Schiit DAC APx555 Standard Test Suite: Hel

Notes:

This is a test of a representative production line sample. If you have difficulties reproducing these results, check your analyzer set-up and ancillary equipment carefully. ensure your analyzer has had a recent calibration, and contact the analyzer manufacturer for help if necessary. If you still have significantly different results, please contact info@schiit.com with a copy of your results so we can bring back your product and check it against our standard.

Summary

Low Gain, 300 Ohm	
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
Crosstalk, One Channel Undriven	PASSED
Stepped Level Sweep	PASSED
Low Gain, 32 Ohm	
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
Crosstalk, One Channel Undriven	PASSED
Stepped Level Sweep	PASSED
High Gain, 300 Ohm	
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
Crosstalk, One Channel Undriven	PASSED
Stepped Level Sweep	PASSED

High Gain, 32 Ohm	
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
Crosstalk, One Channel Undriven	PASSED
Stepped Level Sweep	PASSED
Line Out	
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
Crosstalk, One Channel Undriven	PASSED
Crosstalk Sweep, One Channel Driven	PASSED
Bandpass Level Sweep	PASSED

Sequence Result:	
Sequence Result:	PASSED

APx Instrument	
Instrument ID:	11571
Calibration Date:	5/8/2018
APx Version:	5.0.0.105.133644

Low Gain, 300 Ohm : Signal Path Setup

Output Connector:	ASIO
Output Sample Rate:	48.0000 kHz
Output EQ:	None
Input Connector:	Analog Unbalanced
Channels:	2
Termination:	300 ohm
High Performance Sine Analyzer:	Enabled
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Device Delay:	0.000 s
Input EQ:	None

• References

dBr G:	-20.000 dBFS
Shared Frequency Reference:	1.00000 kHz
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.

• Clocks

Output Rate:	Track Output SR
Sync Out Level:	3.300 V
Sync Out Polarity:	Normal
Timebase Reference:	Internal
Jitter:	Disabled

• Triggers

Source:	Off
Input Logic Level:	3.300 V

Edge: Rising

Low Gain, 300 Ohm : Level and Gain

Waveform: Sine

Generator Level: -5.500 dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

RMS Level (10/9/2019 11:41:40.885 AM)

Ch1 1.020 Vrms

Ch2 1.017 Vrms

Low Gain, 300 Ohm : DC Level

Waveform: Sine

Generator Level: -∞ dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

Delay Time: 100.0 ms

Acquisition Time: 333.0 ms

DC Level (10/9/2019 11:41:42.003 AM)

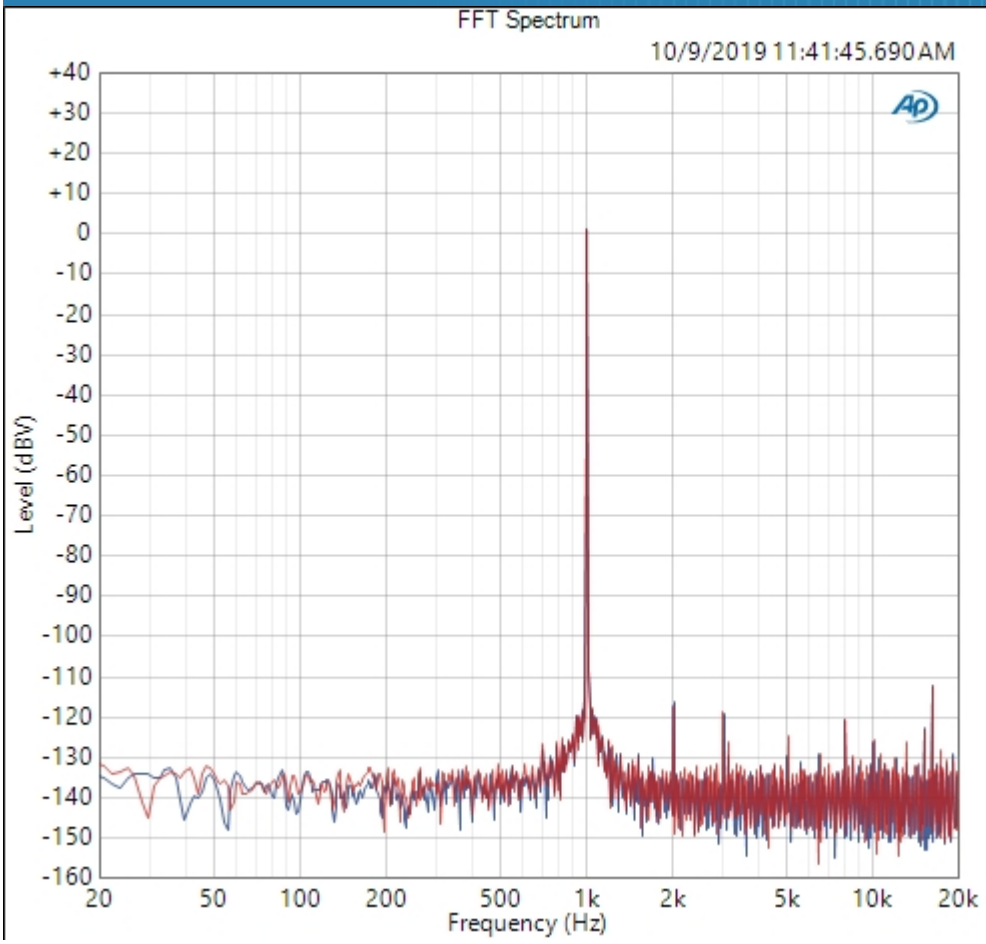
Ch1 -10.49 mV

Ch2 -8.774 mV

Low Gain, 300 Ohm : Signal Analyzer

Waveform:	Sine
Generator Level:	-4.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	10/9/2019 11:41:45 AM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32K
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (10/9/2019 11:41:45.690 AM)

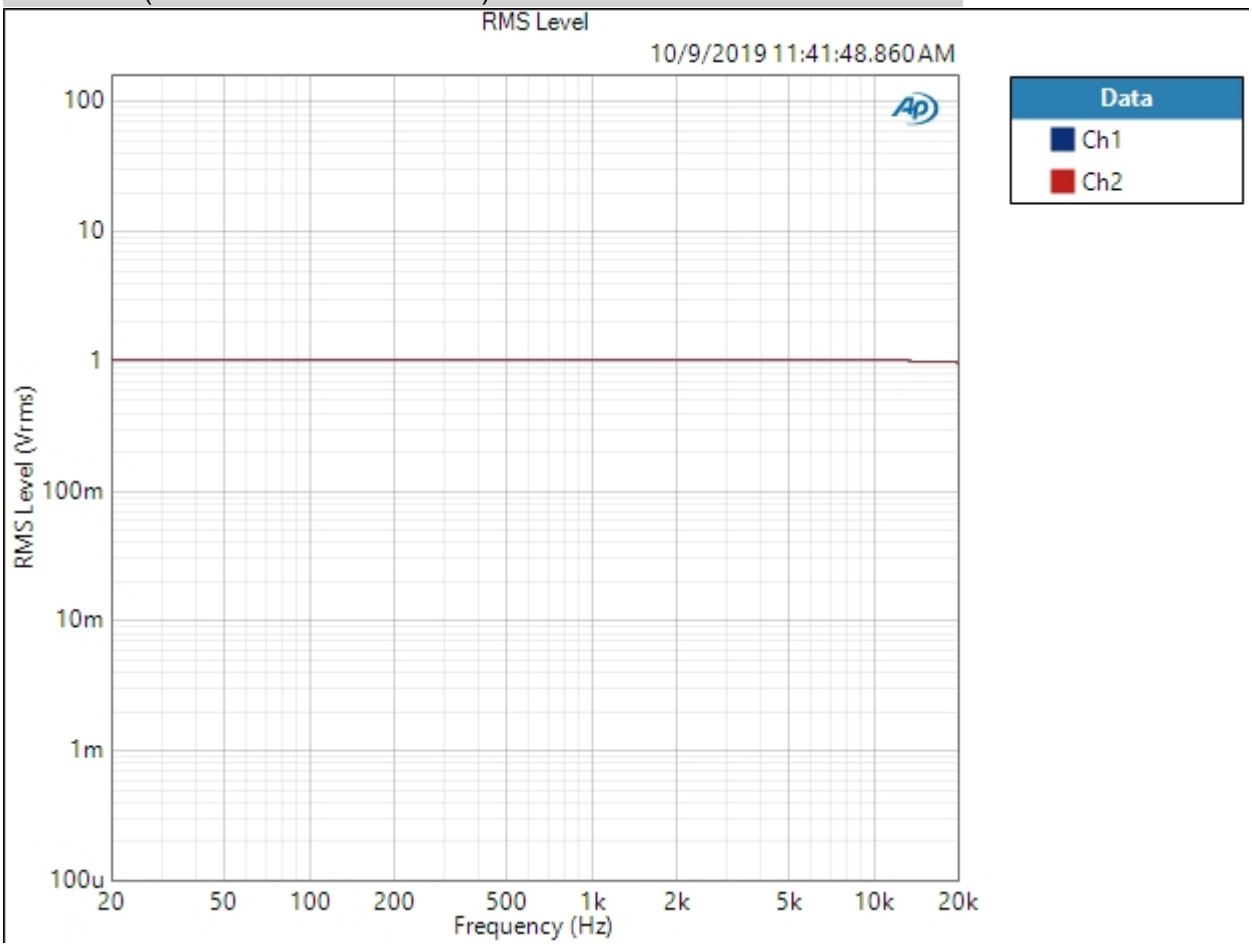


Result: PASSED

Low Gain, 300 Ohm : Frequency Response

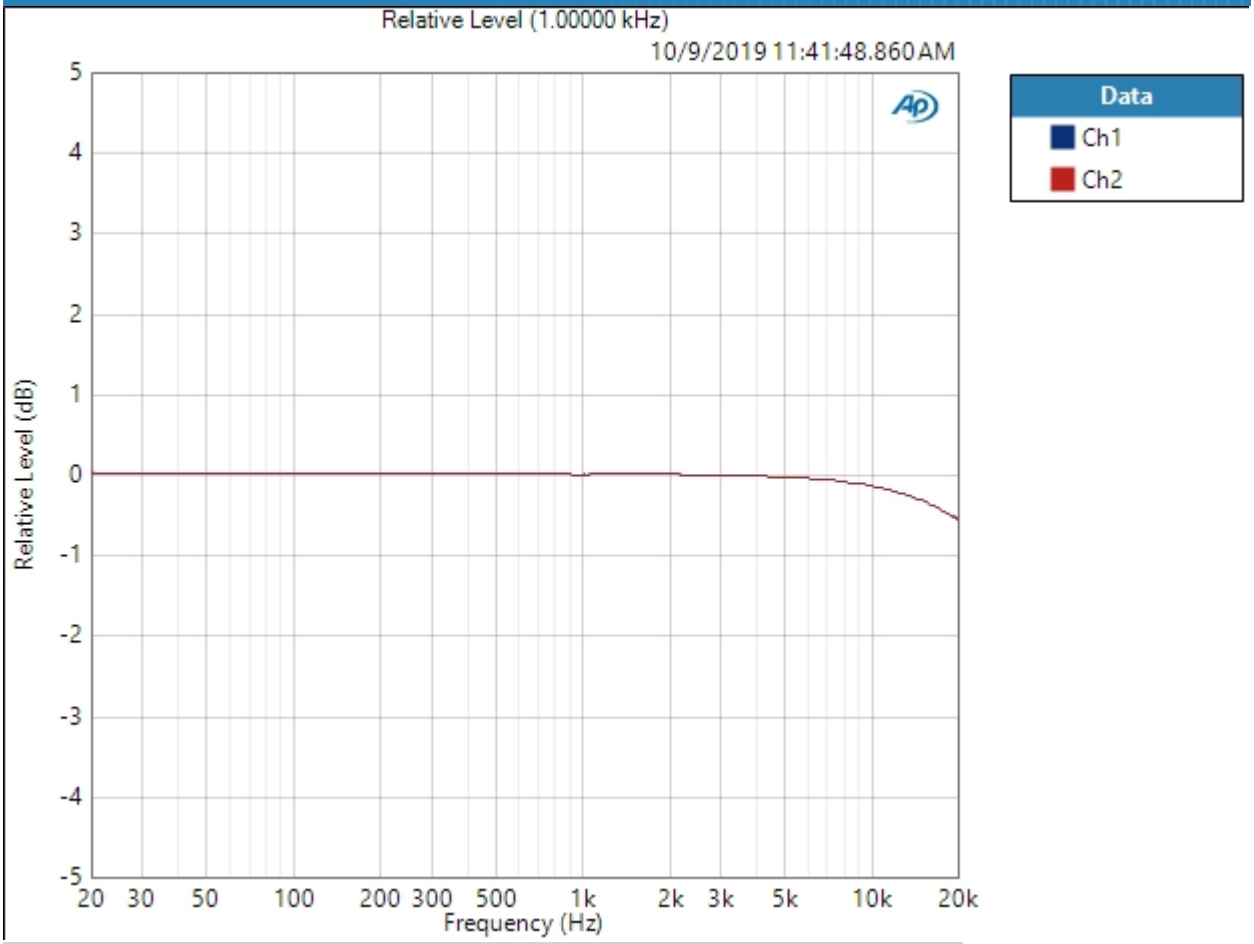
Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	500.0 ms
Secondary Source:	None
Measured 1	10/9/2019 11:41:48 AM

RMS Level (10/9/2019 11:41:48.860 AM)



Result: PASSED

Relative Level (1.00000 kHz) (10/9/2019 11:41:48.860 AM)



Relative Level (1.00000 kHz) Parameters

Mode: Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (10/9/2019 11:41:48.860 AM)

Ch1 ±0.302 dB

Ch2 ±0.301 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Low Gain, 300 Ohm : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz

Signal to Noise Ratio (10/9/2019 11:41:50.744 AM)

Ch1 110.147 dB
Ch2 110.026 dB

Low Gain, 300 Ohm : THD+N

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (10/9/2019 11:41:53.343 AM)

Ch1 0.000804 %

Ch2 0.000903 %

THD Ratio (10/9/2019 11:41:53.343 AM)

Ch1 0.000311 %

Ch2 0.000337 %

Noise Ratio (10/9/2019 11:41:53.343 AM)

Ch1 0.000738 %

Ch2 0.000842 %

Distortion Product Ratio (10/9/2019 11:41:53.343 AM)

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	-119.28	-124.10	-126.99	-128.40	-126.44	-124.69	-123.31	-128.18	-128.92
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-120.05	-119.72	-124.57	-126.23	-127.70	-129.22	-120.66	-127.70	-128.62

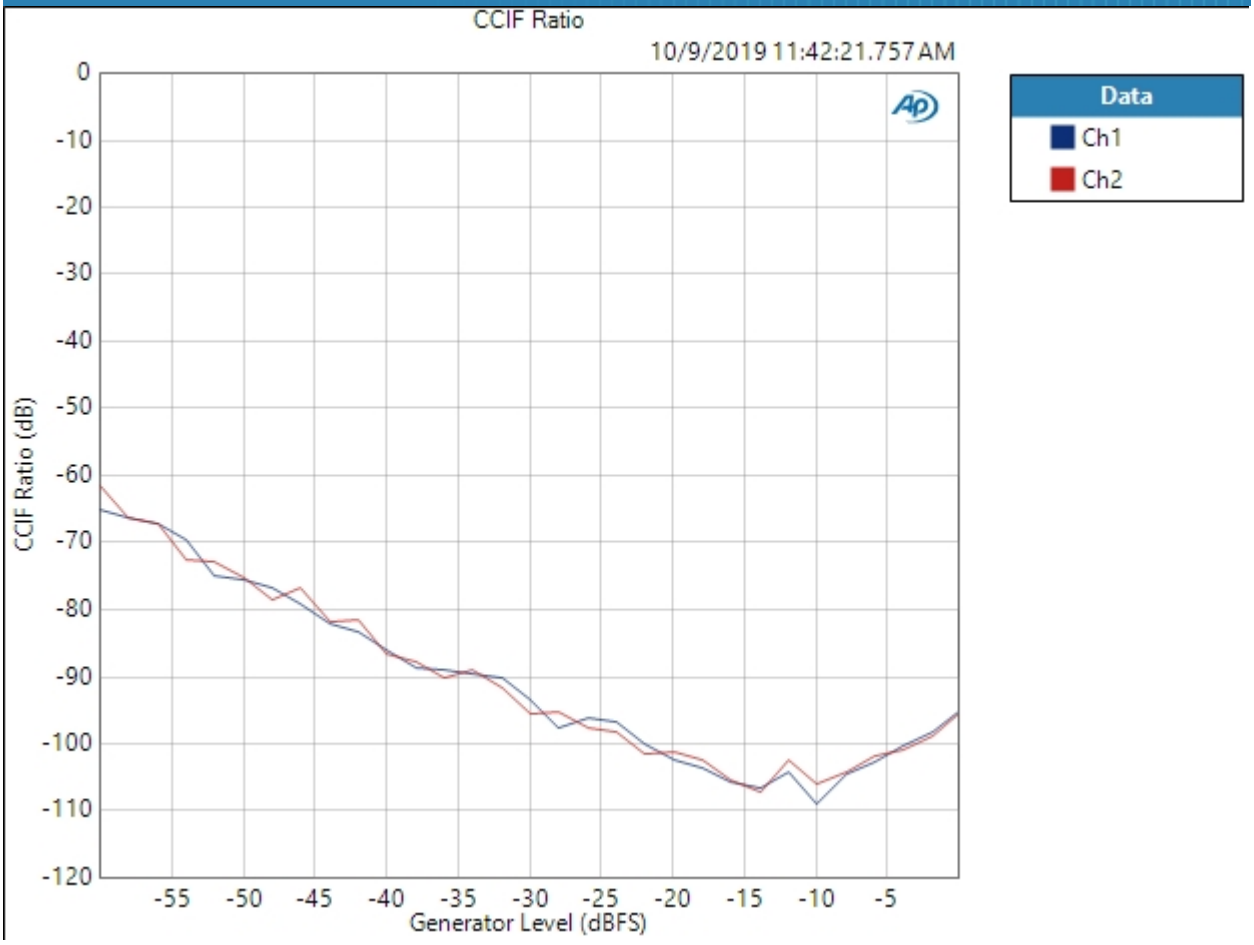
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Low Gain, 300 Ohm : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	31
Step Size:	+2.000 dBFS
Mode:	d2+d3
Measured 1	10/9/2019 11:42:21 AM

CCIF Ratio (10/9/2019 11:42:21.757 AM)

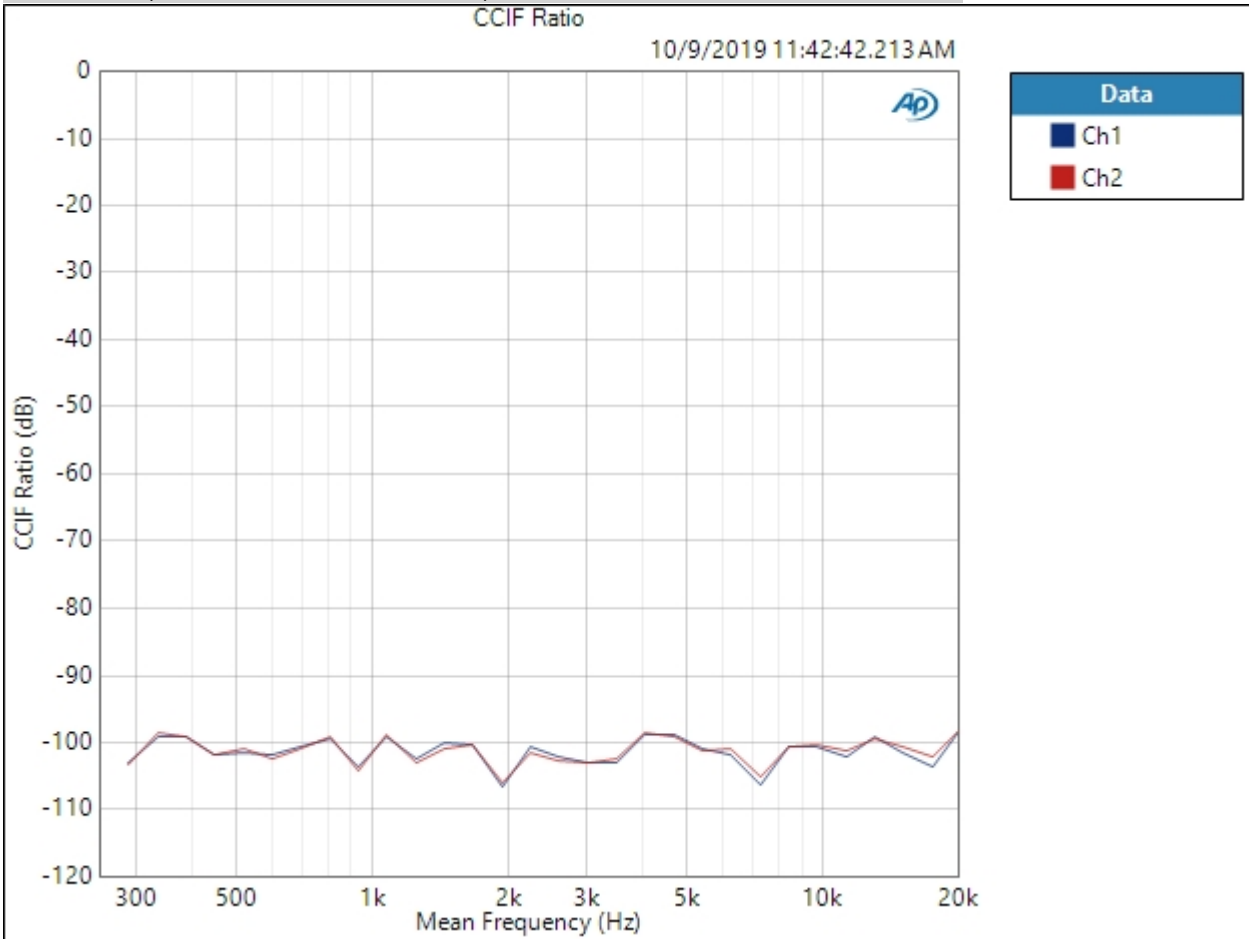


Result: PASSED

Low Gain, 300 Ohm : IMD Frequency Sweep (CCIF)

Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Sweep Frequency:	Mean Frequency
Mean Frequency:	12.5000 kHz
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	10/9/2019 11:42:42 AM

CCIF Ratio (10/9/2019 11:42:42.213 AM)



Result: PASSED

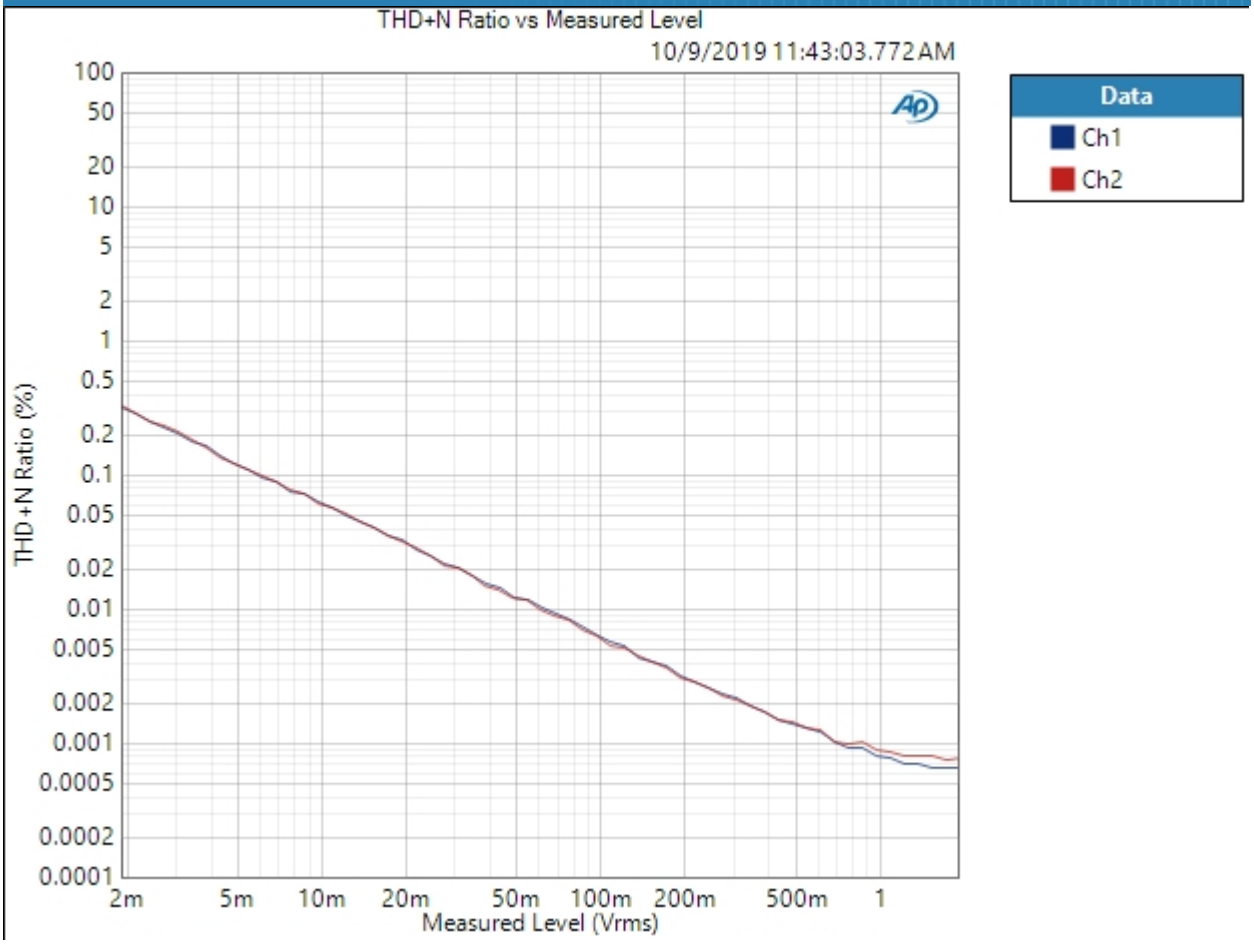
Low Gain, 300 Ohm : Crosstalk, One Channel Undriven	
Waveform:	Sine
Generator Level:	-14.000 dBFS
DC Offset:	0.000 D
Frequency:	10.0000 kHz

Crosstalk (10/9/2019 11:42:43.786 AM)	
Ch1	86.581 dB
Ch2	87.405 dB

Low Gain, 300 Ohm : Stepped Level Sweep

Waveform:	Sine
Generator Level:	-20.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	61
Step Size:	+1.000 dBFS
Offset:	0.000 D
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	10/9/2019 11:43:03 AM

THD+N Ratio vs Measured Level (10/9/2019 11:43:03.772 AM)



Result: PASSED

Low Gain, 32 Ohm : Signal Path Setup

Output Connector:	ASIO
Output Sample Rate:	48.0000 kHz
Output EQ:	None
Input Connector:	Analog Unbalanced
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Device Delay:	0.000 s
Input EQ:	None

• References

dBr G:	-20.000 dBFS
Shared Frequency Reference:	1.00000 kHz
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.

• Clocks

Output Rate:	Track Output SR
Sync Out Level:	3.300 V
Sync Out Polarity:	Normal
Timebase Reference:	Internal
Jitter:	Disabled

• Triggers

Source:	Off
Input Logic Level:	3.300 V

Edge:	Rising

Low Gain, 32 Ohm : Level and Gain

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz

RMS Level (10/9/2019 11:43:18.374 AM)

Ch1	1.009 Vrms
Ch2	1.007 Vrms

Low Gain, 32 Ohm : DC Level

Waveform:	Sine
Generator Level:	-∞ dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Delay Time:	100.0 ms
Acquisition Time:	333.0 ms

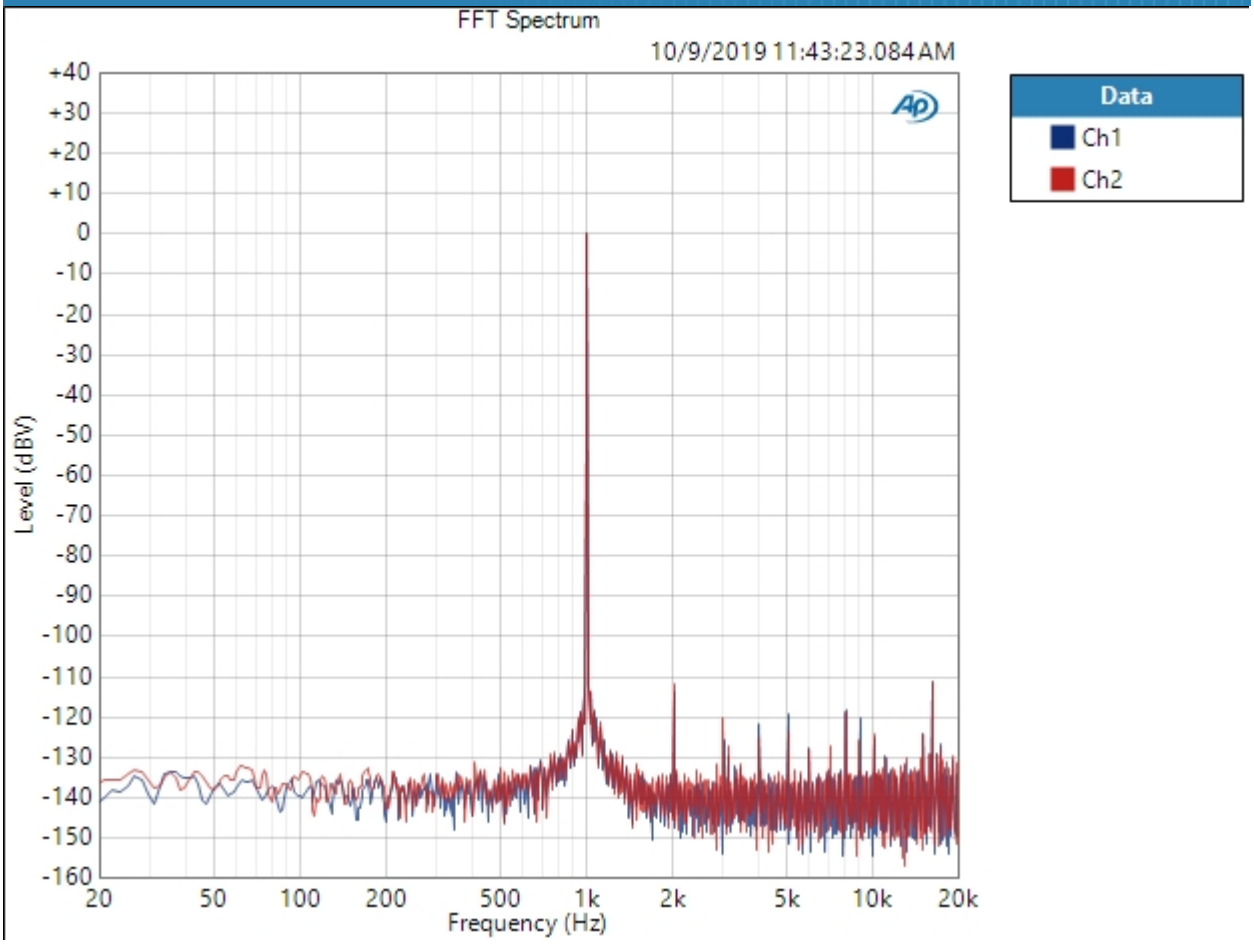
DC Level (10/9/2019 11:43:19.456 AM)

Ch1	-10.39 mV
Ch2	-8.687 mV

Low Gain, 32 Ohm : Signal Analyzer

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	10/9/2019 11:43:23 AM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32K
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (10/9/2019 11:43:23.084 AM)

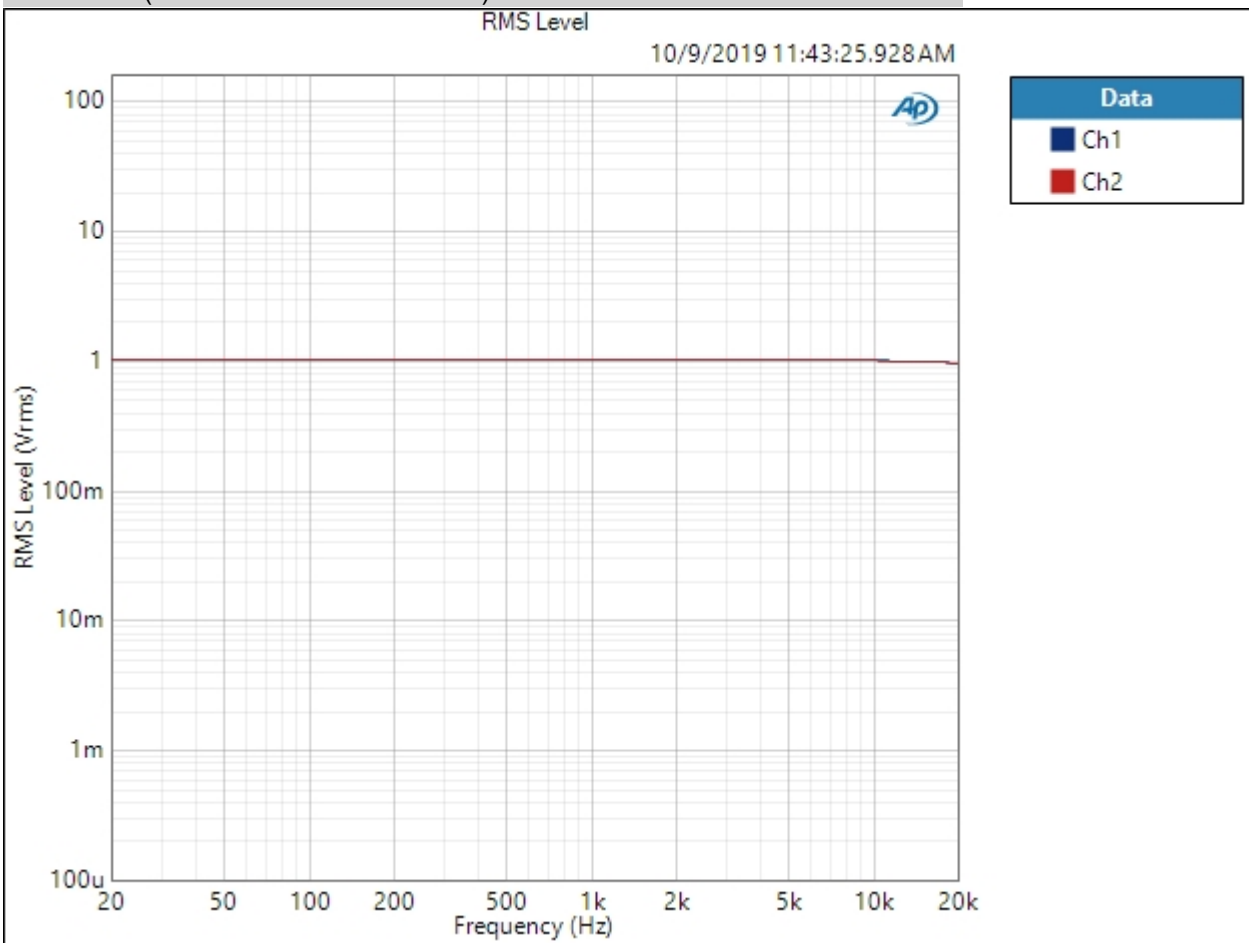


Result: PASSED

Low Gain, 32 Ohm : Frequency Response

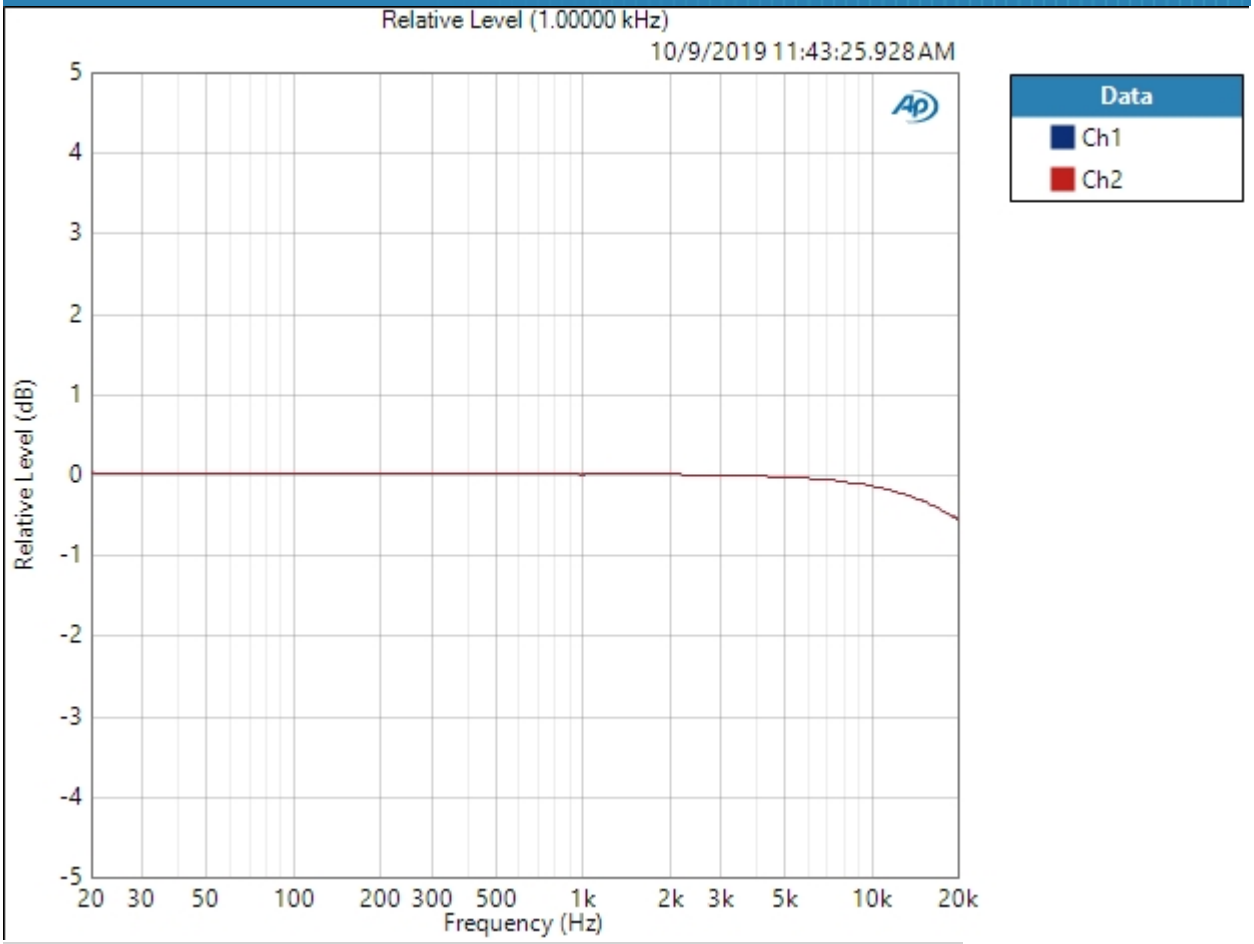
Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	500.0 ms
Secondary Source:	None
Measured 1	10/9/2019 11:43:25 AM

RMS Level (10/9/2019 11:43:25.928 AM)



Result: PASSED

Relative Level (1.00000 kHz) (10/9/2019 11:43:25.928 AM)



Relative Level (1.00000 kHz) Parameters

Mode: Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (10/9/2019 11:43:25.928 AM)

Ch1 ±0.302 dB

Ch2 ±0.302 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Low Gain, 32 Ohm : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz

Signal to Noise Ratio (10/9/2019 11:43:27.812 AM)

Ch1 109.966 dB
Ch2 109.917 dB

Low Gain, 32 Ohm : THD+N

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (10/9/2019 11:43:31.122 AM)

Ch1 0.000826 %

Ch2 0.000908 %

THD Ratio (10/9/2019 11:43:31.122 AM)

Ch1 0.000406 %

Ch2 0.000424 %

Noise Ratio (10/9/2019 11:43:31.122 AM)

Ch1 0.000707 %

Ch2 0.000794 %

Distortion Product Ratio (10/9/2019 11:43:31.122 AM)

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	-113.08	-122.35	-124.01	-122.57	-124.16	-121.19	-121.10	-129.38	-127.03
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-111.26	-121.69	-124.75	-126.63	-121.99	-124.37	-121.99	-126.20	-126.12

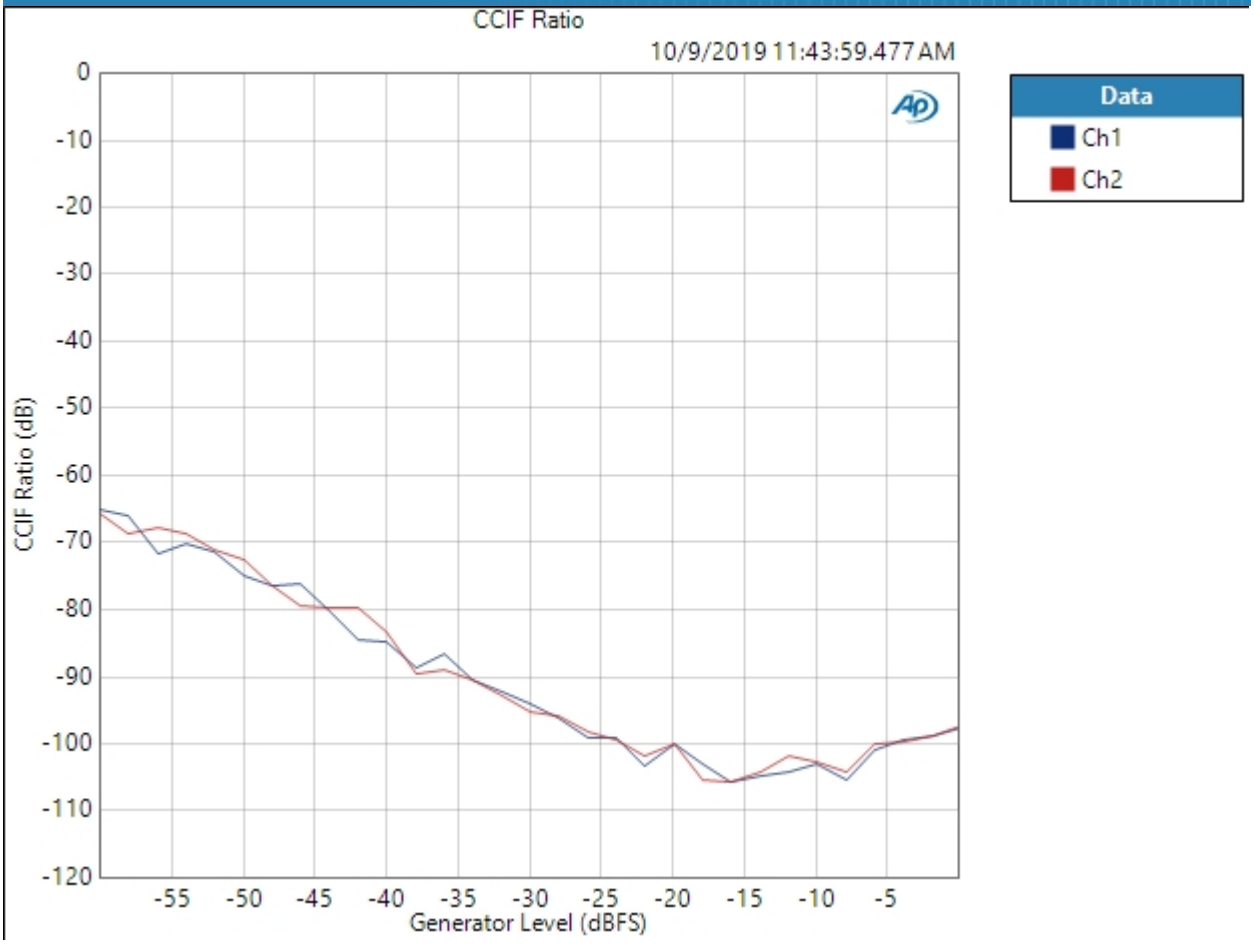
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Low Gain, 32 Ohm : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	31
Step Size:	+2.000 dBFS
Mode:	d2+d3
Measured 1	10/9/2019 11:43:59 AM

CCIF Ratio (10/9/2019 11:43:59.477 AM)

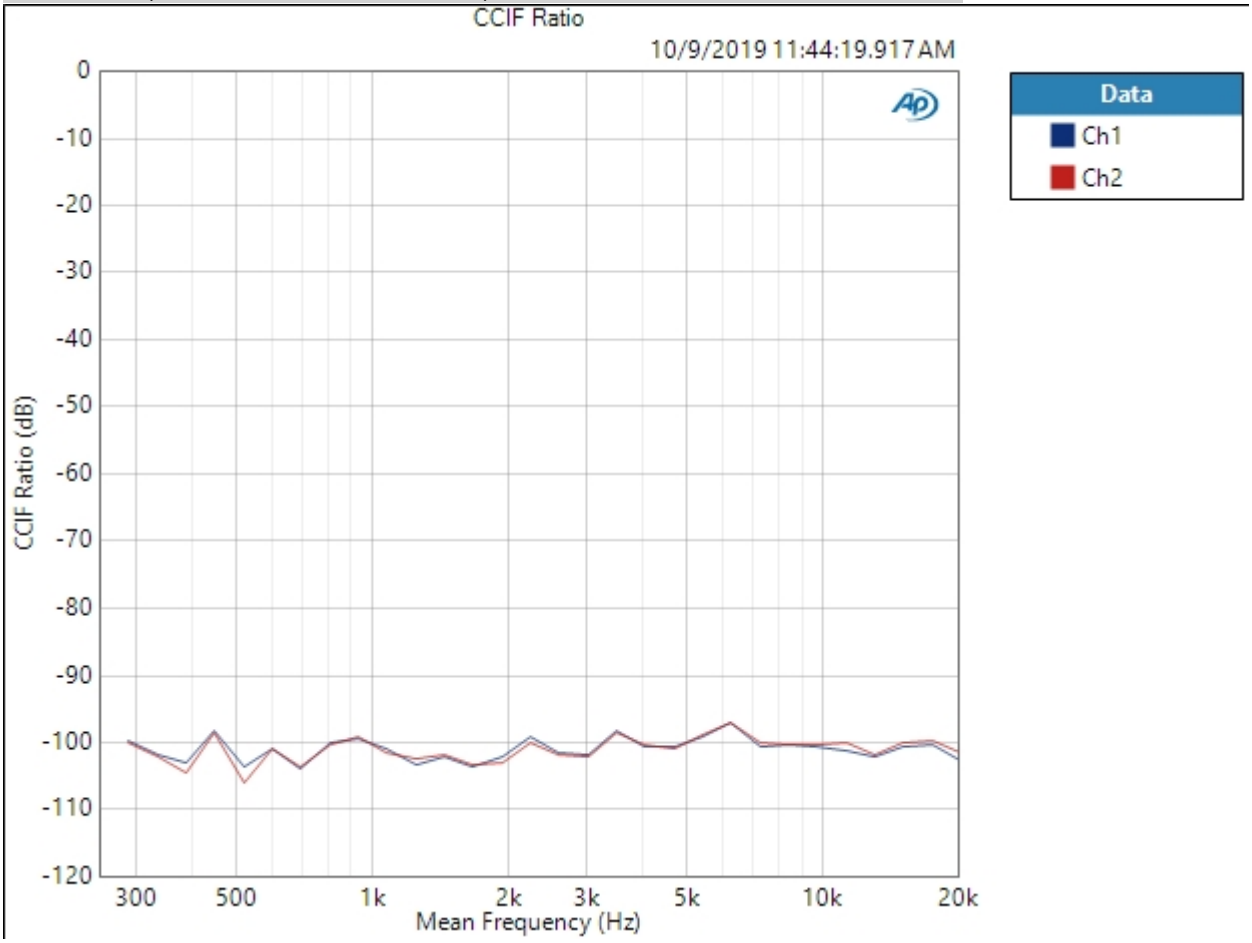


Result: PASSED

Low Gain, 32 Ohm : IMD Frequency Sweep (CCIF)

Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Sweep Frequency:	Mean Frequency
Mean Frequency:	12.5000 kHz
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	10/9/2019 11:44:19 AM

CCIF Ratio (10/9/2019 11:44:19.917 AM)



Result: PASSED

Low Gain, 32 Ohm : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Level:	-14.000 dBFS
DC Offset:	0.000 D
Frequency:	10.0000 kHz

Crosstalk (10/9/2019 11:44:21.122 AM)

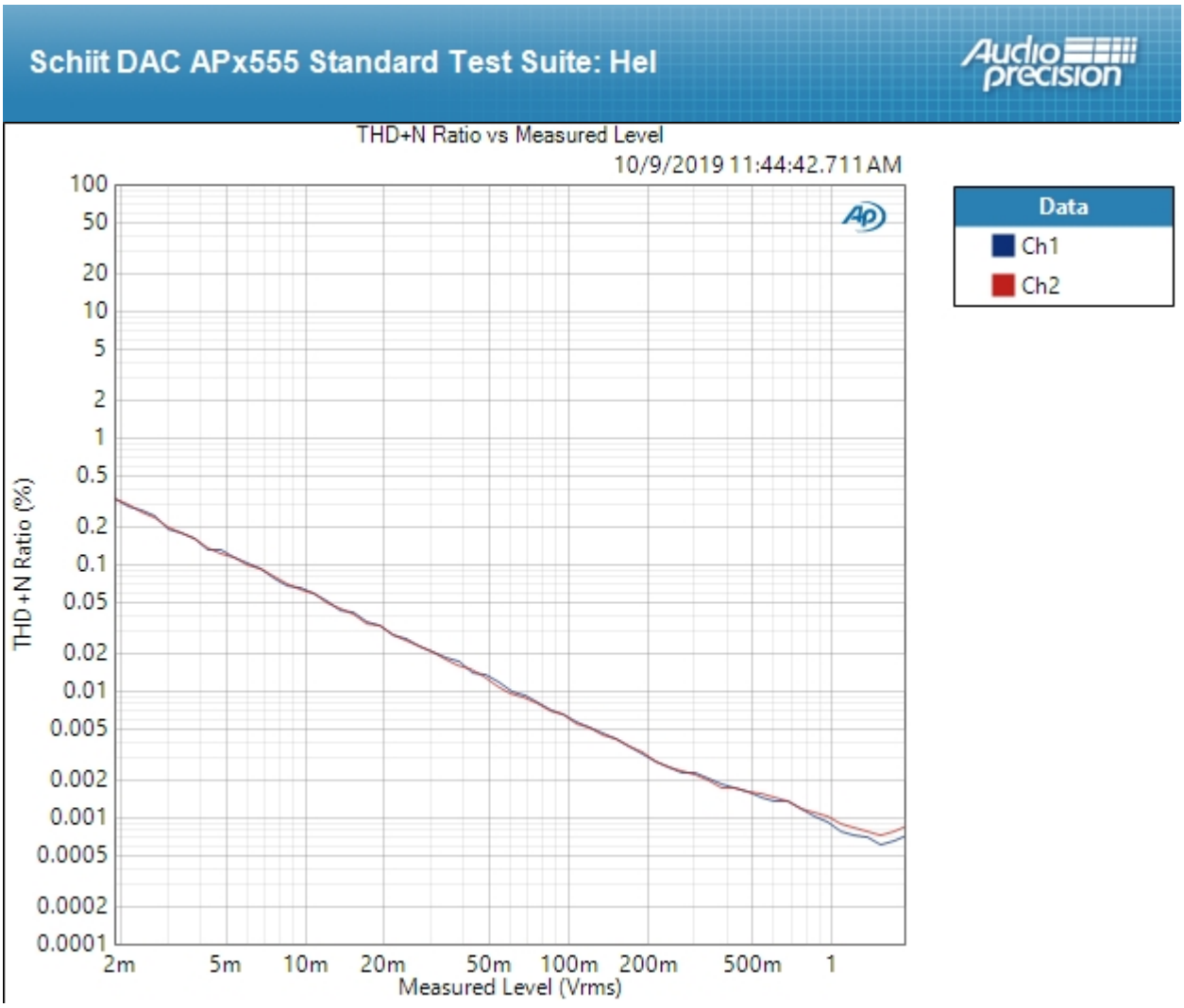
Ch1 73.362 dB

Ch2 73.512 dB

Low Gain, 32 Ohm : Stepped Level Sweep

Waveform:	Sine
Generator Level:	-20.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	61
Step Size:	+1.000 dBFS
Offset:	0.000 D
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	10/9/2019 11:44:42 AM

THD+N Ratio vs Measured Level (10/9/2019 11:44:42.711 AM)



Result: PASSED

High Gain, 300 Ohm : Signal Path Setup

Output Connector:	ASIO
Output Sample Rate:	48.0000 kHz
Output EQ:	None
Input Connector:	Analog Unbalanced
Channels:	2
Termination:	300 ohm
High Performance Sine Analyzer:	Enabled
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Device Delay:	0.000 s
Input EQ:	None

• References

dBr G:	-20.000 dBFS
Shared Frequency Reference:	1.00000 kHz
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.

• Clocks

Output Rate:	Track Output SR
Sync Out Level:	3.300 V
Sync Out Polarity:	Normal
Timebase Reference:	Internal
Jitter:	Disabled

• Triggers

Source:	Off
Input Logic Level:	3.300 V

Edge: Rising

High Gain, 300 Ohm : Level and Gain

Waveform: Sine

Generator Level: -21.000 dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

RMS Level (10/9/2019 11:45:03.120 AM)

Ch1 1.069 Vrms

Ch2 1.065 Vrms

High Gain, 300 Ohm : DC Level

Waveform: Sine

Generator Level: -∞ dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

Delay Time: 100.0 ms

Acquisition Time: 333.0 ms

DC Level (10/9/2019 11:45:04.193 AM)

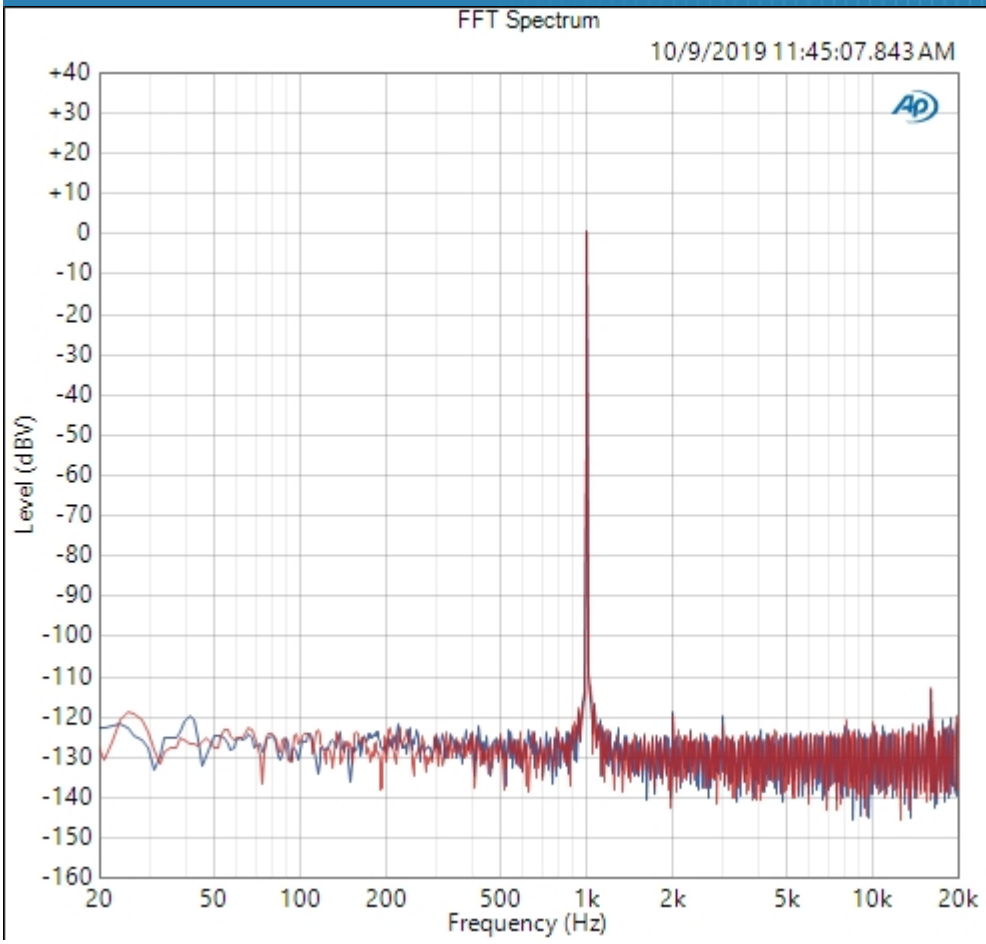
Ch1 -5.39 mV

Ch2 -3.49 mV

High Gain, 300 Ohm : Signal Analyzer

Waveform:	Sine
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	10/9/2019 11:45:07 AM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32K
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (10/9/2019 11:45:07.843 AM)

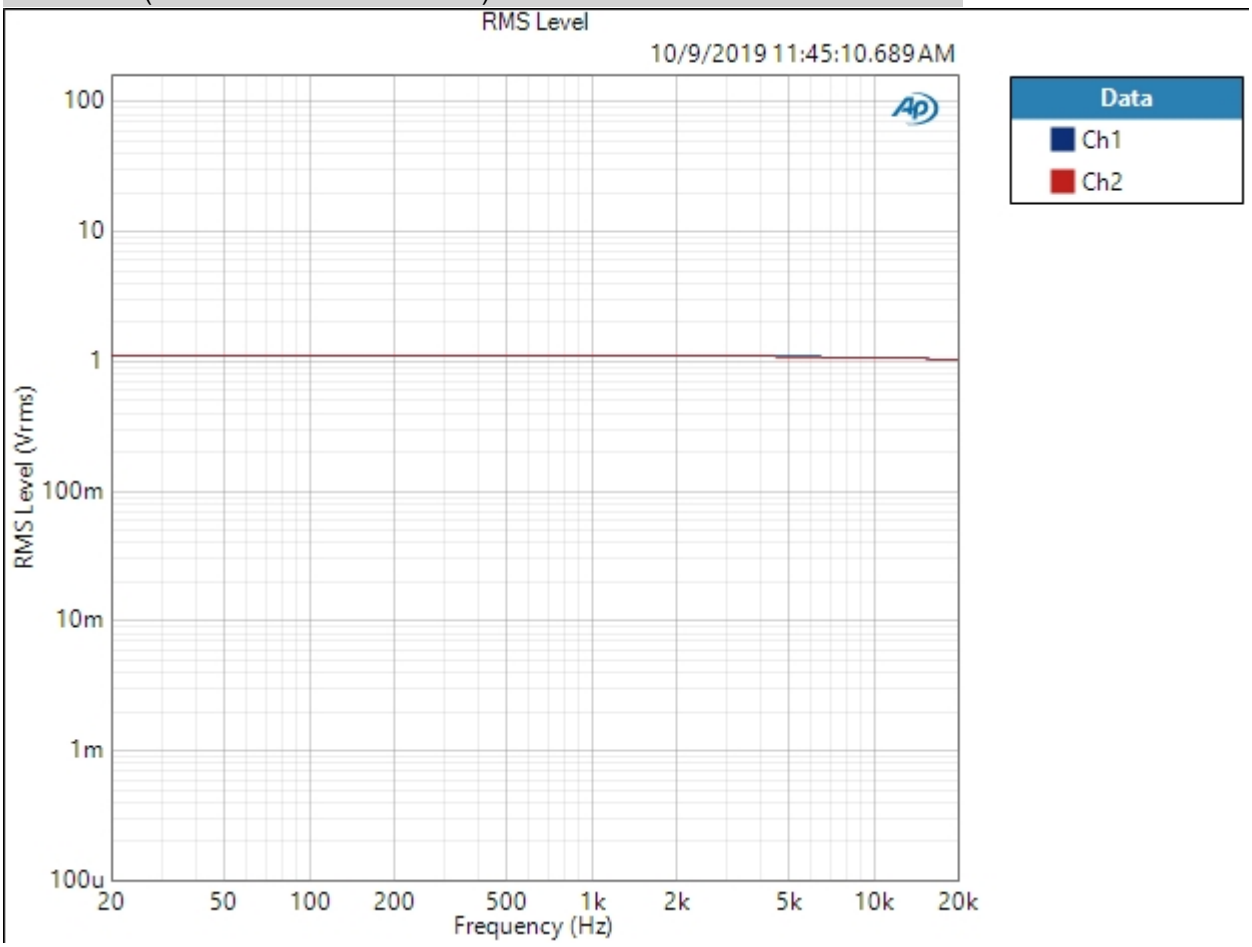


Result: PASSED

High Gain, 300 Ohm : Frequency Response

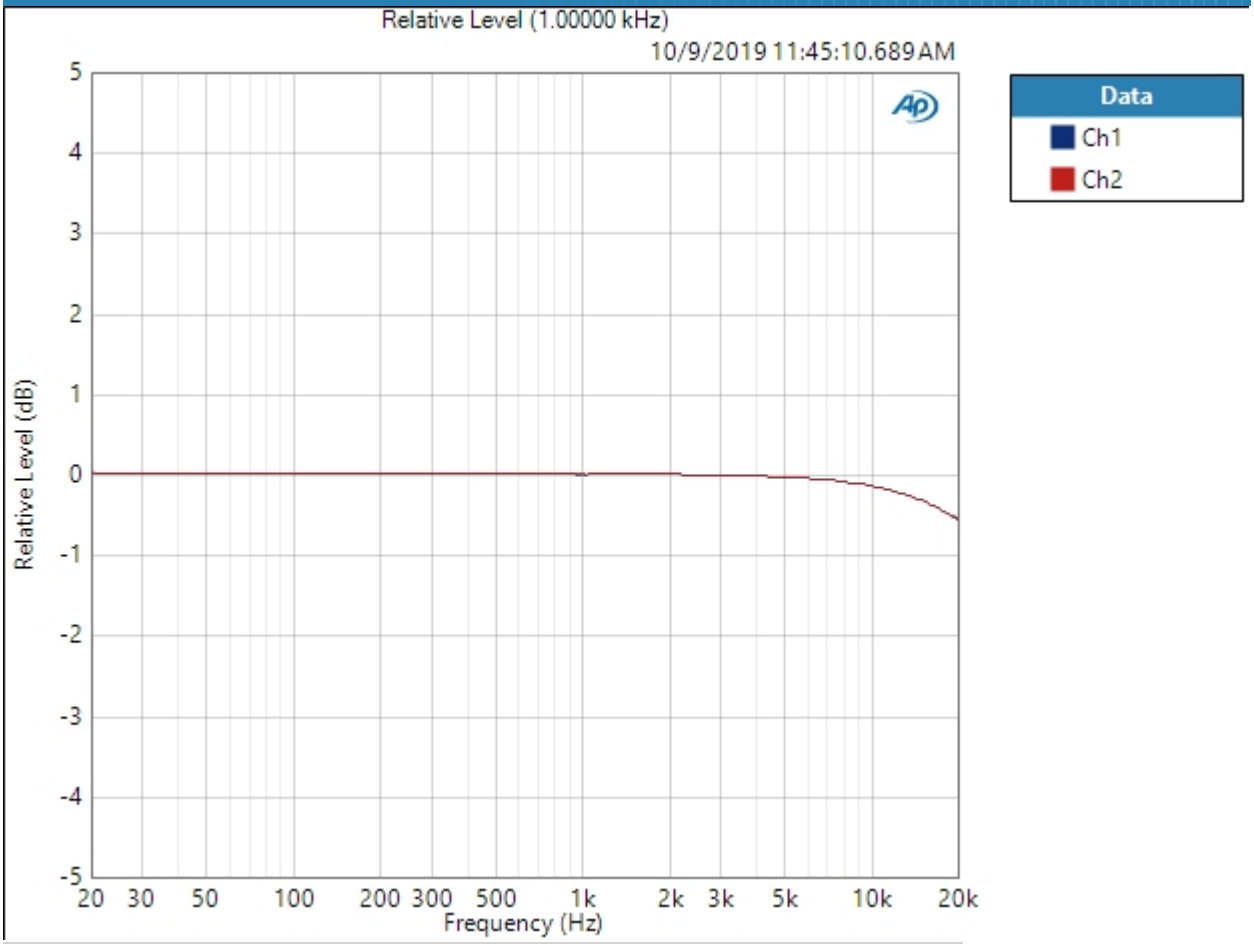
Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	500.0 ms
Secondary Source:	None
Measured 1	10/9/2019 11:45:10 AM

RMS Level (10/9/2019 11:45:10.689 AM)



Result: PASSED

Relative Level (1.00000 kHz) (10/9/2019 11:45:10.689 AM)



Relative Level (1.00000 kHz) Parameters

Mode: Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (10/9/2019 11:45:10.689 AM)

Ch1 ±0.302 dB

Ch2 ±0.302 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

High Gain, 300 Ohm : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	-15.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz

Signal to Noise Ratio (10/9/2019 11:45:12.584 AM)

Ch1 98.910 dB
Ch2 98.544 dB

High Gain, 300 Ohm : THD+N

Waveform:	Sine
Generator Level:	-22.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (10/9/2019 11:45:14.861 AM)

Ch1	0.002638 %
Ch2	0.002622 %

THD Ratio (10/9/2019 11:45:14.861 AM)

Ch1	0.000584 %
Ch2	0.000506 %

Noise Ratio (10/9/2019 11:45:14.861 AM)

Ch1	0.002558 %
Ch2	0.002559 %

Distortion Product Ratio (10/9/2019 11:45:14.861 AM)

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	-115.91	-116.54	-120.22	-120.67	-121.68	-119.88	-114.39	-121.11	-120.42
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-118.59	-114.18	-124.00	-119.45	-121.60	-119.70	-120.14	-124.04	-121.07

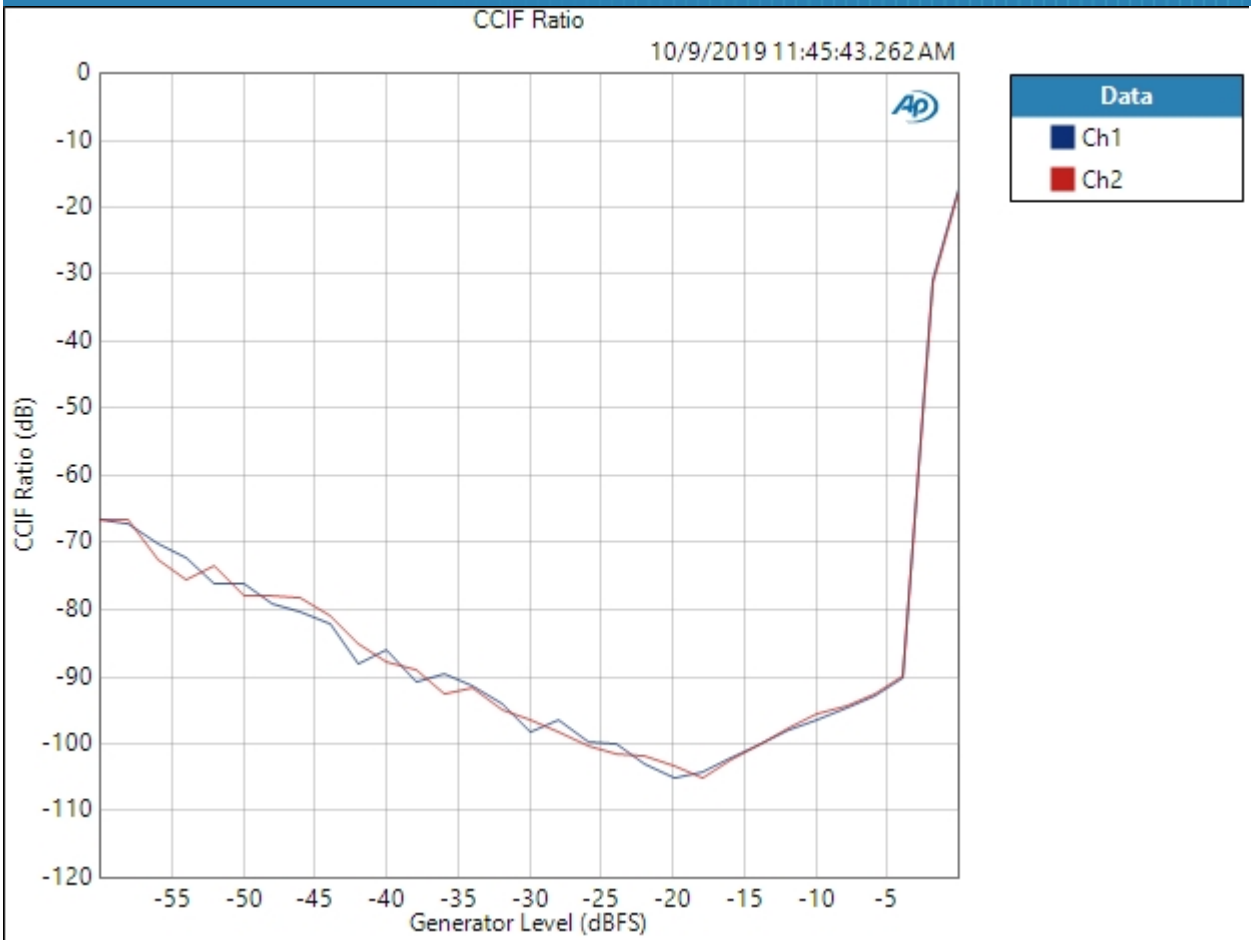
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

High Gain, 300 Ohm : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	31
Step Size:	+2.000 dBFS
Mode:	d2+d3
Measured 1	10/9/2019 11:45:43 AM

CCIF Ratio (10/9/2019 11:45:43.262 AM)

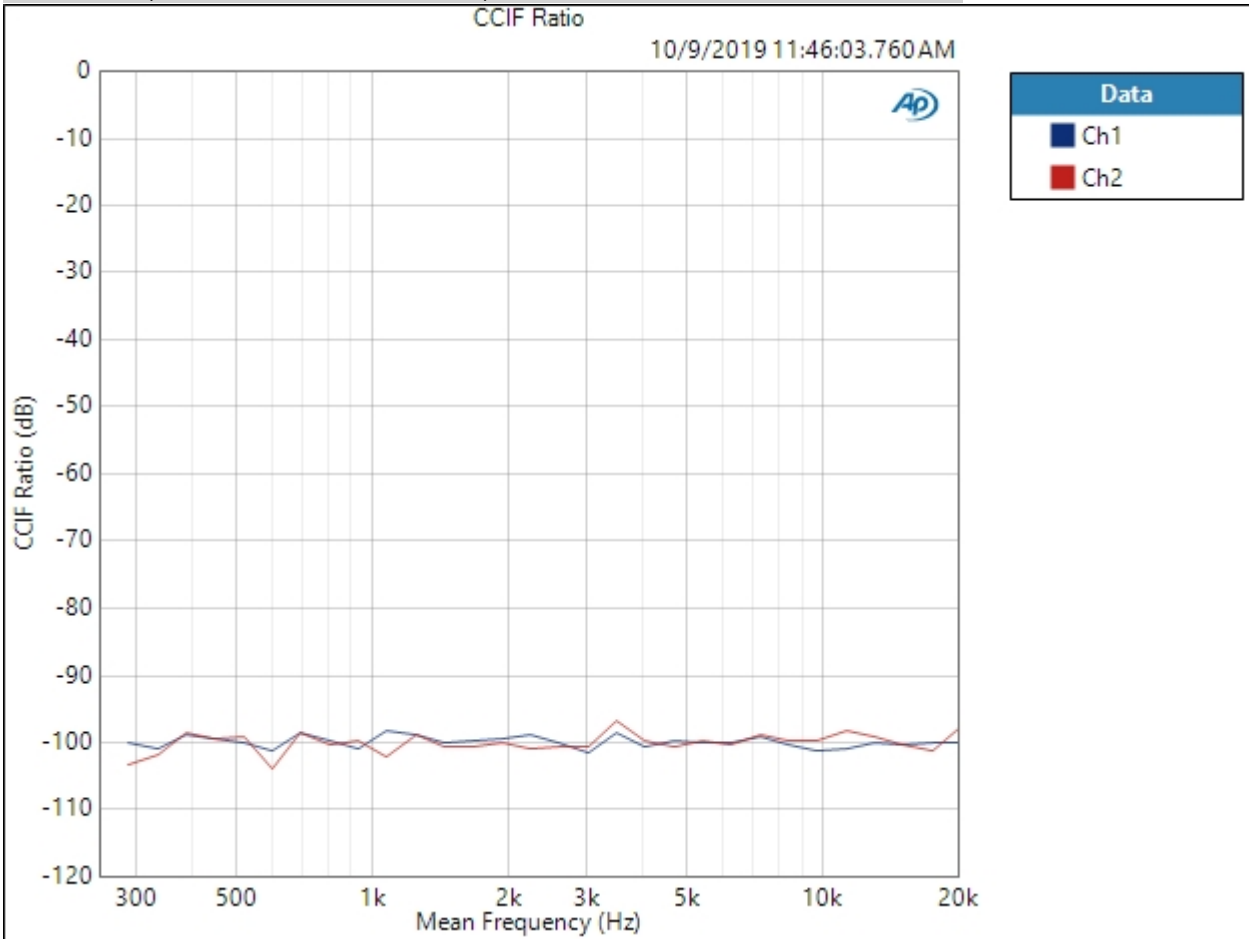


Result: PASSED

High Gain, 300 Ohm : IMD Frequency Sweep (CCIF)

Generator Level:	-22.000 dBFS
DC Offset:	0.000 D
Sweep Frequency:	Mean Frequency
Mean Frequency:	12.5000 kHz
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	10/9/2019 11:46:03 AM

CCIF Ratio (10/9/2019 11:46:03.760 AM)



Result: PASSED

High Gain, 300 Ohm : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Frequency:	10.0000 kHz

Crosstalk (10/9/2019 11:46:05.743 AM)

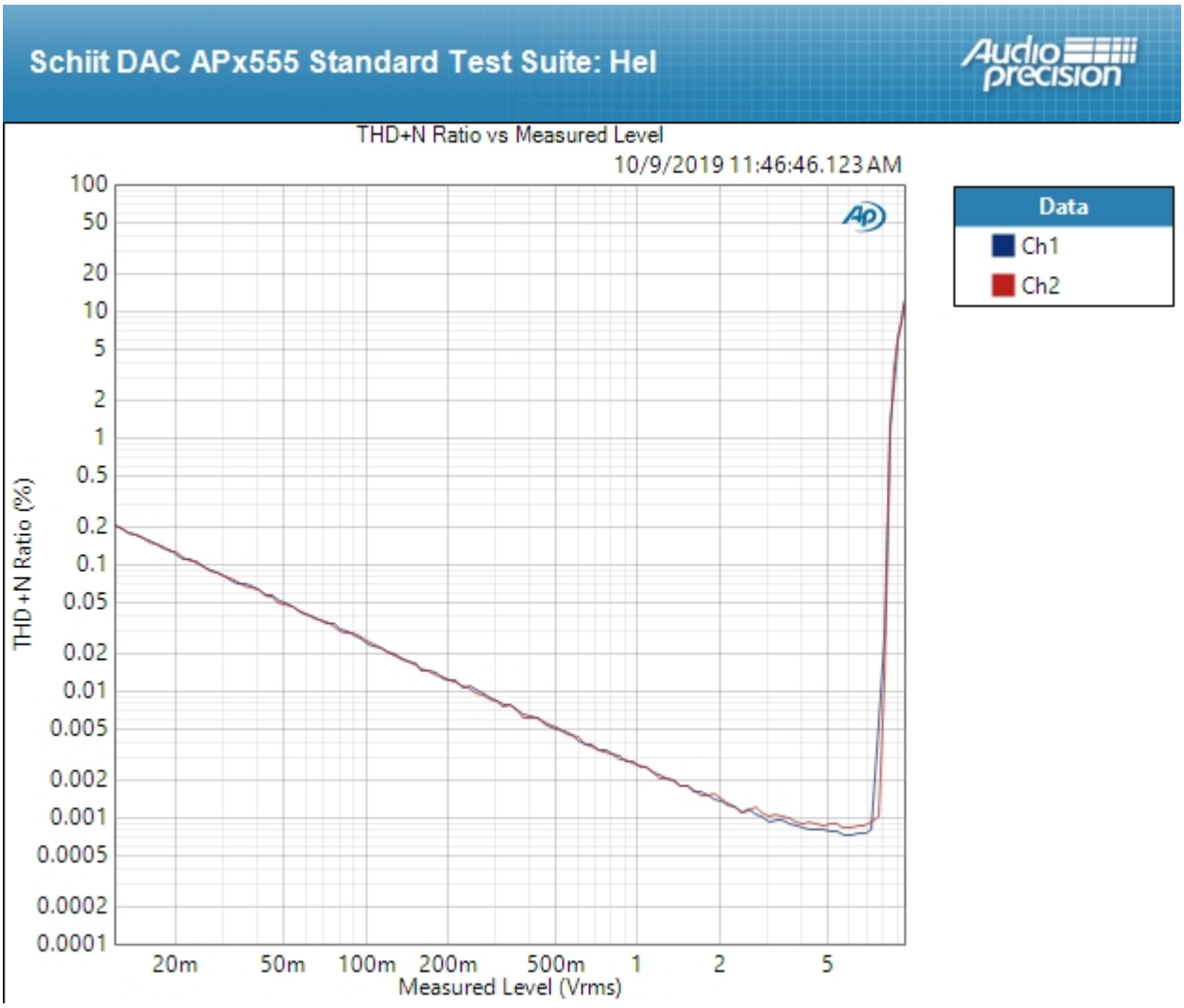
Ch1 80.224 dB

Ch2 80.474 dB

High Gain, 300 Ohm : Stepped Level Sweep

Waveform:	Sine
Generator Level:	-20.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	121
Step Size:	+0.500 dBFS
Offset:	0.000 D
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	10/9/2019 11:46:46 AM

THD+N Ratio vs Measured Level (10/9/2019 11:46:46.123 AM)



Result: PASSED

High Gain, 32 Ohm : Signal Path Setup

Output Connector:	ASIO
Output Sample Rate:	48.0000 kHz
Output EQ:	None
Input Connector:	Analog Unbalanced
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Device Delay:	0.000 s
Input EQ:	None

• References

dBr G:	-20.000 dBFS
Shared Frequency Reference:	1.00000 kHz
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.

• Clocks

Output Rate:	Track Output SR
Sync Out Level:	3.300 V
Sync Out Polarity:	Normal
Timebase Reference:	Internal
Jitter:	Disabled

• Triggers

Source:	Off
Input Logic Level:	3.300 V

Edge: Rising

High Gain, 32 Ohm : Level and Gain

Waveform: Sine

Generator Level: -21.000 dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

RMS Level (10/9/2019 11:46:56.195 AM)

Ch1 1.058 Vrms

Ch2 1.054 Vrms

High Gain, 32 Ohm : DC Level

Waveform: Sine

Generator Level: -∞ dBFS

DC Offset: 0.000 D

Frequency: 1.00000 kHz

Delay Time: 100.0 ms

Acquisition Time: 333.0 ms

DC Level (10/9/2019 11:46:57.286 AM)

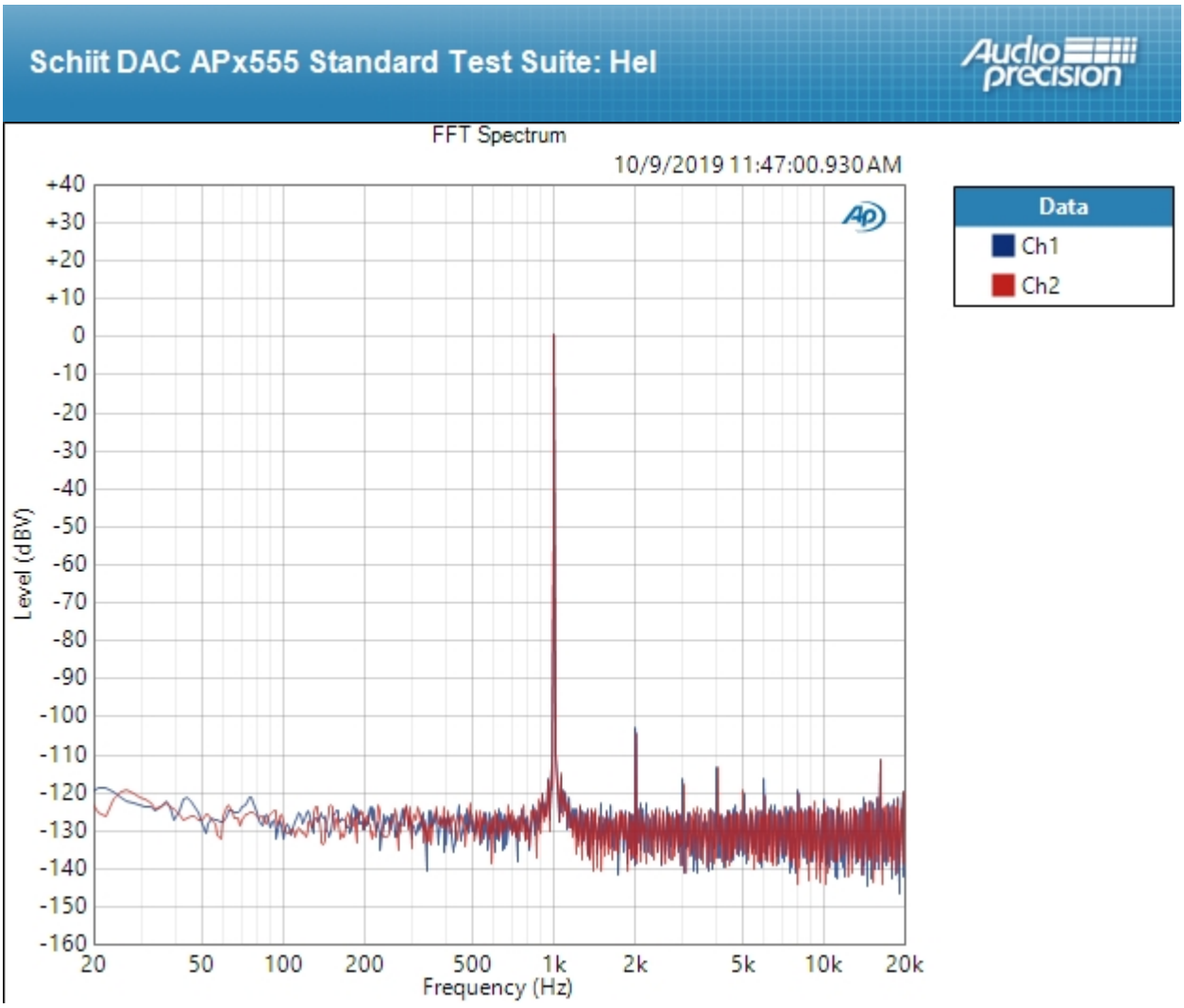
Ch1 -3.86 mV

Ch2 -4.07 mV

High Gain, 32 Ohm : Signal Analyzer

Waveform:	Sine
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	10/9/2019 11:47:00 AM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32K
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (10/9/2019 11:47:00.930 AM)

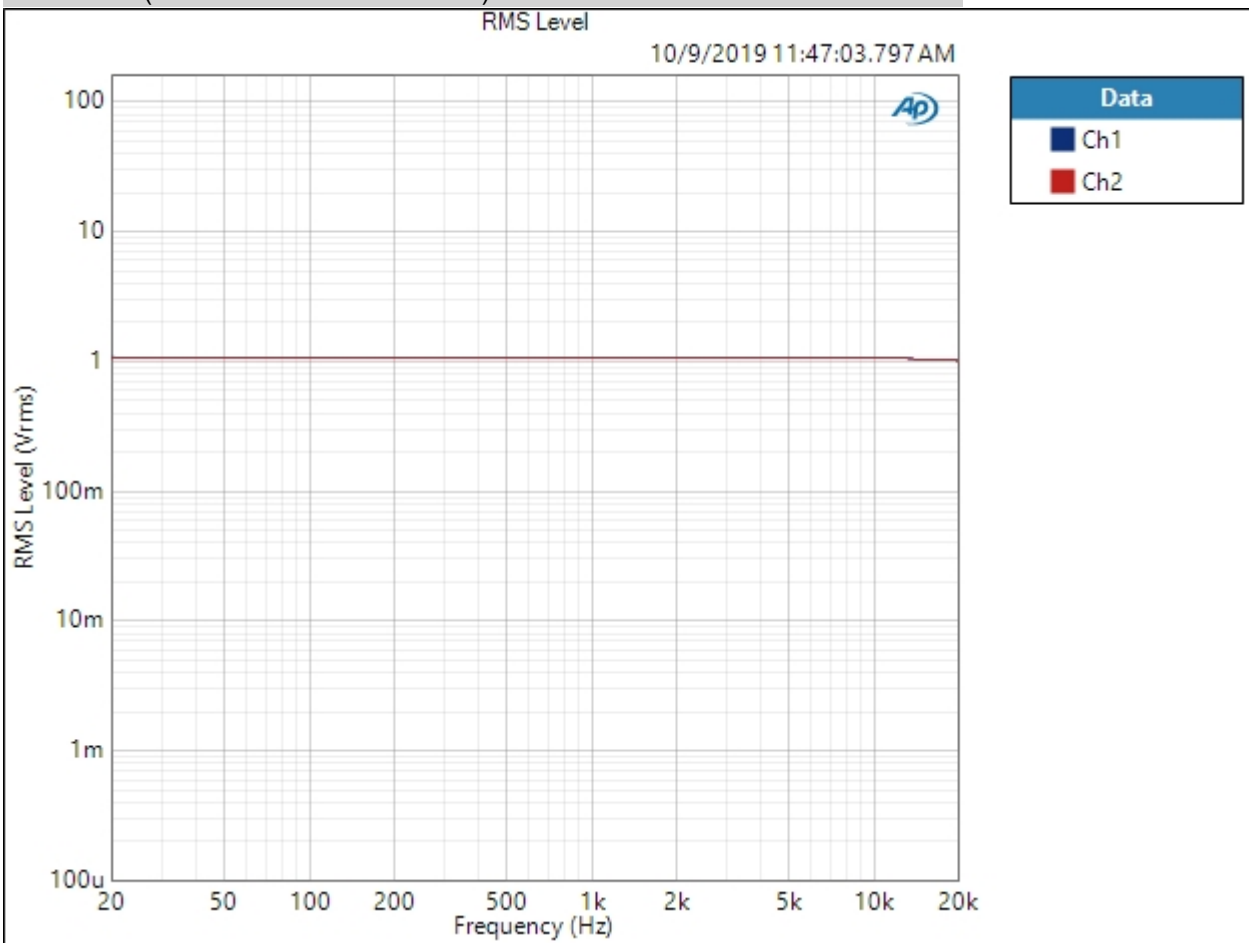


Result: PASSED

High Gain, 32 Ohm : Frequency Response

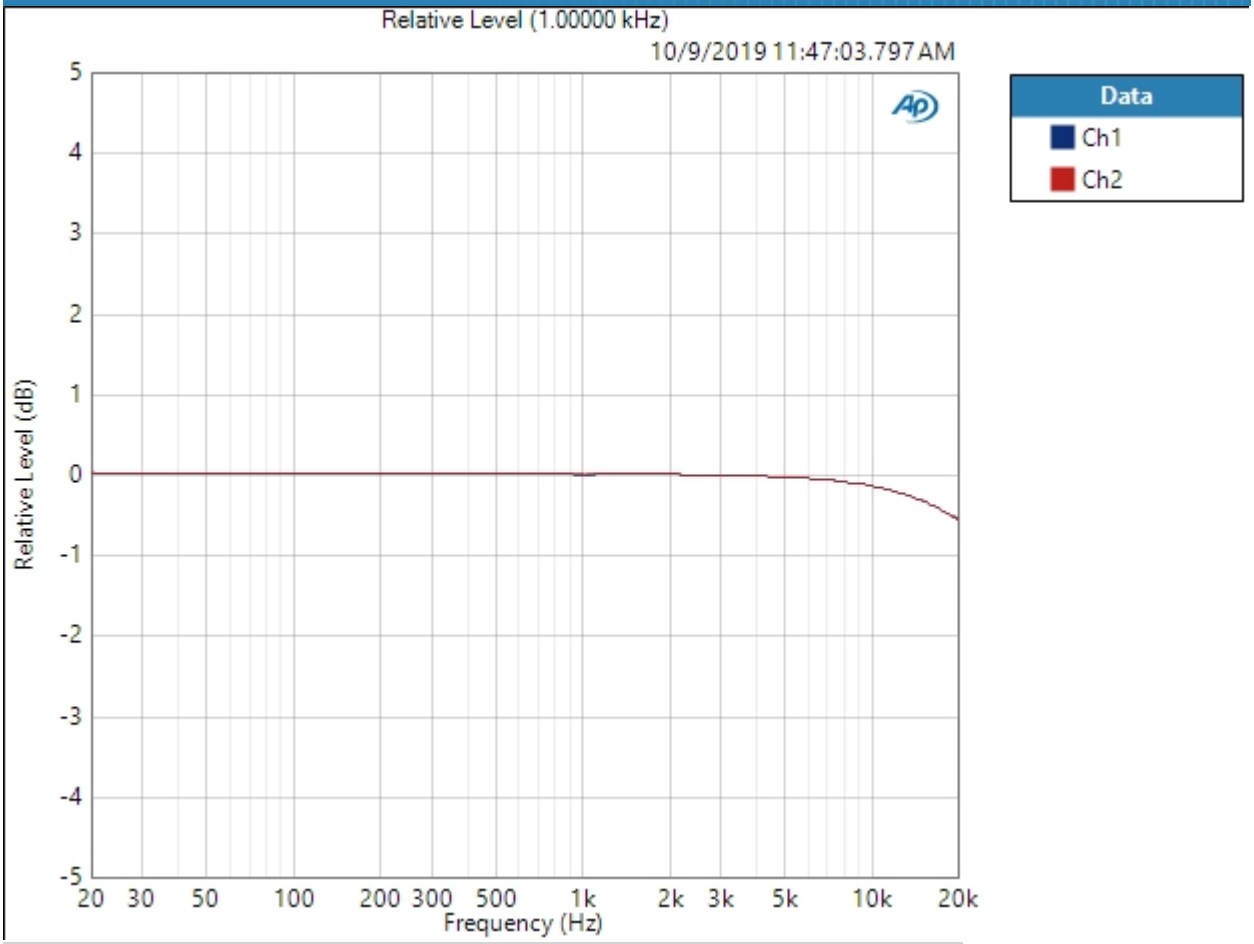
Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	500.0 ms
Secondary Source:	None
Measured 1	10/9/2019 11:47:03 AM

RMS Level (10/9/2019 11:47:03.797 AM)



Result: PASSED

Relative Level (1.00000 kHz) (10/9/2019 11:47:03.797 AM)



Relative Level (1.00000 kHz) Parameters

Mode: Normalized at Reference

Ref Frequency: 1.00000 kHz

Result: PASSED

Deviation (20.0000 Hz - 20.0000 kHz) (10/9/2019 11:47:03.797 AM)

Ch1 ±0.303 dB

Ch2 ±0.303 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

High Gain, 32 Ohm : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	-15.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz

Signal to Noise Ratio (10/9/2019 11:47:05.670 AM)

Ch1 99.054 dB
Ch2 98.611 dB

High Gain, 32 Ohm : THD+N

Waveform:	Sine
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (10/9/2019 11:47:07.679 AM)

Ch1	0.002489 %
Ch2	0.002453 %

THD Ratio (10/9/2019 11:47:07.679 AM)

Ch1	0.000954 %
Ch2	0.000731 %

Noise Ratio (10/9/2019 11:47:07.679 AM)

Ch1	0.002309 %
Ch2	0.002324 %

Distortion Product Ratio (10/9/2019 11:47:07.679 AM)

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	-102.10	-115.08	-112.20	-117.80	-117.73	-120.63	-117.60	-117.29	-121.14
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-105.15	-118.04	-114.46	-121.44	-117.02	-121.05	-118.74	-120.44	-121.49

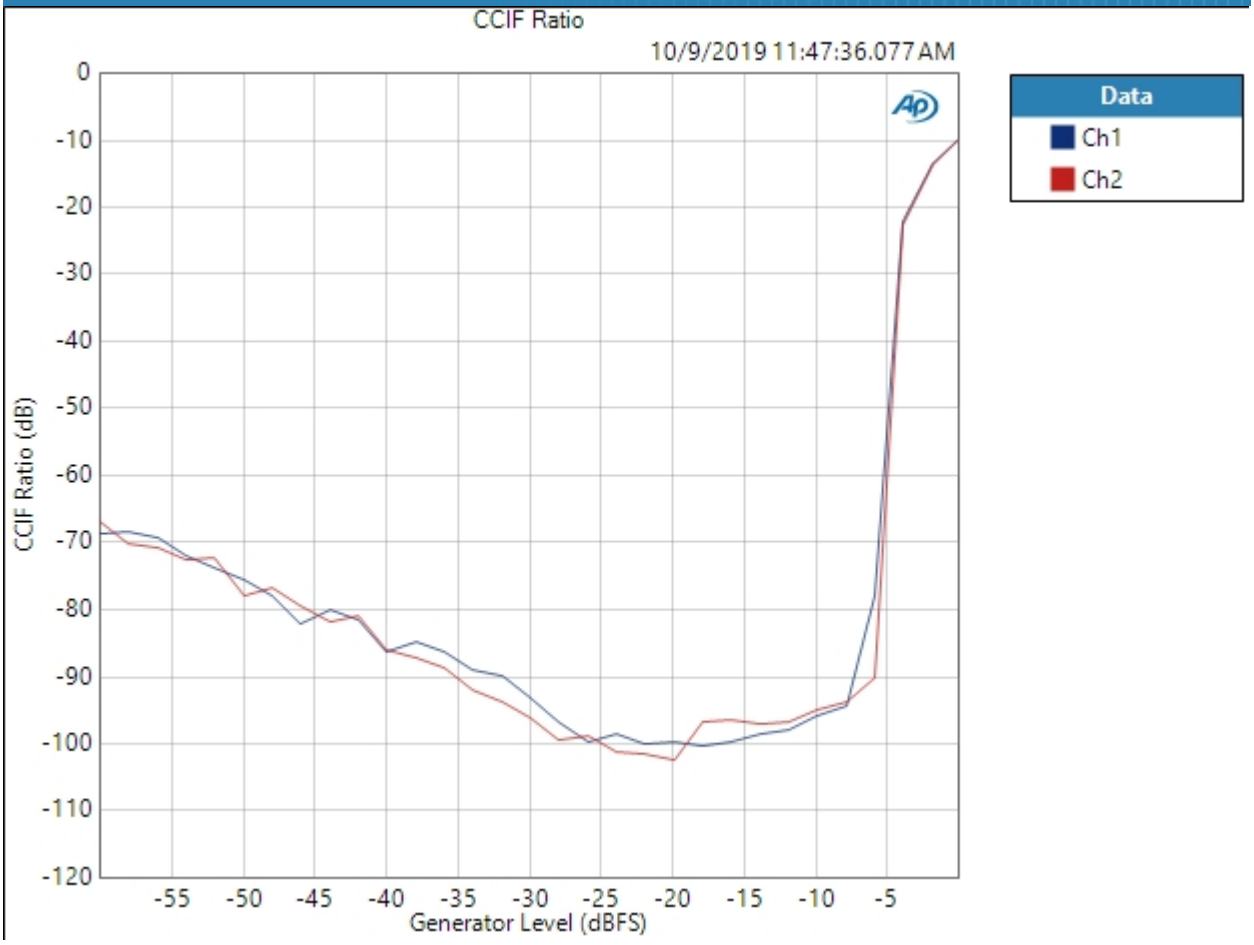
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

High Gain, 32 Ohm : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	31
Step Size:	+2.000 dBFS
Mode:	d2+d3
Measured 1	10/9/2019 11:47:36 AM

CCIF Ratio (10/9/2019 11:47:36.077 AM)

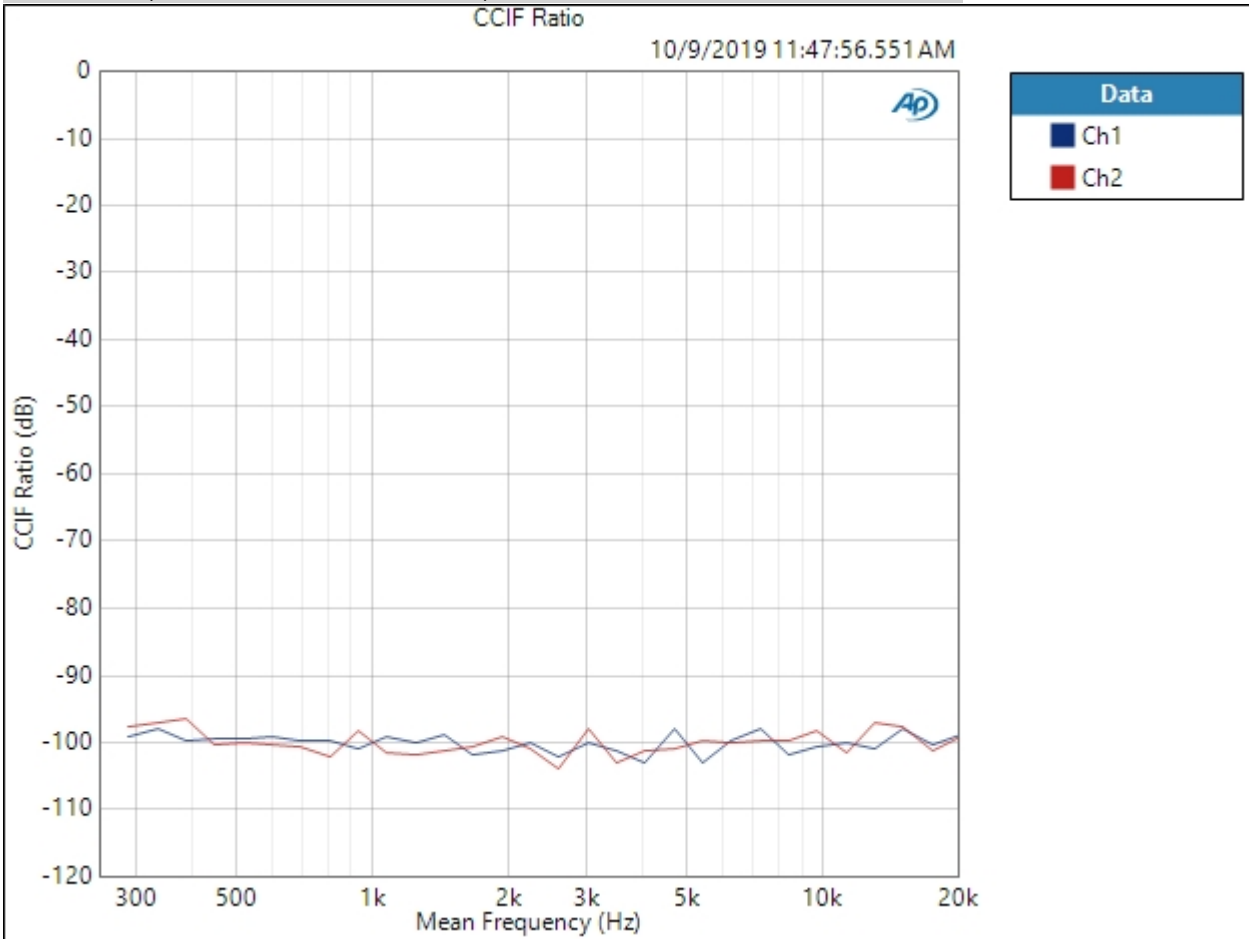


Result: PASSED

High Gain, 32 Ohm : IMD Frequency Sweep (CCIF)

Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Sweep Frequency:	Mean Frequency
Mean Frequency:	12.5000 kHz
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	10/9/2019 11:47:56 AM

CCIF Ratio (10/9/2019 11:47:56.551 AM)



Result: PASSED

High Gain, 32 Ohm : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Level:	-21.000 dBFS
DC Offset:	0.000 D
Frequency:	10.0000 kHz

Crosstalk (10/9/2019 11:47:57.779 AM)

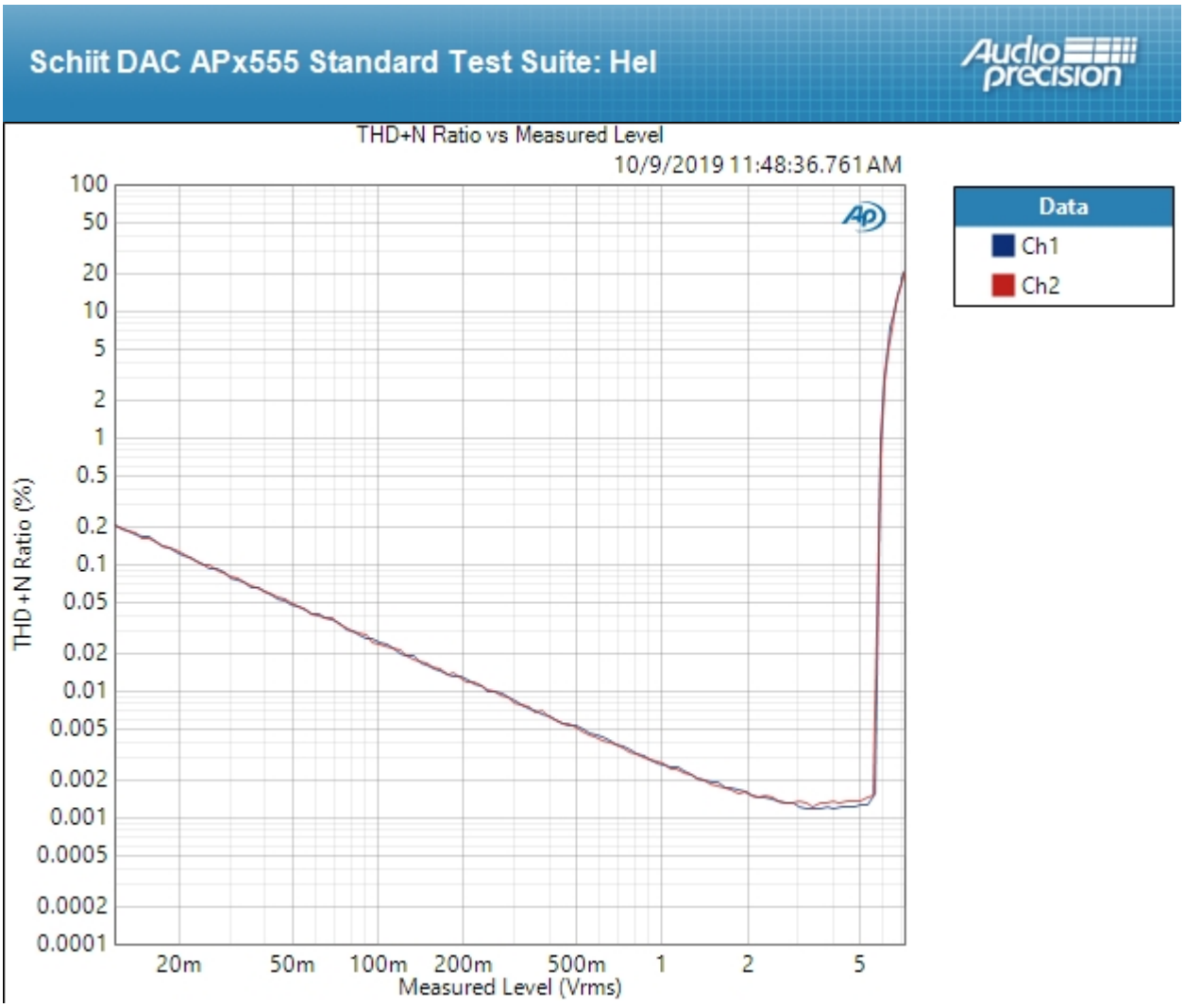
Ch1 72.868 dB

Ch2 73.372 dB

High Gain, 32 Ohm : Stepped Level Sweep

Waveform:	Sine
Generator Level:	-20.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	127
Step Size:	+0.476 dBFS
Offset:	0.000 D
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	10/9/2019 11:48:36 AM

THD+N Ratio vs Measured Level (10/9/2019 11:48:36.761 AM)



Result: PASSED

Line Out : Signal Path Setup

Output Connector:	ASIO
Output Sample Rate:	48.0000 kHz
Output EQ:	None
Input Connector:	Analog Unbalanced
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Device Delay:	0.000 s
Input EQ:	None

• References

dBr G:	-20.000 dBFS
Shared Frequency Reference:	1.00000 kHz
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.

• Clocks

Output Rate:	Track Output SR
Sync Out Level:	3.300 V
Sync Out Polarity:	Normal
Timebase Reference:	Internal
Jitter:	Disabled

• Triggers

Source:	Off
Input Logic Level:	3.300 V

Edge:	Rising

Line Out : Level and Gain

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz

RMS Level (10/9/2019 12:16:12.099 PM)

Ch1 1.023 Vrms
Ch2 1.020 Vrms

Line Out : DC Level

Waveform:	Sine
Generator Level:	-∞ dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Delay Time:	100.0 ms
Acquisition Time:	333.0 ms

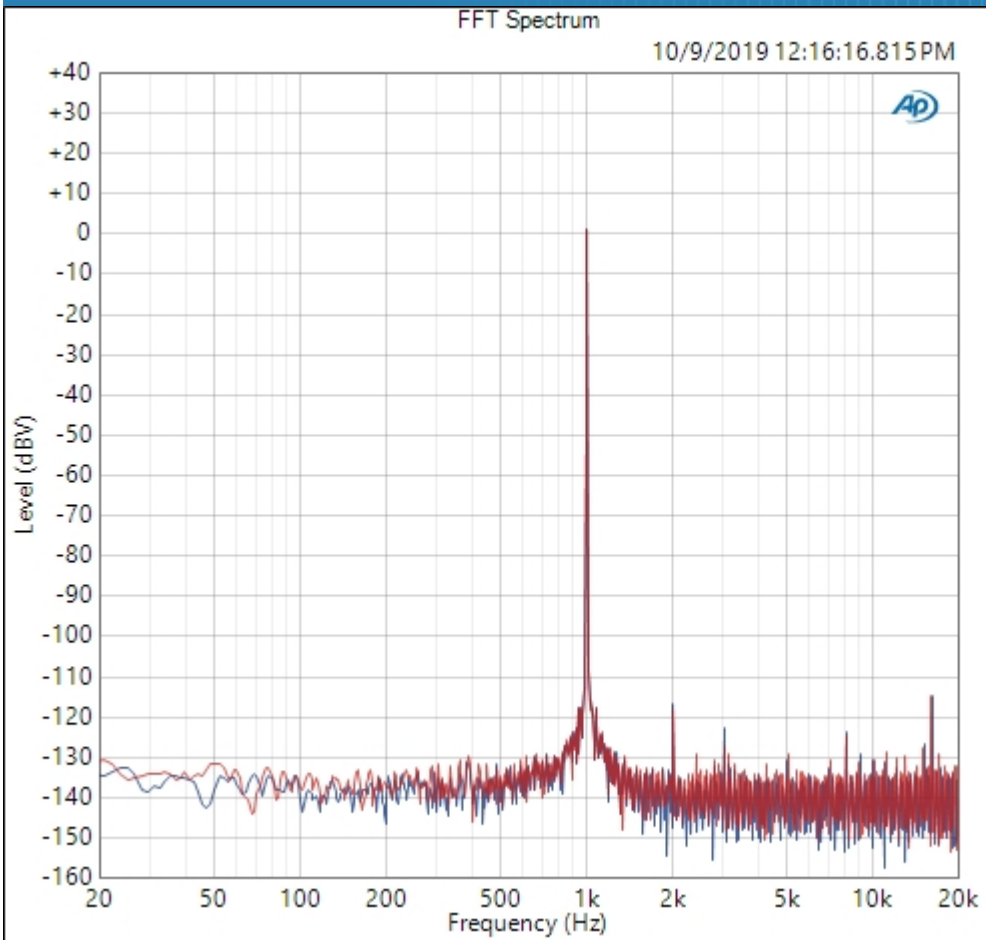
DC Level (10/9/2019 12:16:13.148 PM)

Ch1 -10.56 mV
Ch2 -8.810 mV

Line Out : Signal Analyzer

Waveform:	Sine
Generator Level:	-4.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	10/9/2019 12:16:16 PM
Acquisition Type:	Auto
Trigger:	Free Run
Delay Time:	250.0 ms
Input Bandwidth:	Use Signal Path
FFT Length:	32K
Averaging:	Power
Averages:	3
Window:	AP-Equiripple
Record Acquisition:	False
Recording Type:	Multiple Mono PCM (.wav)

FFT Spectrum (10/9/2019 12:16:16.815 PM)

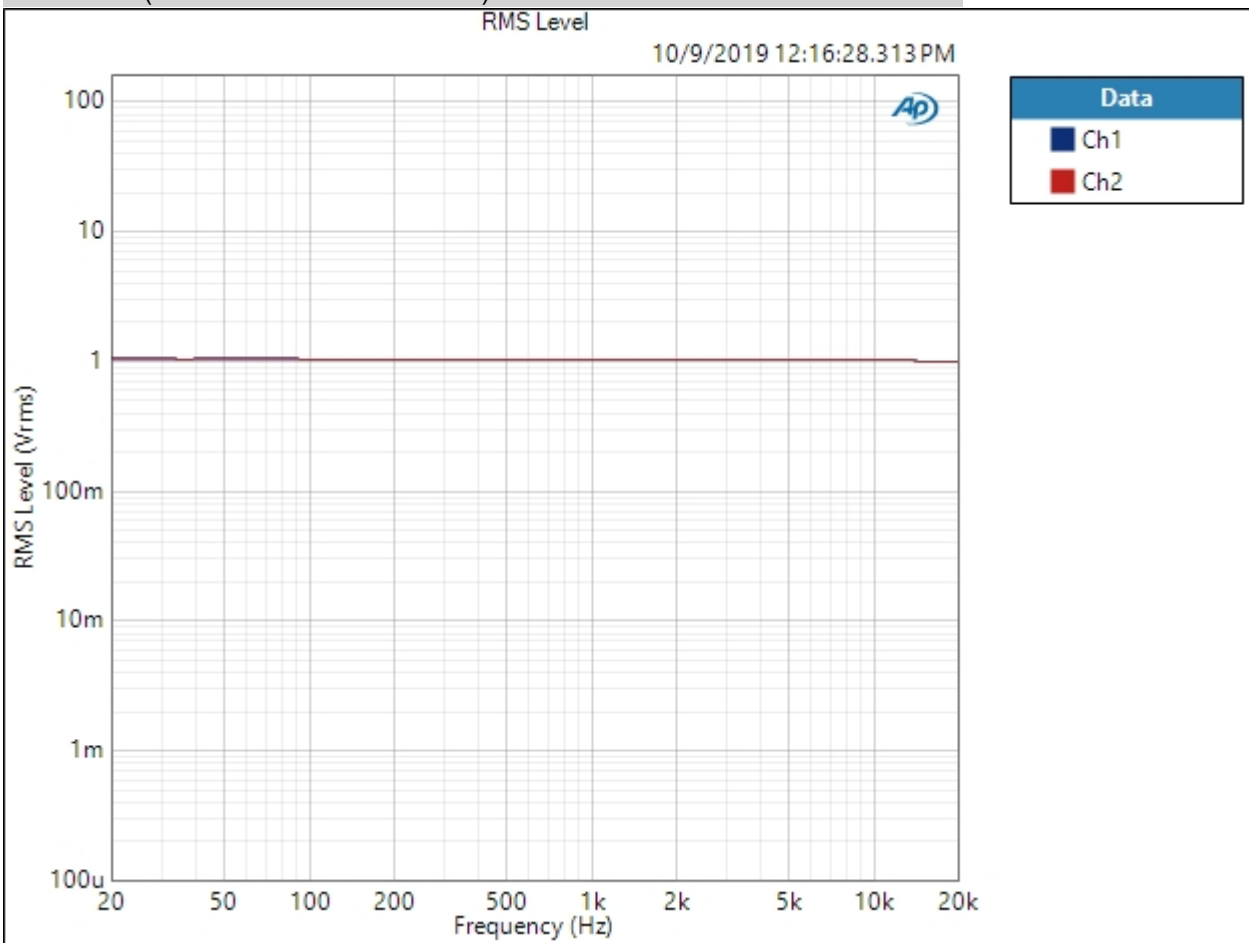


Result: PASSED

Line Out : Frequency Response

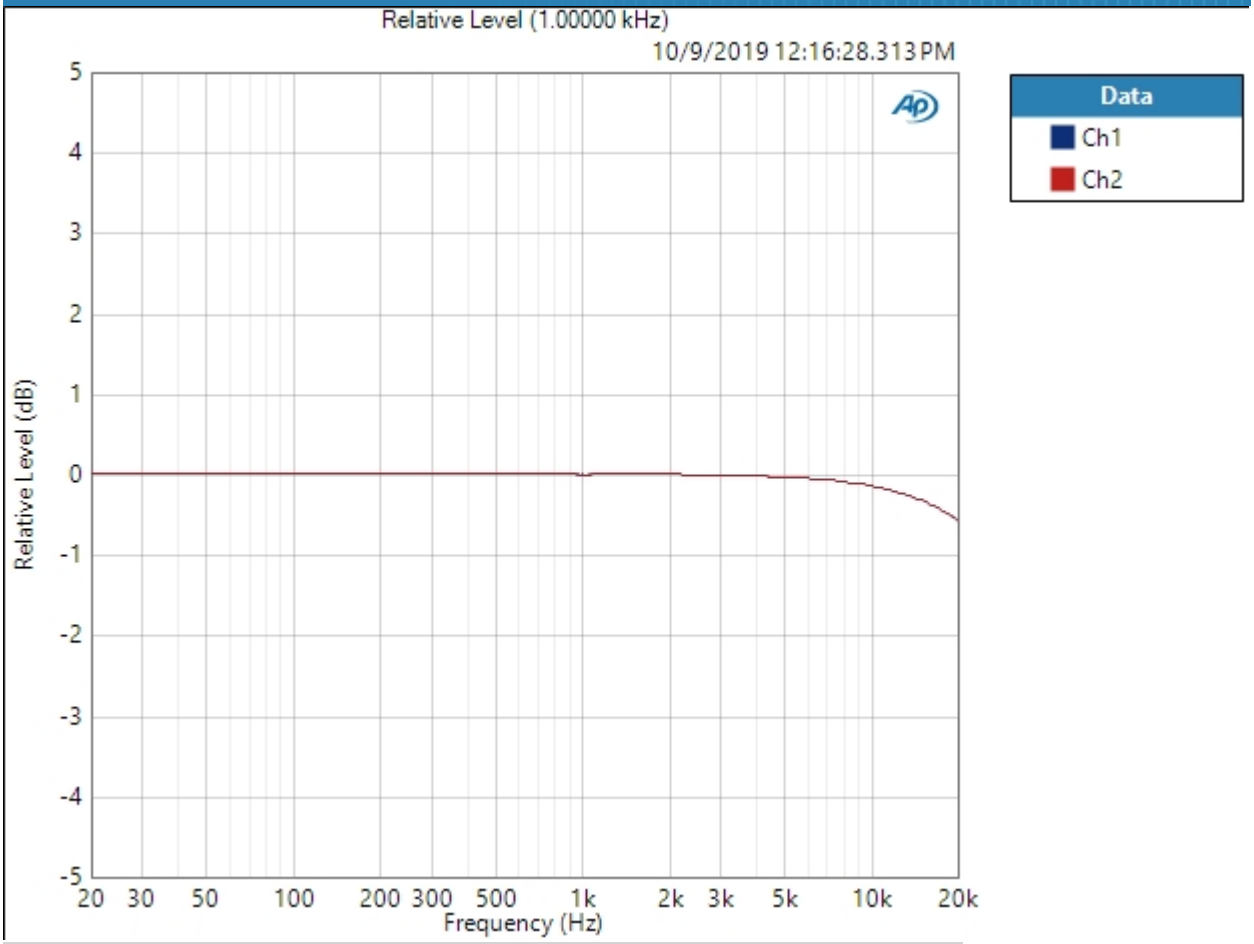
Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
EQ:	None
Pre-Sweep:	200.0 ms
Sweep:	2.000 s
Extend Acquisition By:	3.000 s
Secondary Source:	None
Measured 1	10/9/2019 12:16:28 PM

RMS Level (10/9/2019 12:16:28.313 PM)



Result: PASSED

Relative Level (1.00000 kHz) (10/9/2019 12:16:28.313 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) (10/9/2019 12:16:28.313 PM)

Ch1 ±0.302 dB

Ch2 ±0.301 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Line Out : Signal to Noise Ratio

Waveform:	Sine
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz

Signal to Noise Ratio (10/9/2019 12:16:30.238 PM)

Ch1 111.870 dB
Ch2 111.630 dB

Line Out : THD+N

Waveform:	Sine
Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Measured Frequency

THD+N Ratio (10/9/2019 12:16:34.441 PM)

Ch1	0.000725 %
Ch2	0.000829 %

THD Ratio (10/9/2019 12:16:34.441 PM)

Ch1	0.000238 %
Ch2	0.000267 %

Noise Ratio (10/9/2019 12:16:34.441 PM)

Ch1	0.000687 %
Ch2	0.000798 %

Distortion Product Ratio (10/9/2019 12:16:34.441 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	-118.74	-126.02	-131.14	-134.95	-129.05	-133.43	-126.04	-134.20	-131.80
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-120.68	-119.31	-130.50	-131.59	-127.85	-127.91	-126.92	-128.06	-128.52

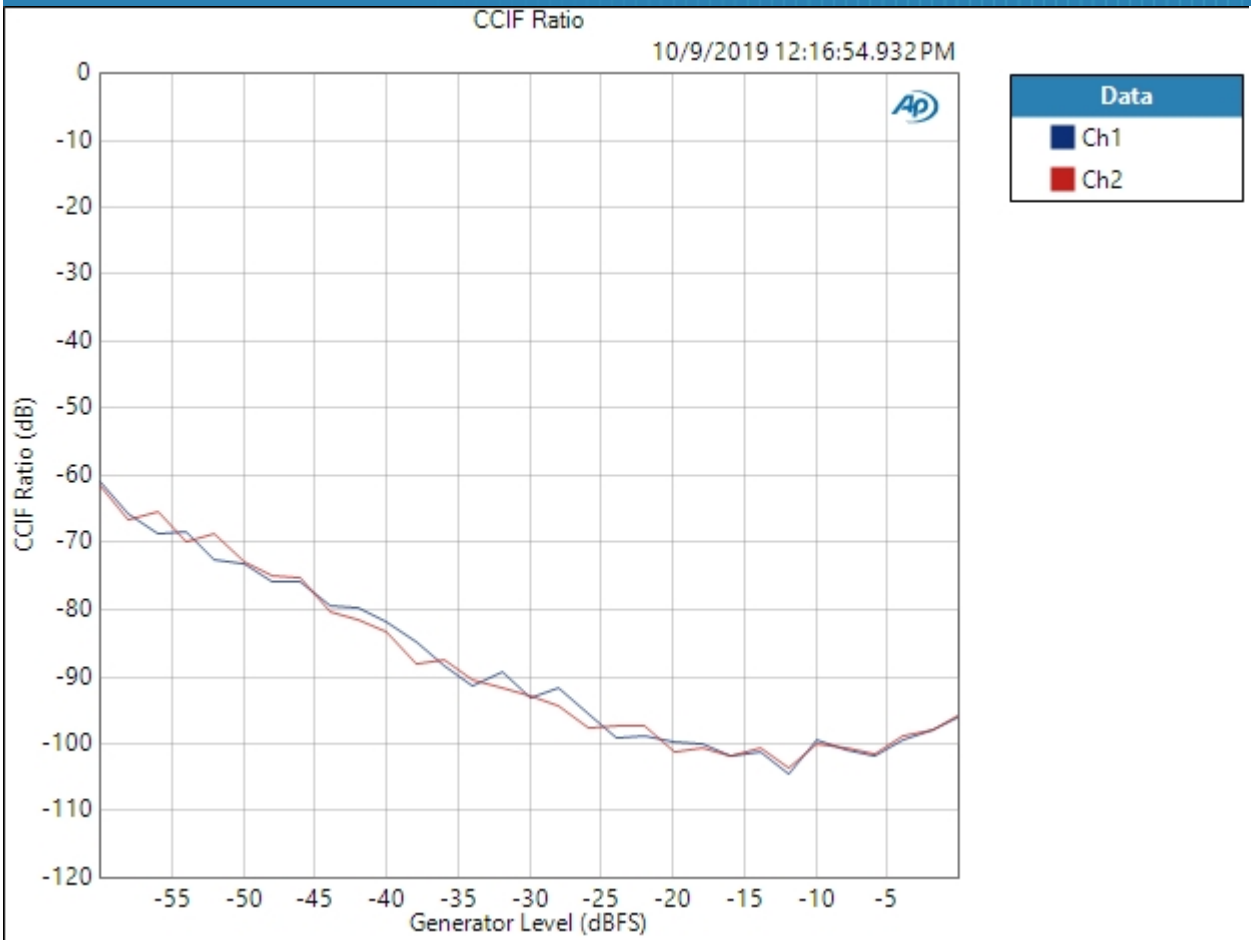
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Line Out : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	-0.000 dBFS
DC Offset:	0.000 D
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	-60.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	31
Step Size:	+2.000 dBFS
Mode:	d2+d3
Measured 1	10/9/2019 12:16:54 PM

CCIF Ratio (10/9/2019 12:16:54.932 PM)

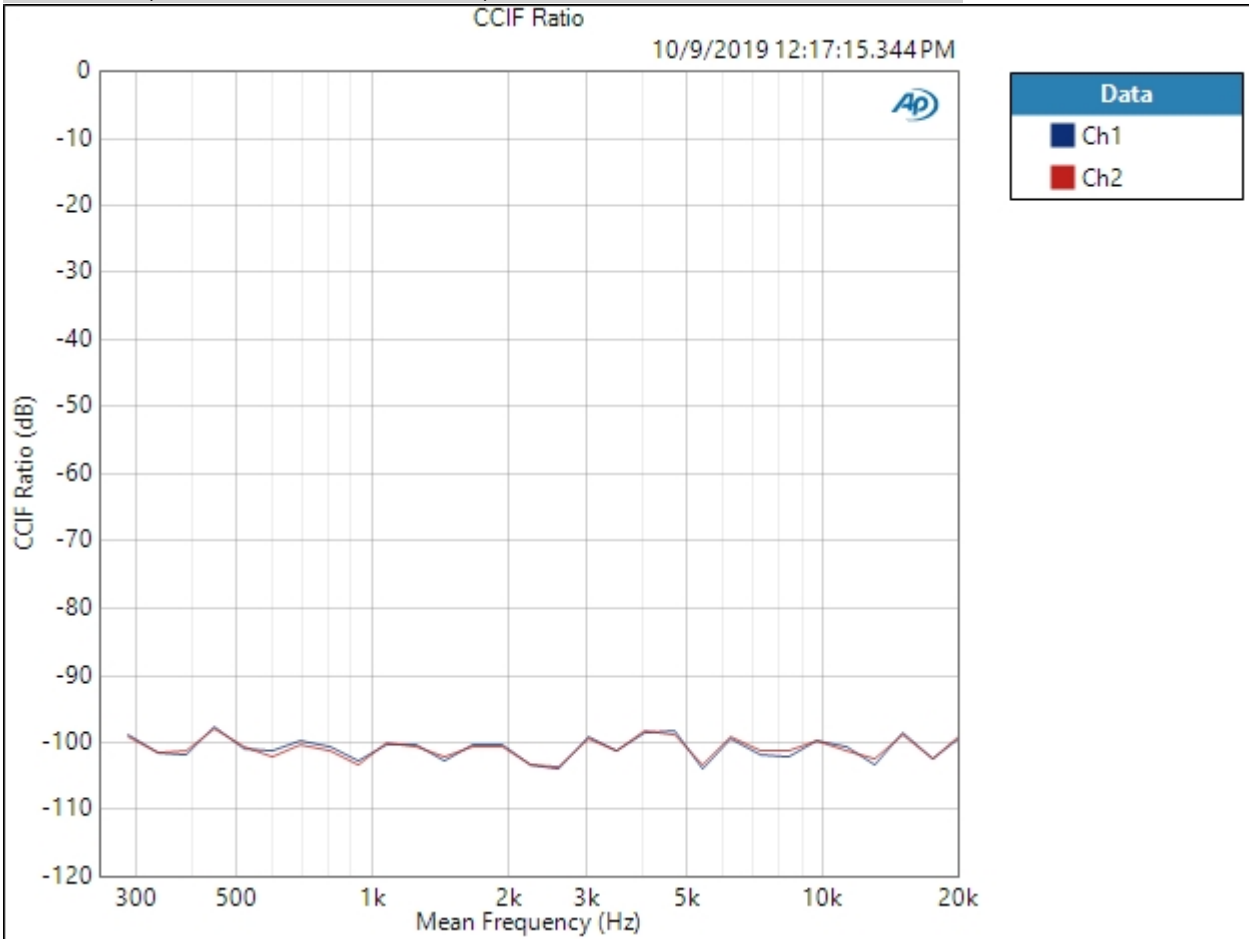


Result: PASSED

Line Out : IMD Frequency Sweep (CCIF)

Generator Level:	-5.500 dBFS
DC Offset:	0.000 D
Sweep Frequency:	Mean Frequency
Mean Frequency:	12.5000 kHz
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	10/9/2019 12:17:15 PM

CCIF Ratio (10/9/2019 12:17:15.344 PM)



Result: PASSED

Line Out : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Level:	-14.000 dBFS
DC Offset:	0.000 D
Frequency:	10.0000 kHz

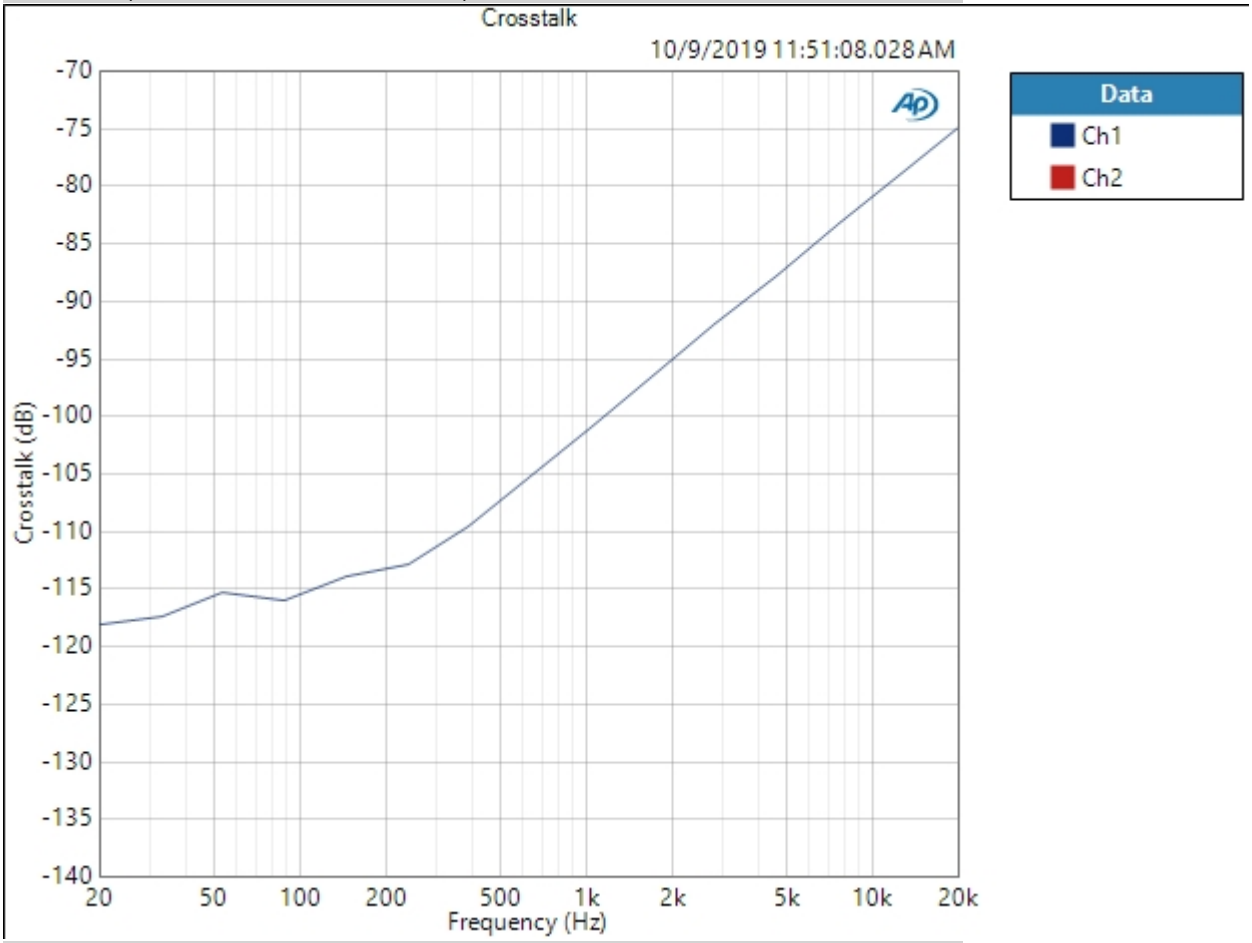
Crosstalk (10/9/2019 12:17:16.946 PM)

Ch1 79.188 dB
Ch2 80.751 dB

Line Out : Crosstalk Sweep, One Channel Driven

Generator Level:	-14.000 dBFS
DC Offset:	0.000 D
Start Frequency:	20.0000 kHz
Stop Frequency:	20.0000 Hz
Step Type:	Logarithmic
Number of Points:	15
Measured 1	10/9/2019 11:51:08 AM

Crosstalk (10/9/2019 11:51:08.028 AM)



Crosstalk Parameters

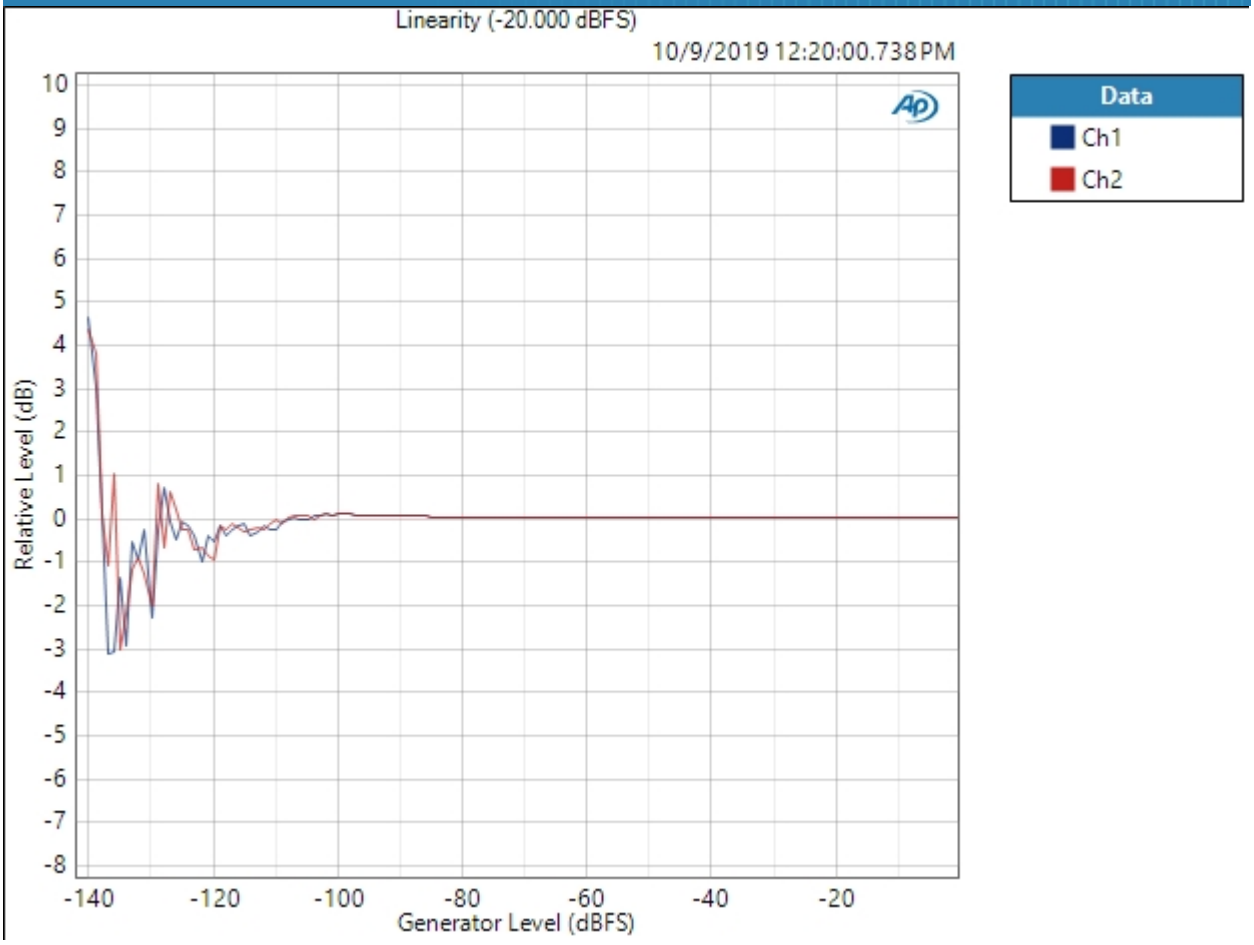
Source: Ch1

Result: PASSED

Line Out : Bandpass Level Sweep

Waveform:	Sine
Generator Level:	-20.000 dBFS
DC Offset:	0.000 D
Frequency:	1.00000 kHz
Start Level:	-140.000 dBFS
Stop Level:	-0.000 dBFS
Step Type:	Linear
Number of Points:	141
Step Size:	+1.000 dBFS
Offset:	0.000 D
Selectivity:	Window width
Bandpass Tuning Mode:	Generator Frequency
Measured 1	10/9/2019 12:20:00 PM

Linearity (-20.000 dBFS) (10/9/2019 12:20:00.738 PM)



Linearity (-20.000 dBFS) Parameters

Mode: Normalized at Reference

Relative Level: -20.000 dBFS

Result: PASSED