters

Mode:	Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (5/1/2025 12:44:04.914 PM)

Ch1 ±0.062 dB

Ch2 ±0.055 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

300 Ohm High Gain : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	360.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	A-wt.

Signal to Noise Ratio (5/1/2025 12:44:06.947 PM)

Ch1 100.206 dB

Ch2 99.456 dB

300 Ohm High Gain : THD+N

Waveform:	Sine
Generator Level:	180.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	Signal Path
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (5/1/2025 12:44:08.613 PM)

Ch1 0.156999 %

Ch2 0.154333 %

THD Ratio (5/1/2025 12:44:08.613 PM)

Ch1 0.155953 %

Ch2 0.153468 %

Noise Ratio (5/1/2025 12:44:08.613 PM)

Ch1 0.004236 %

Ch2 0.004435 %

Distortion Product Ratio (5/1/2025 12:44:08.613 PM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-56.15	-81.50	-118.26	-120.82	-124.95	-128.27	-121.26	-122.29	-125.32
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-56.29	-84.10	-110.27	-113.68	-123.01	-127.59	-128.17	-124.04	-124.17

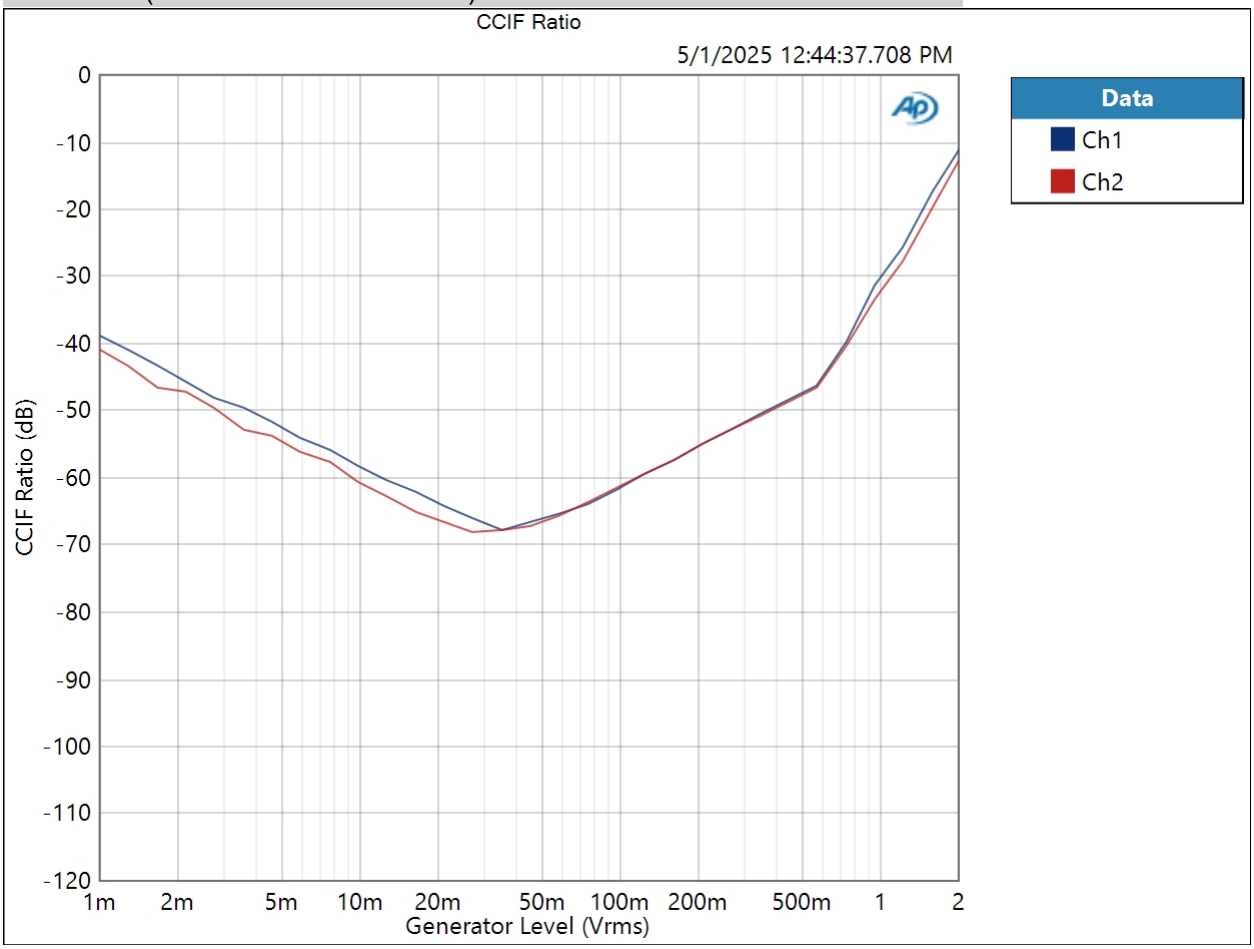
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB
Channel:	Ch1

300 Ohm High Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	2.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/1/2025 12:44:37 PM

CCIF Ratio (5/1/2025 12:44:37.708 PM)

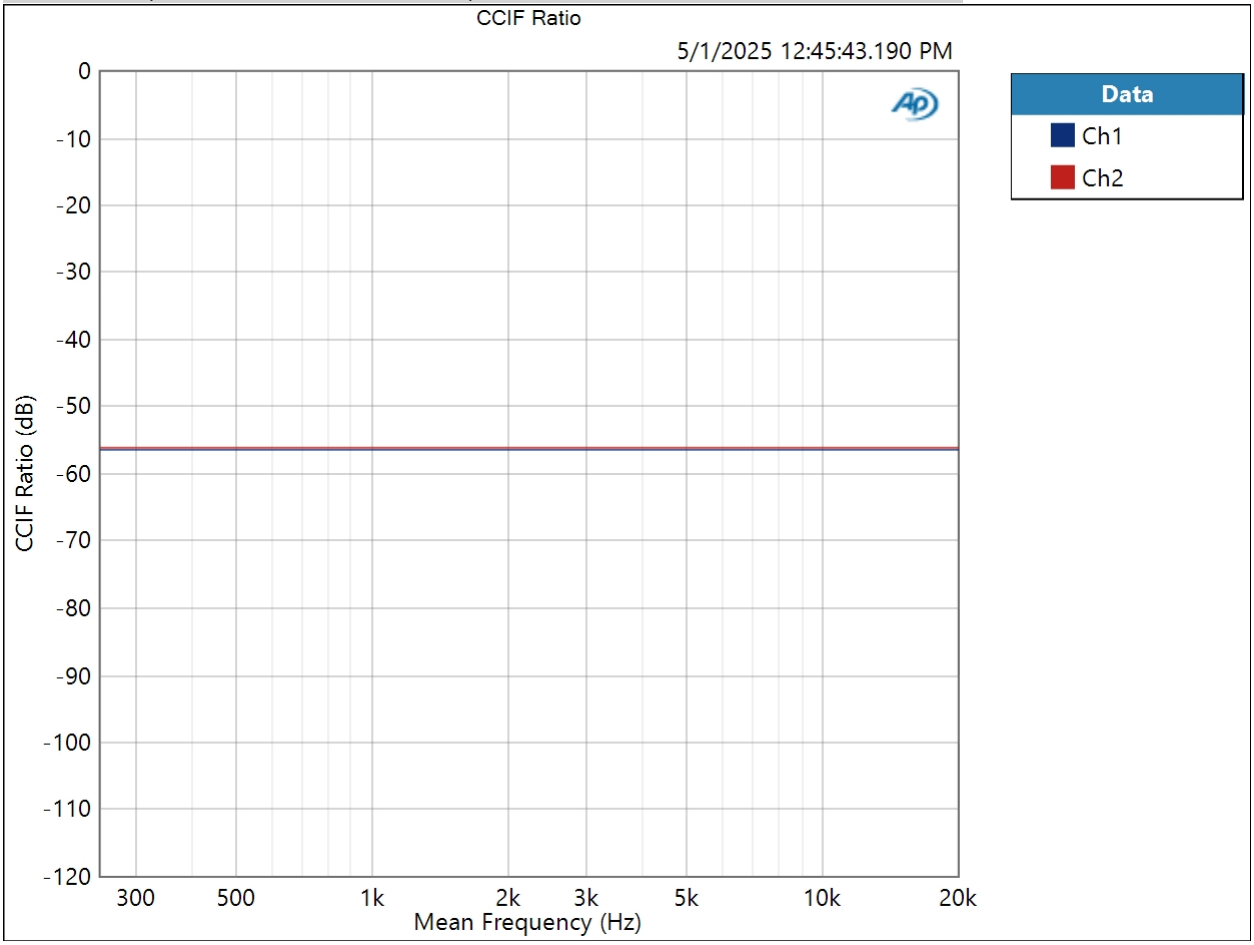


Result: PASSED

300 Ohm High Gain : IMD Frequency Sweep (CCIF)

Generator Level:	180.0 mVrms
DC Offset:	0.000 V
Sweep Frequency:	Mean Frequency
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Frequency:	20.0000 kHz
Stop Frequency:	250.000 Hz
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/1/2025 12:45:43 PM

CCIF Ratio (5/1/2025 12:45:43.190 PM)

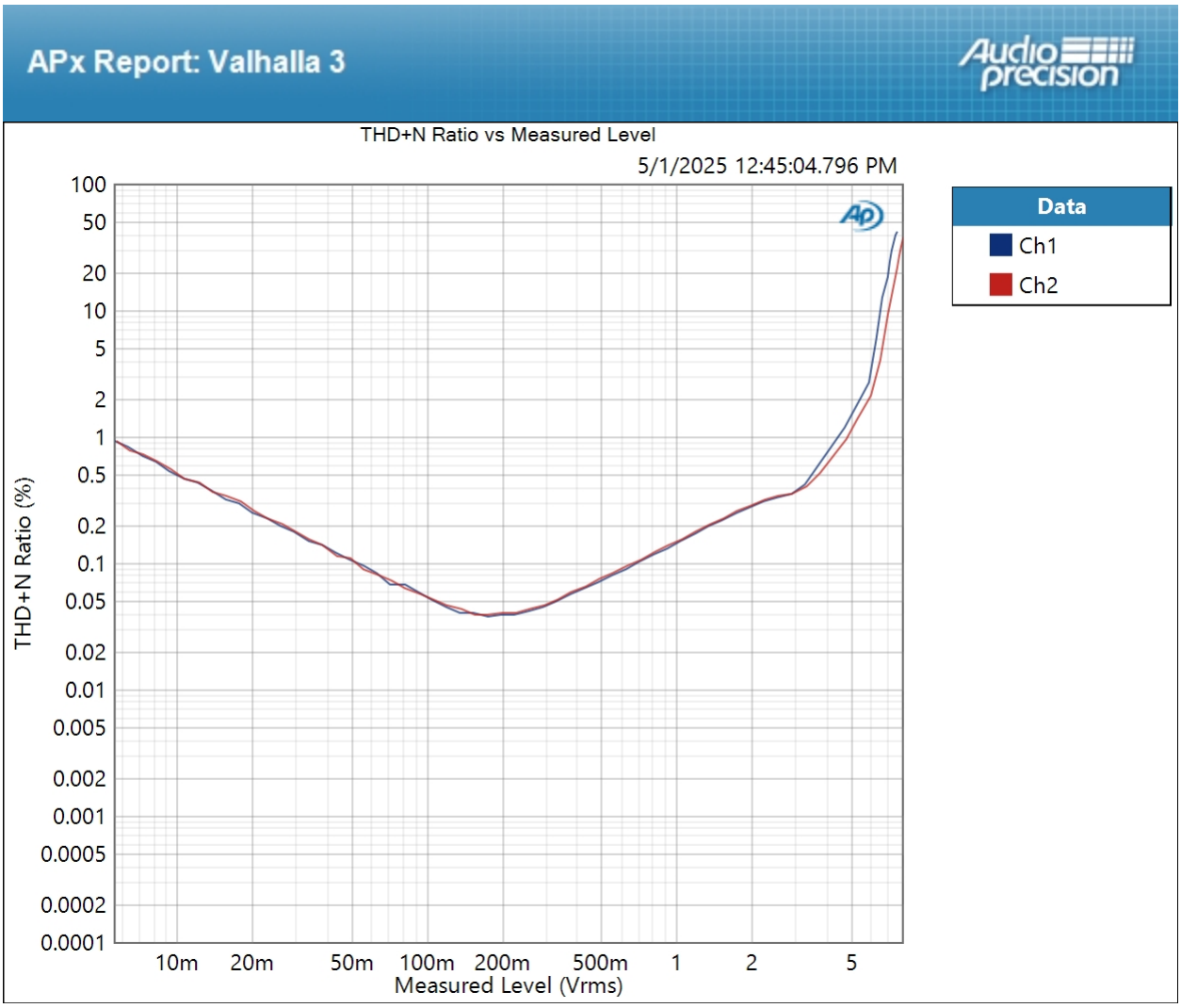


Result: PASSED

300 Ohm High Gain : Stepped Level Sweep

Waveform:	Sine
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	3.000 Vrms
Step Type:	Logarithmic
Number of Points:	64
Offset:	0.000 V
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	Signal Path
Notch Tuning Mode:	Generator Frequency
Measured 1	5/1/2025 12:45:04 PM

THD+N Ratio vs Measured Level (5/1/2025 12:45:04.796 PM)



Result: PASSED

32 Ohm Low With Multiplier : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Source Impedance:	20 ohm
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Measure:	Auto
Channels:	Auto (2 Channels)
Ch1	Data from Ch1, Sensitivity = 0.00 dB, Gain = 0.00 dB
Ch2	Data from Ch2, Sensitivity = 0.00 dB, Gain = 0.00 dB
Input Bandwidth:	AC (<10 Hz) - 20 kHz (44.1 kHz SR)
Input EQ:	None
Termination:	100 kohm
Input 2:	None
Device Delay:	0.000 s

• References

dBr G:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
Shared Frequency Reference:	1.00000 kHz

Analog Input

dBrA:	1.000 Vrms
dBrB:	1.000 Vrms
dBrA Offset:	0.000 dB
dBrB Offset:	0.000 dB
dBSPL1:	10.00 mVrms
dBSPL2:	10.00 mVrms
dBSPL1 Calibrator Level:	94.000 dBSPL
dBSPL2 Calibrator Level:	94.000 dBSPL
dBm (Input Power):	600.0 ohm
W(watts) (Input Power):	8.000 ohm

• DCX

DCX is not detected.

32 Ohm Low With Multiplier : Level and Gain

Waveform:	Sine
Generator Level:	850.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Low-pass Filter:	Signal Path

RMS Level (5/1/2025 12:46:47.892 PM)

Ch1 1.004 Vrms
Ch2 1.006 Vrms

32 Ohm Low With Multiplier : DC Level

Waveform:	Sine
Generator Level:	0.000 Vrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Delay Time:	100.0 ms
Acquisition Time:	333.0 ms

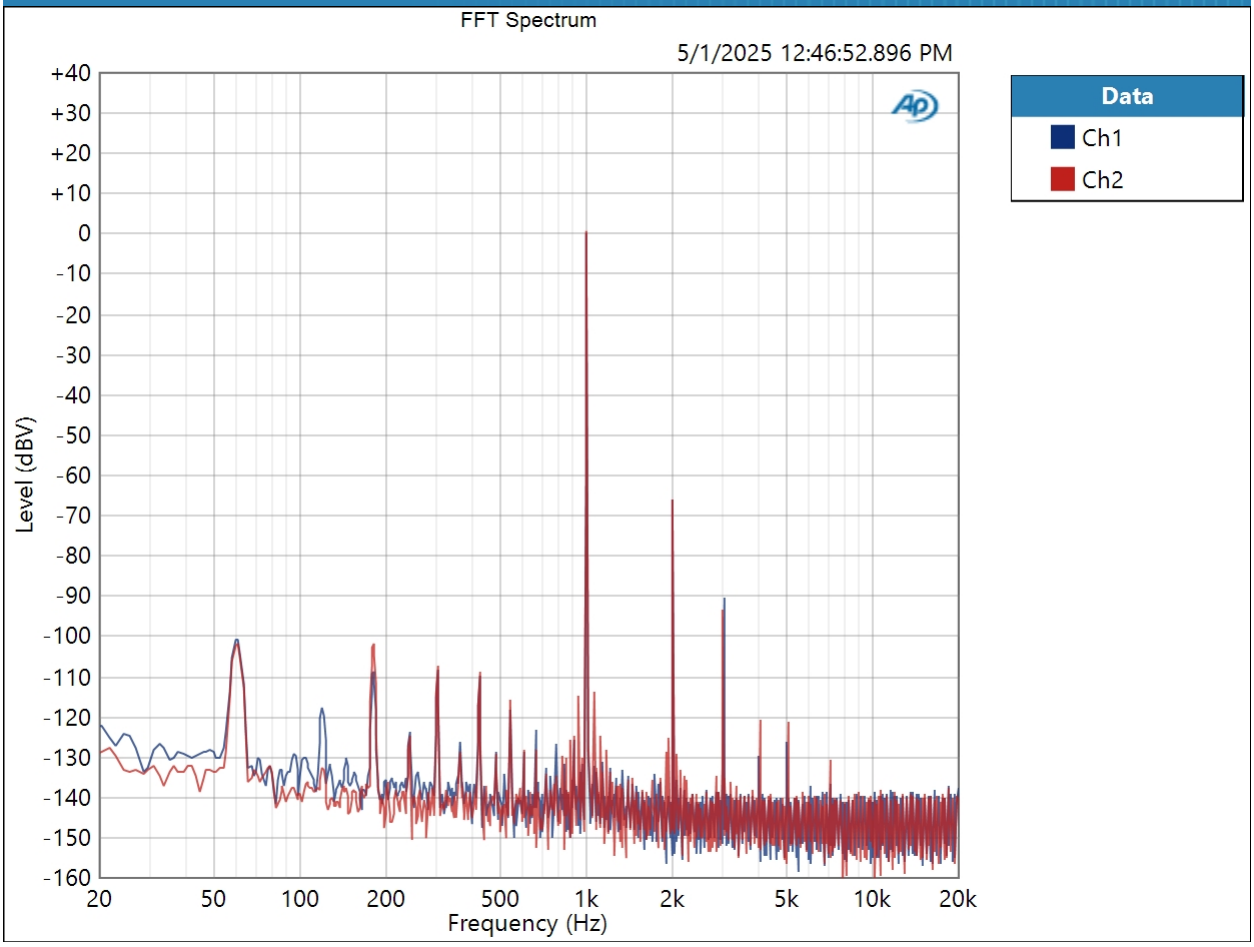
DC Level (5/1/2025 12:46:49.011 PM)

Ch1 -4.725 mV
Ch2 -9.124 mV

32 Ohm Low With Multiplier : Signal Analyzer

Waveform:	Sine
Generator Level:	850.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	5/1/2025 12:46:52 PM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32768
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (5/1/2025 12:46:52.896 PM)

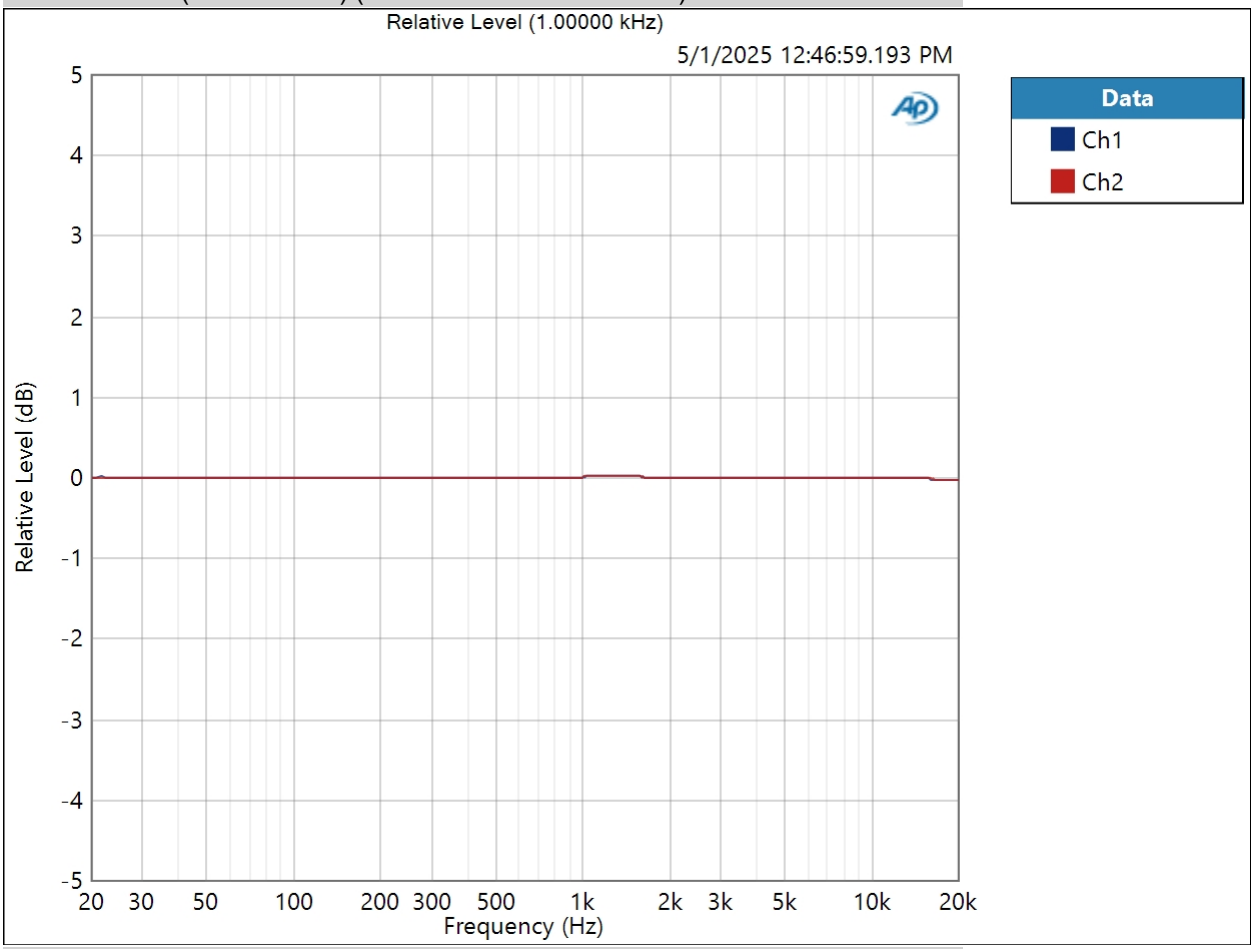


Result: PASSED

32 Ohm Low With Multiplier : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	850.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	2.000 s
Secondary Source:	None
Measured 1	5/1/2025 12:46:59 PM

Relative Level (1.00000 kHz) (5/1/2025 12:46:59.193 PM)



Relative Level (1.00000 kHz) Parameters

Mode:	Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (5/1/2025 12:46:59.193 PM)

Ch1 ±0.026 dB

Ch2 ±0.025 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm Low With Multiplier : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	1.700 Vrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	A-wt.

Signal to Noise Ratio (5/1/2025 12:47:01.353 PM)

Ch1 112.301 dB

Ch2 111.794 dB

32 Ohm Low With Multiplier : THD+N

Waveform:	Sine
Generator Level:	850.0 mVrms
DC Offset:	0.000 V
Frequency:	1.00000 kHz
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	Signal Path
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (5/1/2025 12:47:02.970 PM)

Ch1 0.049059 %

Ch2 0.048419 %

THD Ratio (5/1/2025 12:47:02.970 PM)

Ch1 0.048891 %

Ch2 0.048224 %

Noise Ratio (5/1/2025 12:47:02.970 PM)

Ch1 0.001125 %

Ch2 0.001226 %

Distortion Product Ratio (5/1/2025 12:47:02.970 PM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-66.23	-90.40	-128.34	-125.07	-132.62	-139.96	-137.86	-136.18	-135.90
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-66.34	-93.22	-121.07	-120.54	-135.04	-128.73	-134.77	-139.95	-134.16

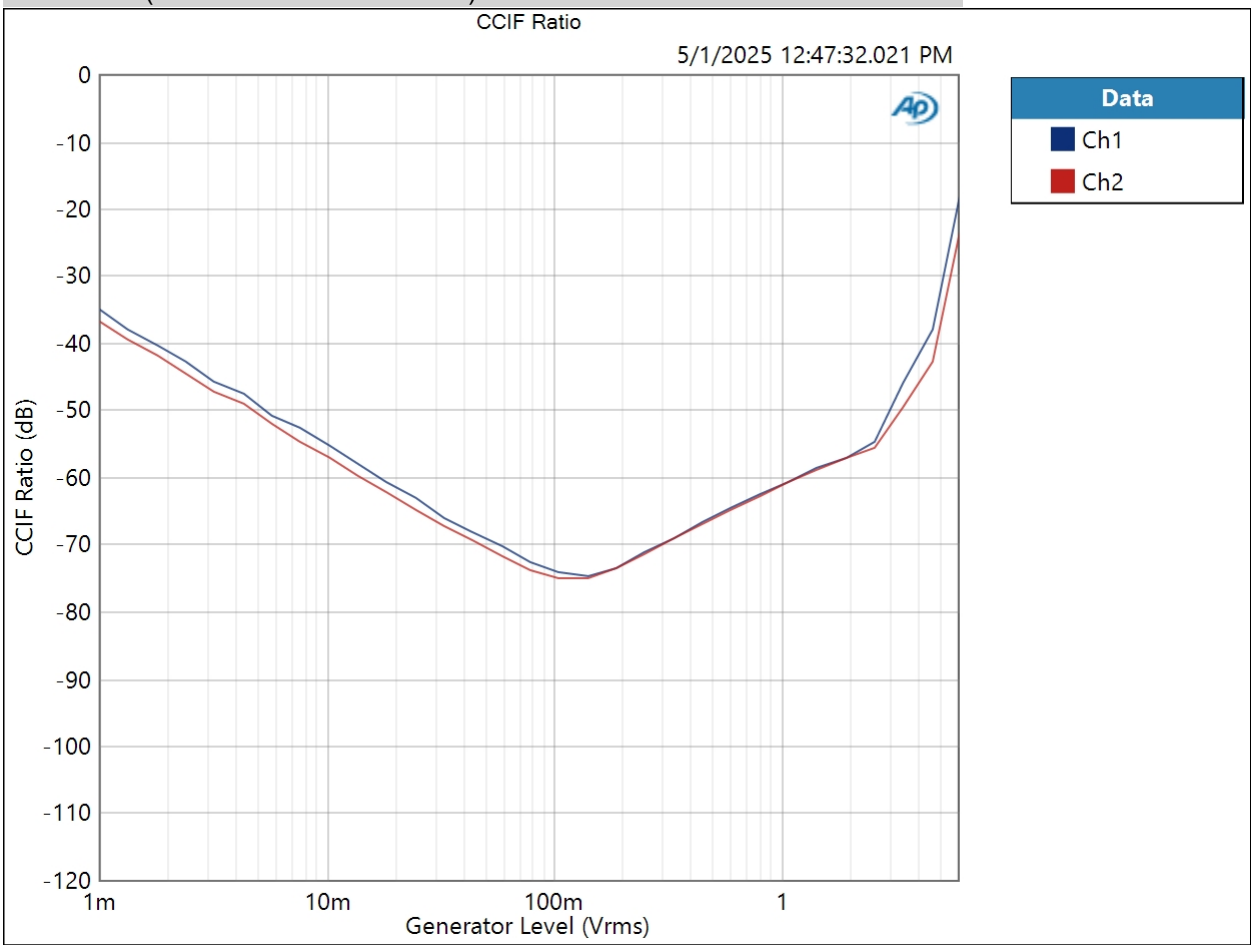
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB
Channel:	Ch1

32 Ohm Low With Multiplier : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	6.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/1/2025 12:47:32 PM

CCIF Ratio (5/1/2025 12:47:32.021 PM)

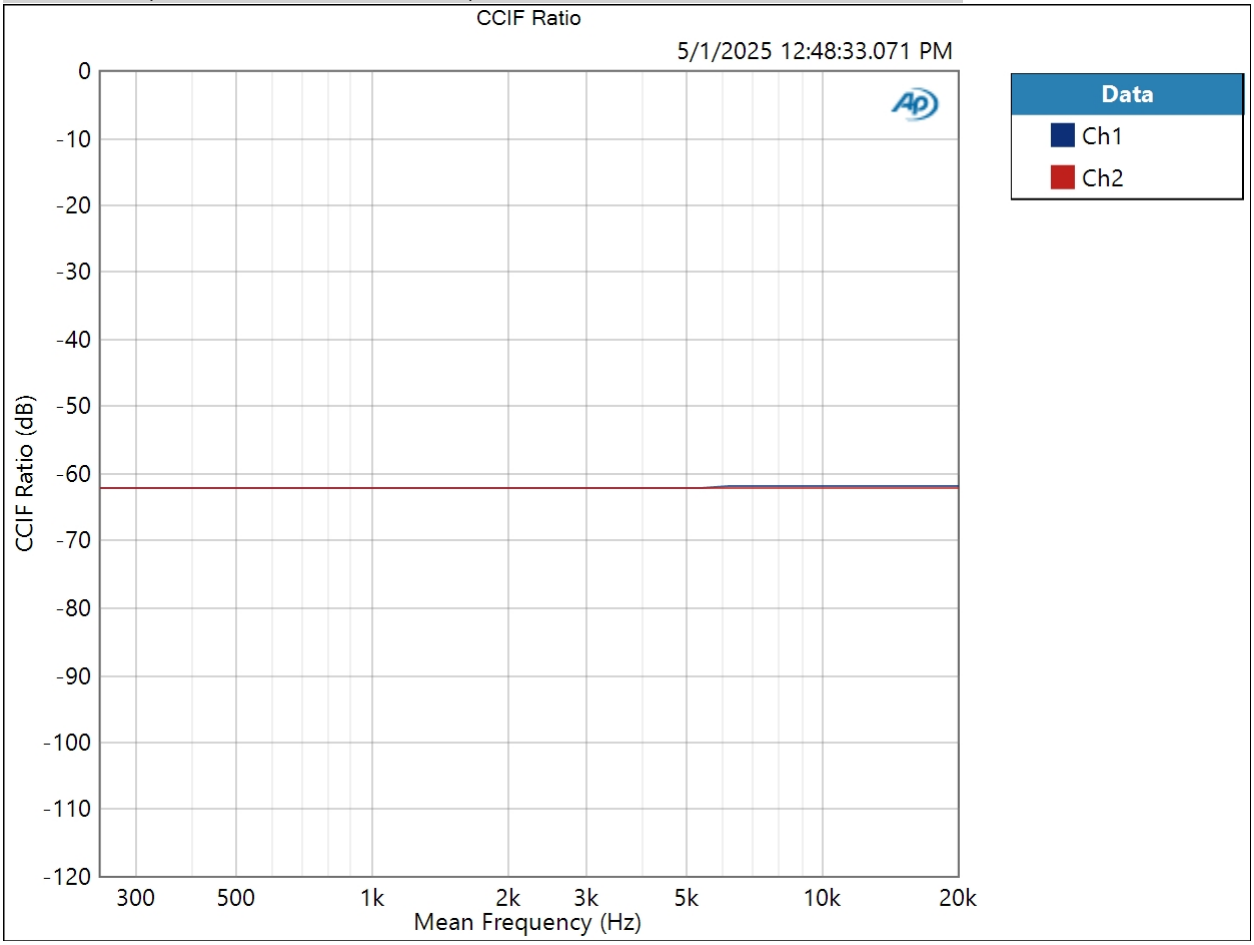


Result: PASSED

32 Ohm Low With Multiplier : IMD Frequency Sweep (CCIF)

Generator Level:	850.0 mVrms
DC Offset:	0.000 V
Sweep Frequency:	Mean Frequency
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Frequency:	20.0000 kHz
Stop Frequency:	250.000 Hz
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/1/2025 12:48:33 PM

CCIF Ratio (5/1/2025 12:48:33.071 PM)

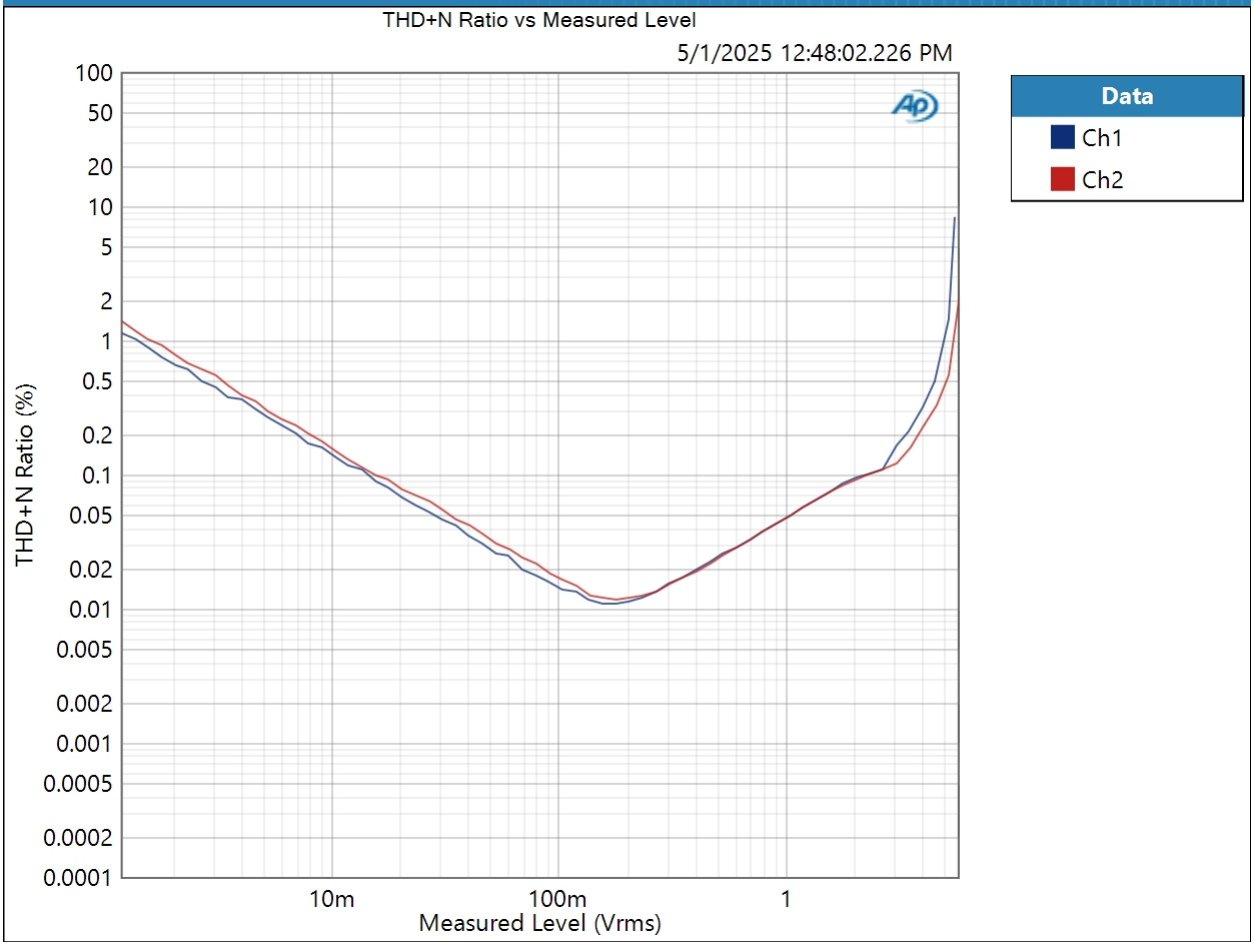


Result: PASSED

32 Ohm Low With Multiplier : Stepped Level Sweep

Waveform:	Sine
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	5.000 Vrms
Step Type:	Logarithmic
Number of Points:	64
Offset:	0.000 V
High-pass Filter:	Elliptic
High-pass Frequency:	20 Hz
Low-pass Filter:	Elliptic
Low-pass Frequency:	20 kHz
Weighting Filter:	Signal Path
Notch Tuning Mode:	Generator Frequency
Measured 1	5/1/2025 12:48:02 PM

THD+N Ratio vs Measured Level (5/1/2025 12:48:02.226 PM)



Result: PASSED