Schiit Amp APx555 Standard Test Suite: Lyr3

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

Preamp

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

Sequence Result:

Sequence Result: PASSED

APx Instrument

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

300 Ohm Low Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
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:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
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

300 Ohm Low Gain : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz

RMS Level (12/6/2019 12:47:20.173 PM)

Ch1 1.010 Vrms
Ch2 1.011 Vrms

300 Ohm Low 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

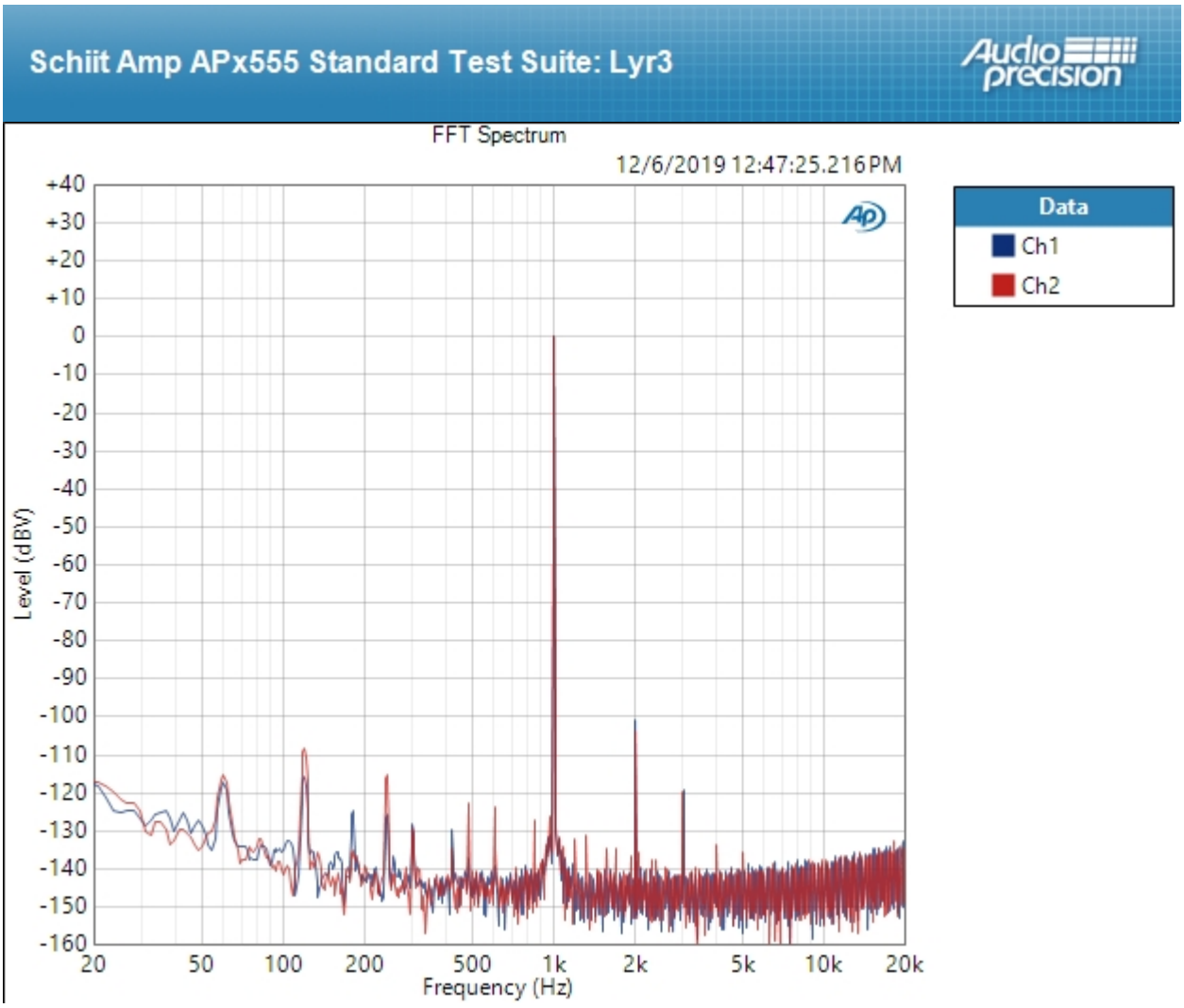
DC Level (12/6/2019 12:47:21.358 PM)

Ch1 -553.7 uV
Ch2 135.2 uV

300 Ohm Low Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	12/6/2019 12:47:25 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 (12/6/2019 12:47:25.216 PM)

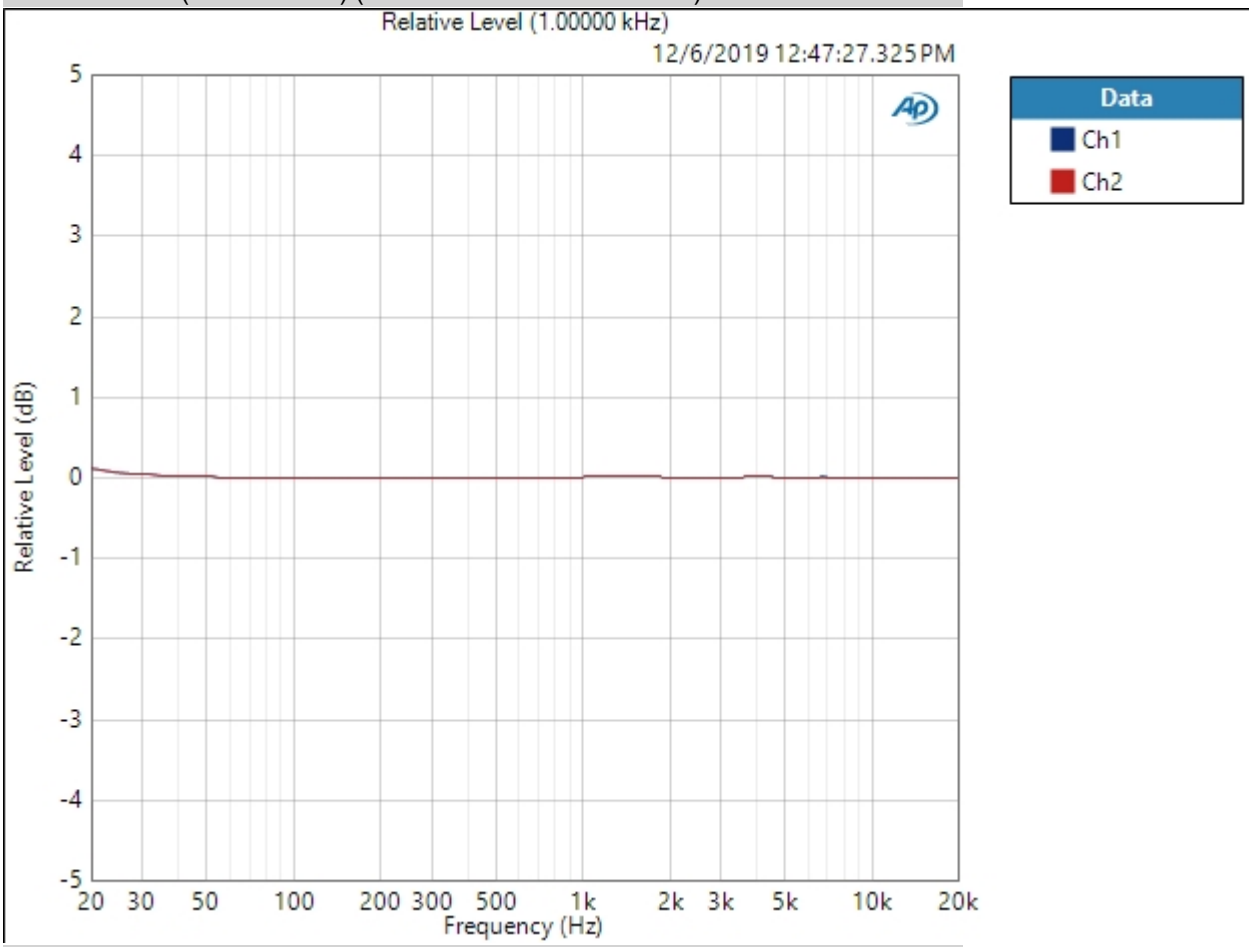


Result: PASSED

300 Ohm Low Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	660.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	50.00 ms
Secondary Source:	None
Measured 1	12/6/2019 12:47:27 PM

Relative Level (1.00000 kHz) (12/6/2019 12:47:27.325 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) (12/6/2019 12:47:27.325 PM)

Ch1 ±0.056 dB

Ch2 ±0.057 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

300 Ohm Low Gain : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (12/6/2019 12:47:29.347 PM)

Ch1 108.732 dB

Ch2 108.430 dB

300 Ohm Low Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
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 (12/6/2019 12:47:31.451 PM)

Ch1 0.001142 %

Ch2 0.001037 %

THD Ratio (12/6/2019 12:47:31.451 PM)

Ch1 0.000941 %

Ch2 0.000723 %

Noise Ratio (12/6/2019 12:47:31.451 PM)

Ch1 0.000647 %

Ch2 0.000739 %

Distortion Product Ratio (12/6/2019 12:47:31.451 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	8.001k	9.001k	10.00k
Ch1	-0.00	-100.63	-118.53	-137.51	-141.22	-137.19	-137.09	-131.95	-135.33	-135.61
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-102.95	-119.63	-133.50	-134.91	-144.64	-136.15	-135.60	-138.46	-136.34

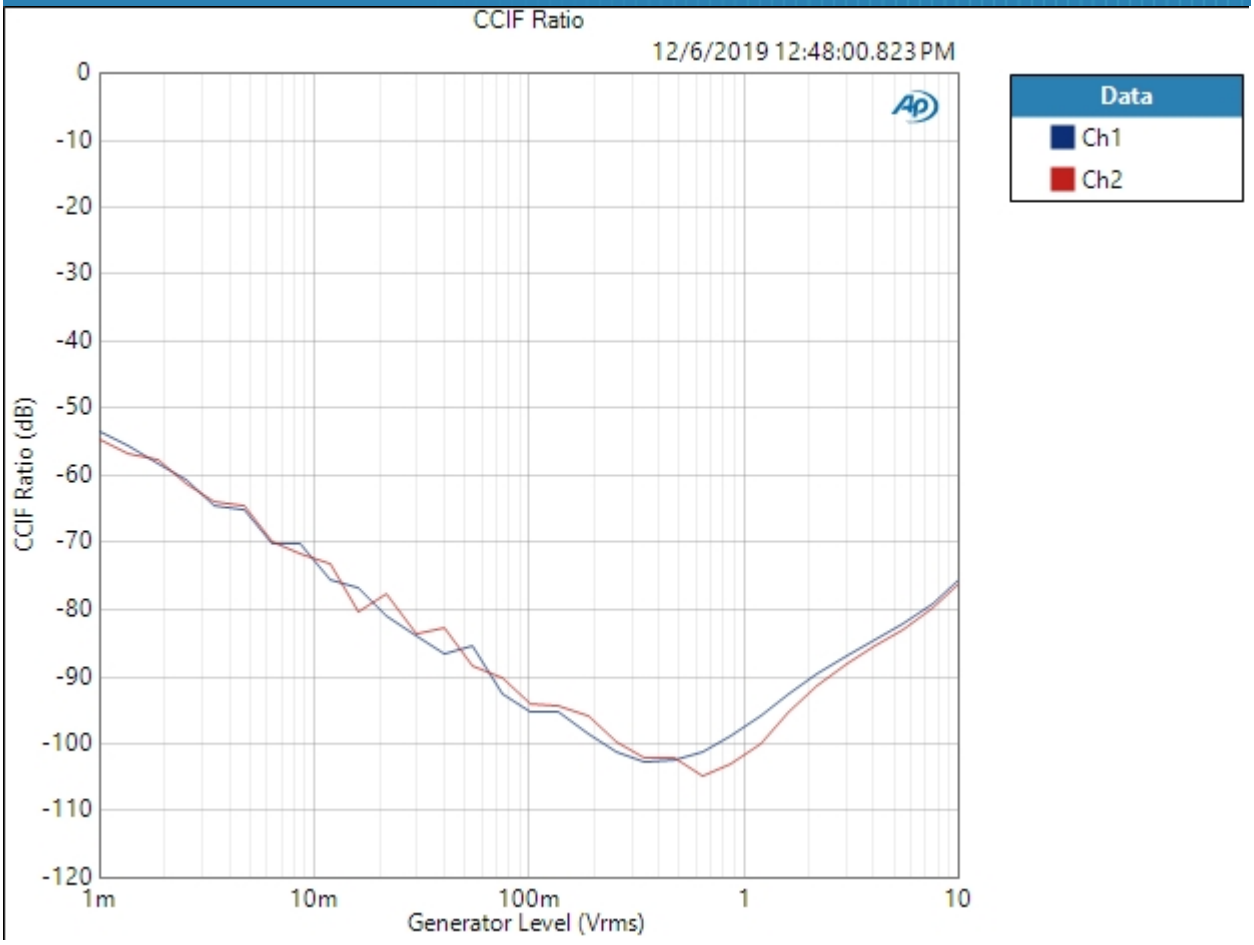
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm Low Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	10.00 Vrms
DC Offset:	0.000 V
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	10.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	12/6/2019 12:48:00 PM

CCIF Ratio (12/6/2019 12:48:00.823 PM)

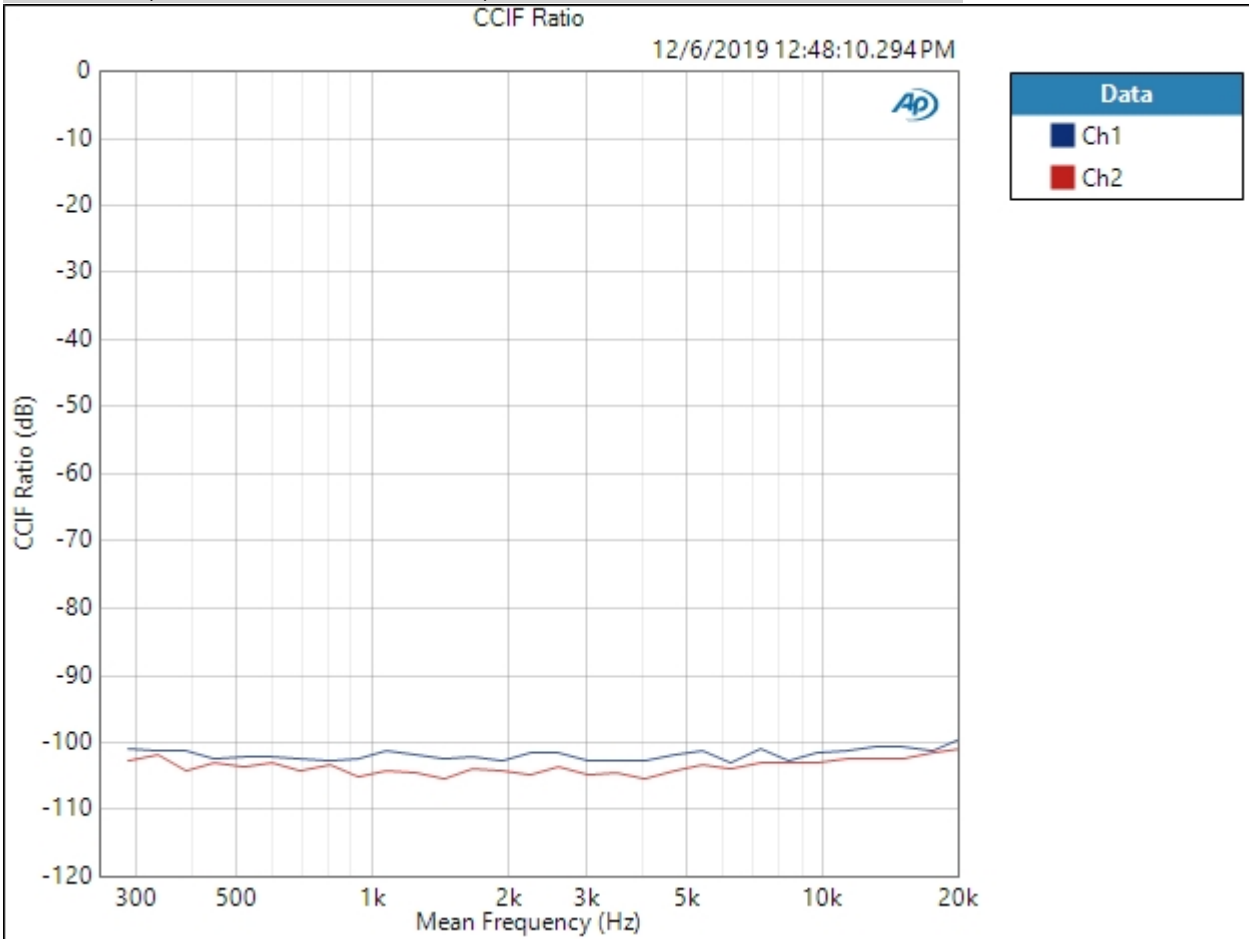


Result: PASSED

300 Ohm Low Gain : IMD Frequency Sweep (CCIF)

Generator Level:	660.0 mVrms
DC Offset:	0.000 V
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	12/6/2019 12:48:10 PM

CCIF Ratio (12/6/2019 12:48:10.294 PM)



Result: PASSED

300 Ohm Low Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (12/6/2019 12:48:11.536 PM)

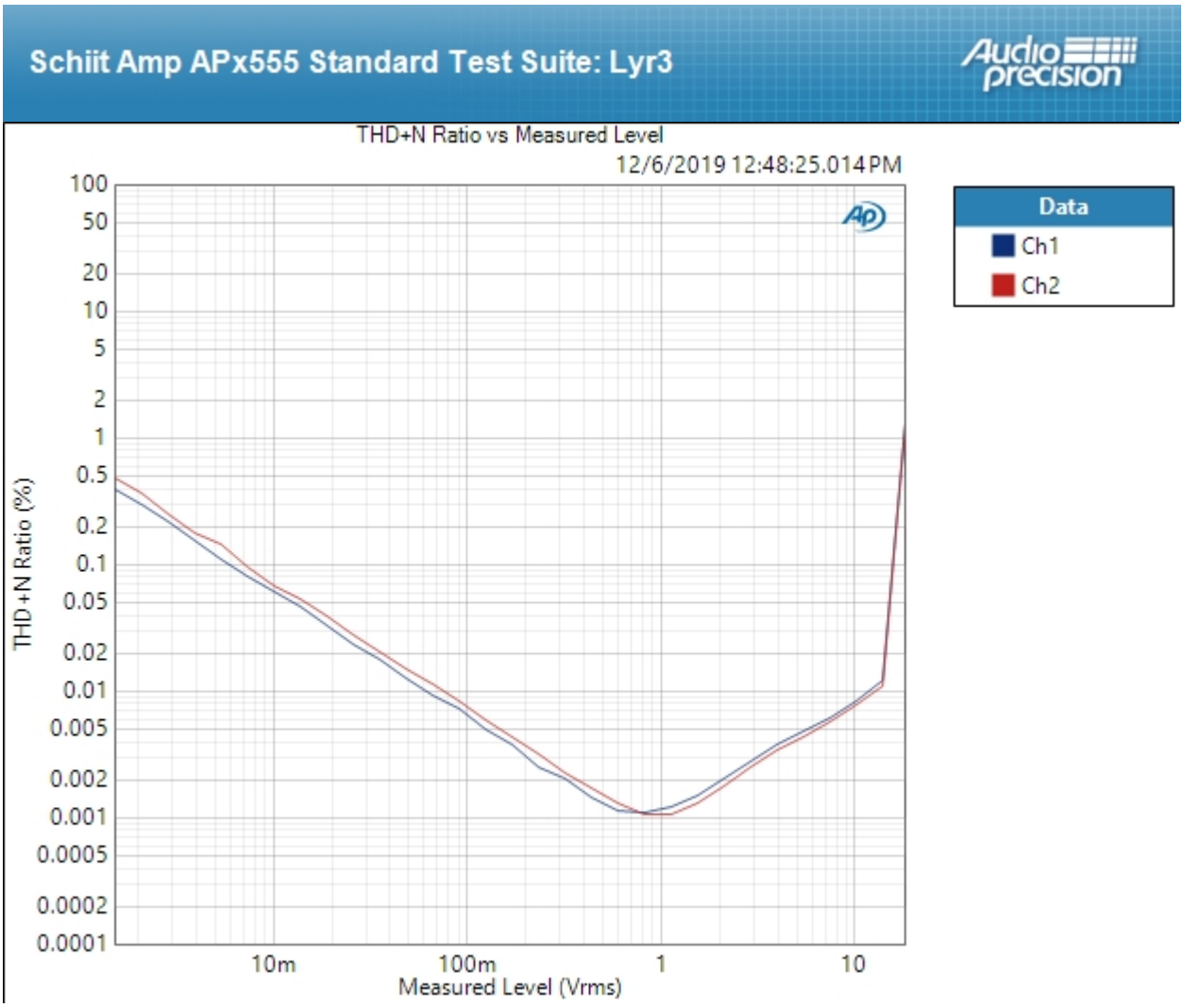
Ch1 80.105 dB

Ch2 80.846 dB

300 Ohm Low Gain : Stepped Level Sweep

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	100.0 mVrms
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	12/6/2019 12:48:25 PM

THD+N Ratio vs Measured Level (12/6/2019 12:48:25.014 PM)



Result: PASSED

300 Ohm High Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
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:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
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

300 Ohm High Gain : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz

RMS Level (12/6/2019 12:48:57.146 PM)

Ch1 1.018 Vrms
Ch2 1.019 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

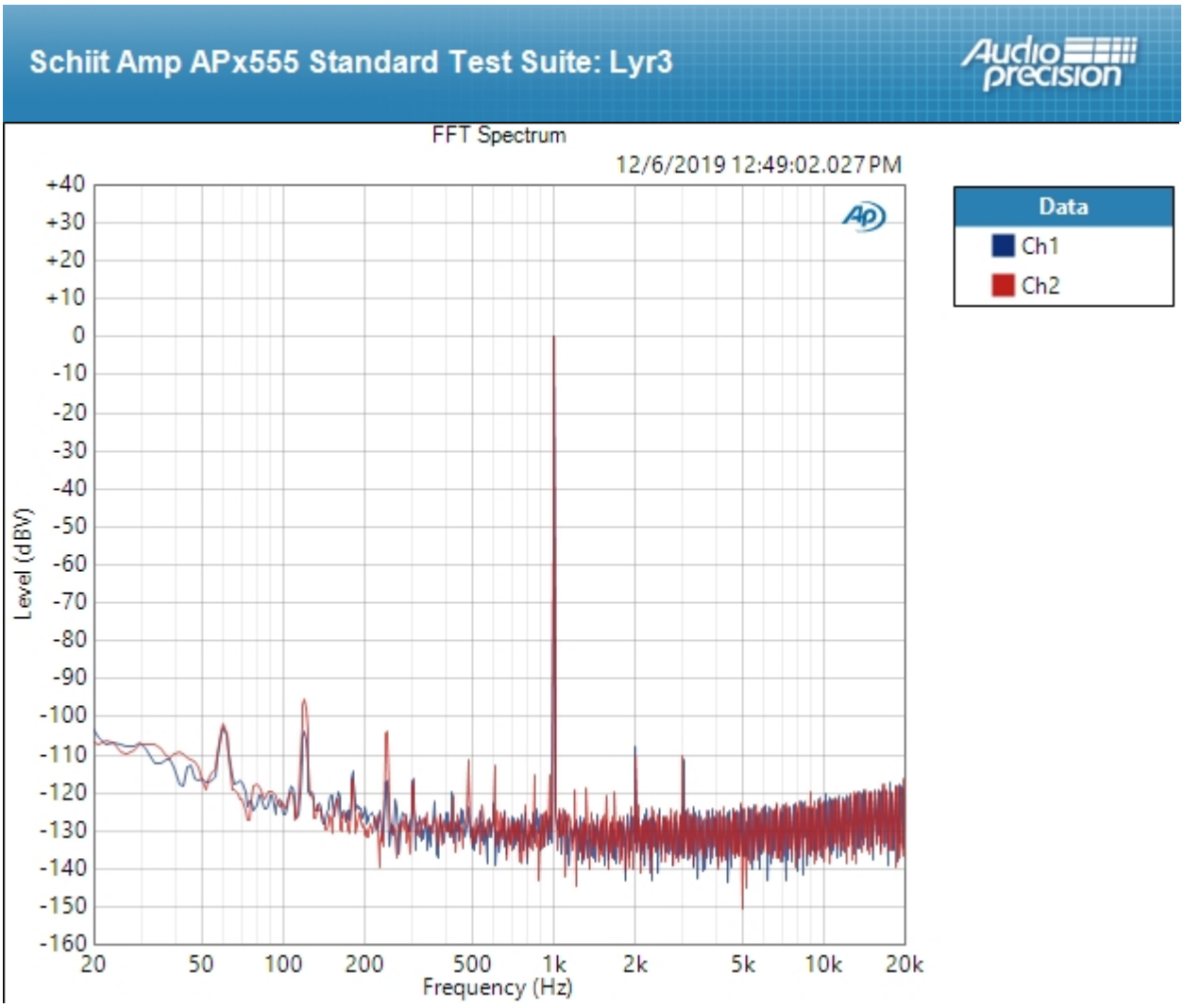
DC Level (12/6/2019 12:48:58.298 PM)

Ch1 0.922 mV
Ch2 1.021 mV

300 Ohm High Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	12/6/2019 12:49:02 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 (12/6/2019 12:49:02.027 PM)

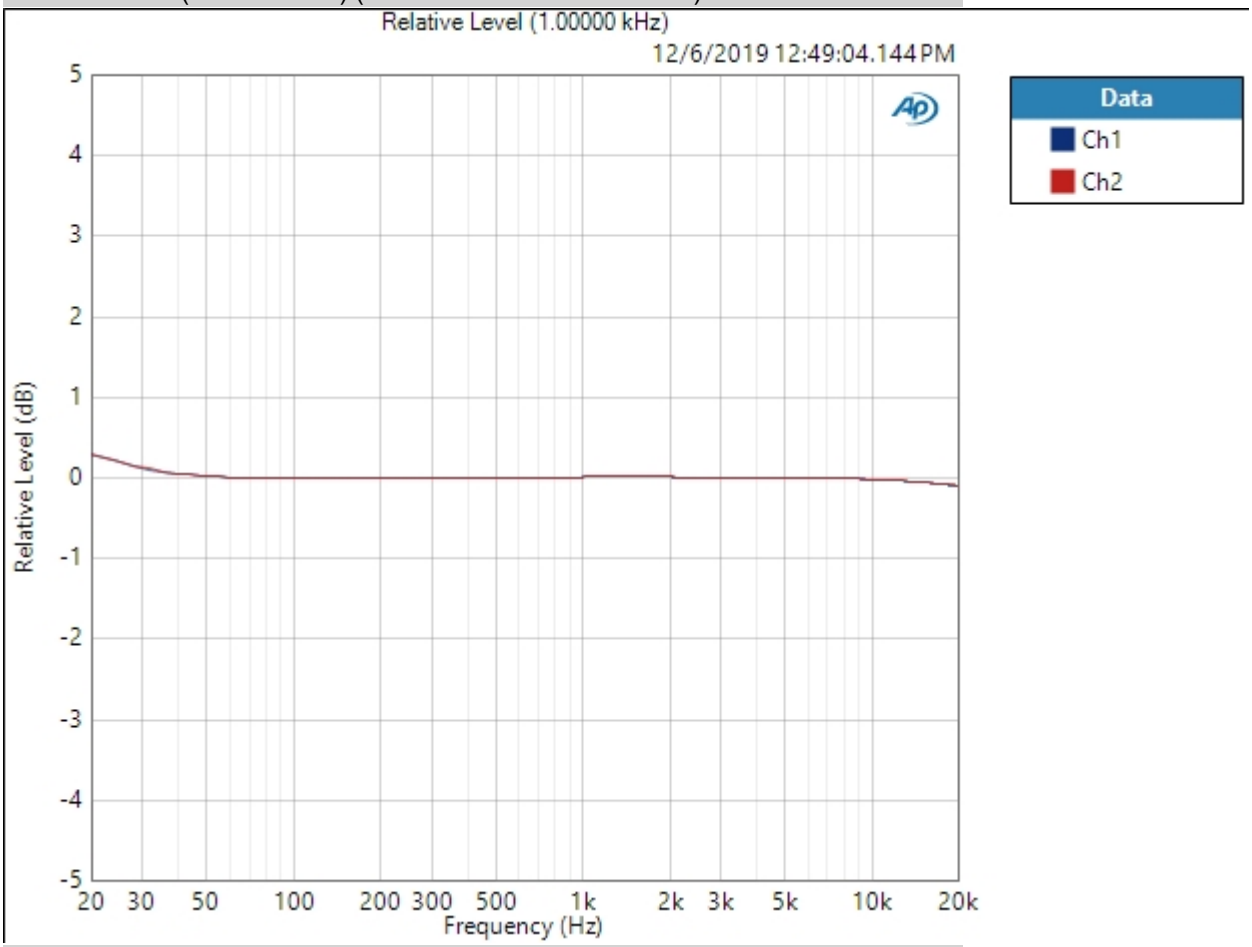


Result: PASSED

300 Ohm High Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	140.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	50.00 ms
Secondary Source:	None
Measured 1	12/6/2019 12:49:04 PM

Relative Level (1.00000 kHz) (12/6/2019 12:49:04.144 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) (12/6/2019 12:49:04.144 PM)

Ch1 ±0.201 dB

Ch2 ±0.198 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 Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (12/6/2019 12:49:06.174 PM)

Ch1 92.753 dB

Ch2 92.557 dB

300 Ohm High Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
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 (12/6/2019 12:49:08.563 PM)

Ch1	0.003836 %
Ch2	0.004253 %

THD Ratio (12/6/2019 12:49:08.563 PM)

Ch1	0.000757 %
Ch2	0.000658 %

Noise Ratio (12/6/2019 12:49:08.563 PM)

Ch1	0.003742 %
Ch2	0.004006 %

Distortion Product Ratio (12/6/2019 12:49:08.563 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	8.001k	9.001k	10.00k
Ch1	-0.00	-108.63	-109.63	-122.25	-121.84	-119.12	-119.85	-115.80	-119.85	-118.88
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-109.00	-110.30	-120.29	-127.38	-123.04	-119.48	-122.23	-124.84	-118.88

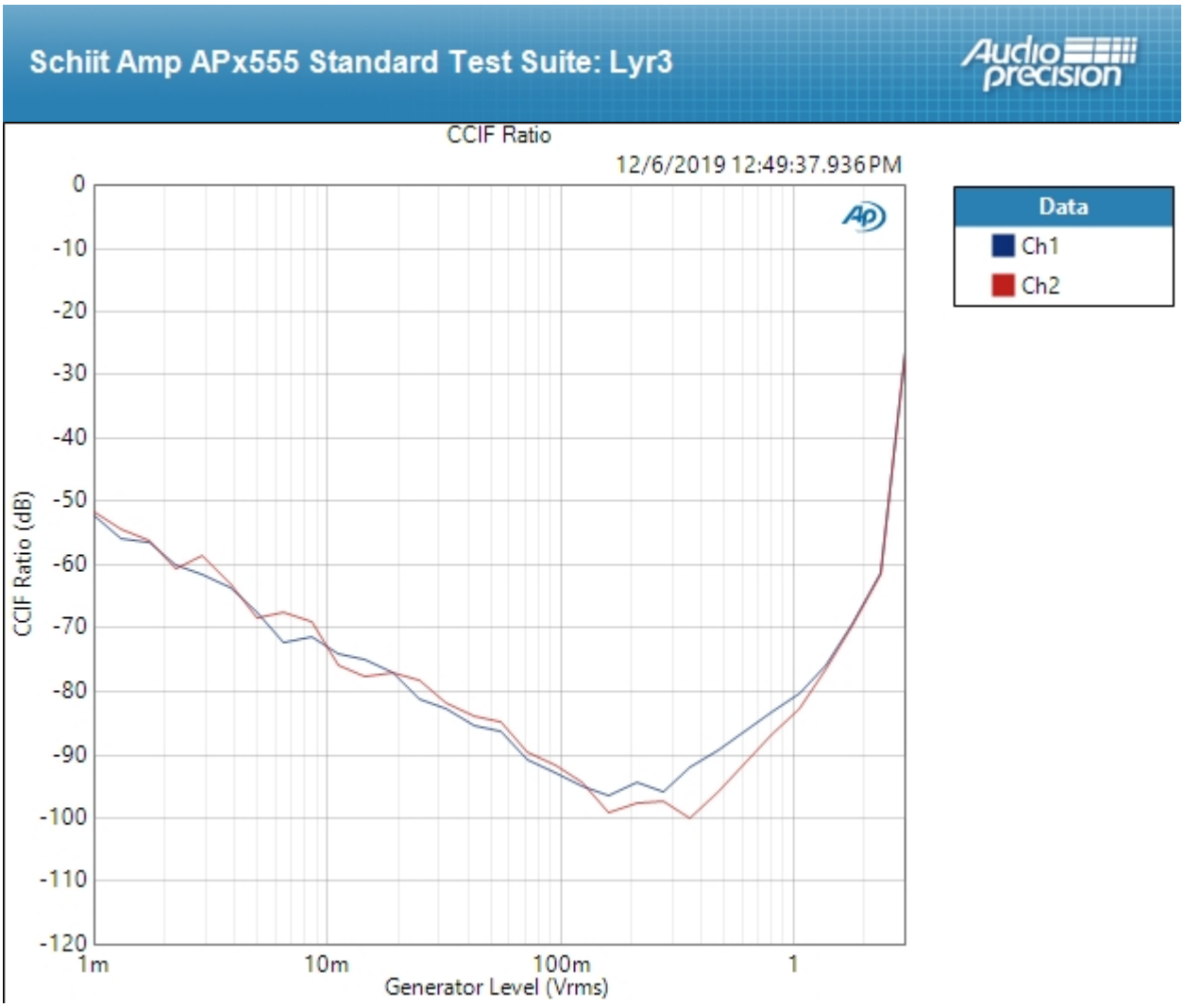
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm High Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	3.000 Vrms
DC Offset:	0.000 V
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	3.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	12/6/2019 12:49:37 PM

CCIF Ratio (12/6/2019 12:49:37.936 PM)

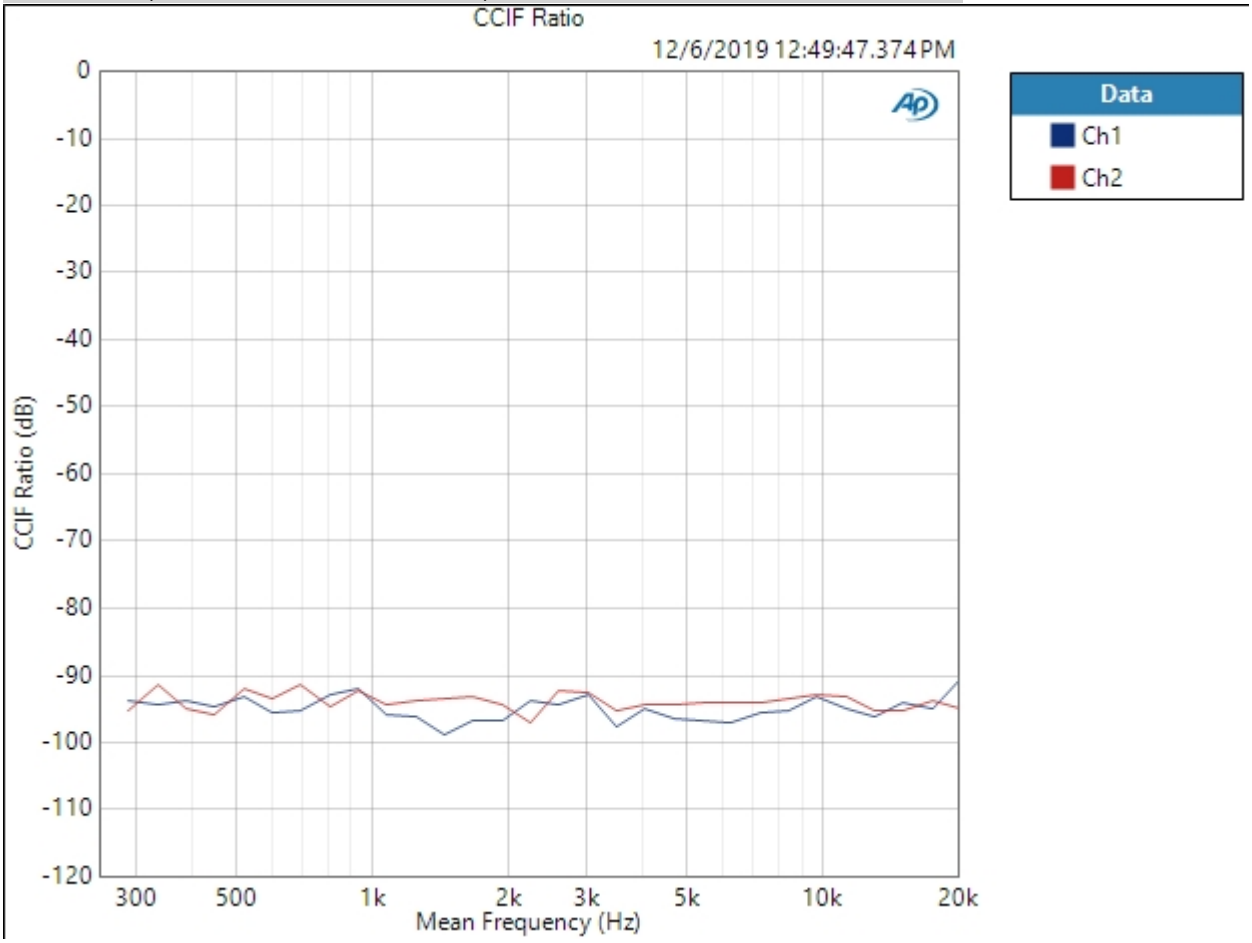


Result: PASSED

300 Ohm High Gain : IMD Frequency Sweep (CCIF)

Generator Level:	140.0 mVrms
DC Offset:	0.000 V
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	12/6/2019 12:49:47 PM

CCIF Ratio (12/6/2019 12:49:47.374 PM)



Result: PASSED

300 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (12/6/2019 12:49:48.821 PM)

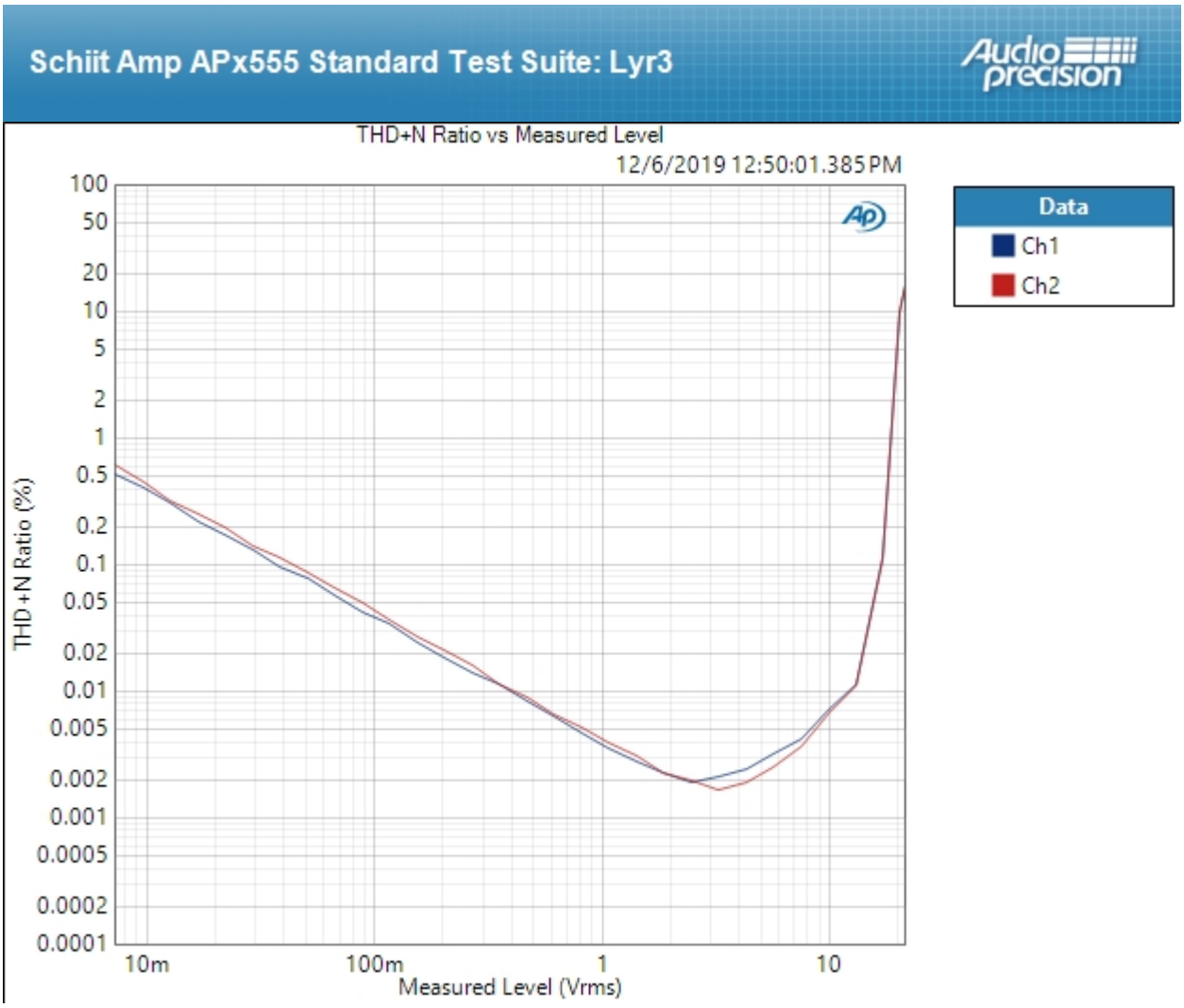
Ch1 62.856 dB

Ch2 76.265 dB

300 Ohm High Gain : Stepped Level Sweep

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	100.0 mVrms
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	4.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	12/6/2019 12:50:01 PM

THD+N Ratio vs Measured Level (12/6/2019 12:50:01.385 PM)



Result: PASSED

32 Ohm Low Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
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:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
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

32 Ohm Low Gain : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz

RMS Level (12/6/2019 12:50:31.345 PM)

Ch1 1.004 Vrms
Ch2 1.005 Vrms

32 Ohm Low 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

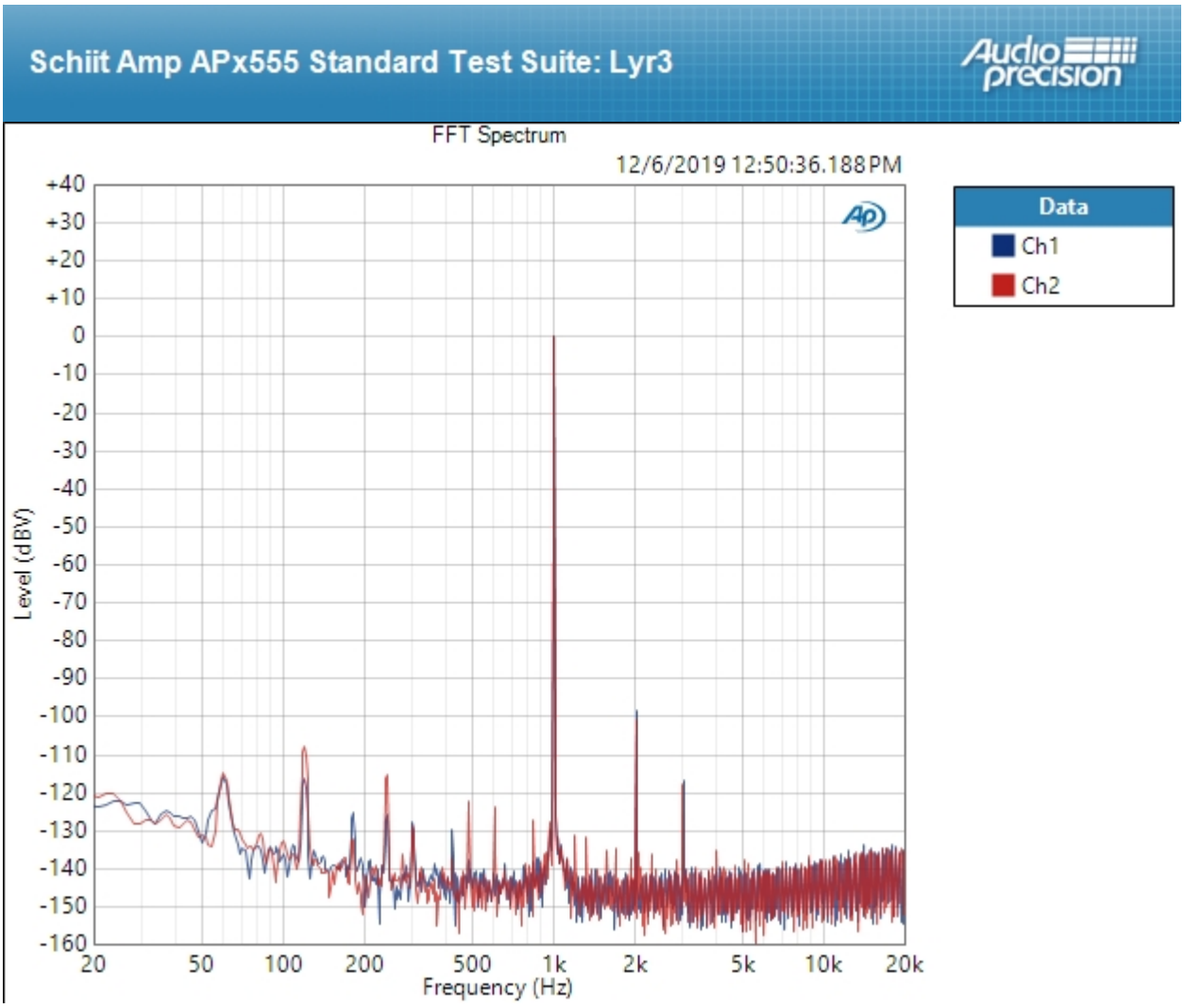
DC Level (12/6/2019 12:50:32.485 PM)

Ch1 1.472 mV
Ch2 -375.3 uV

32 Ohm Low Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	12/6/2019 12:50:36 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 (12/6/2019 12:50:36.188 PM)

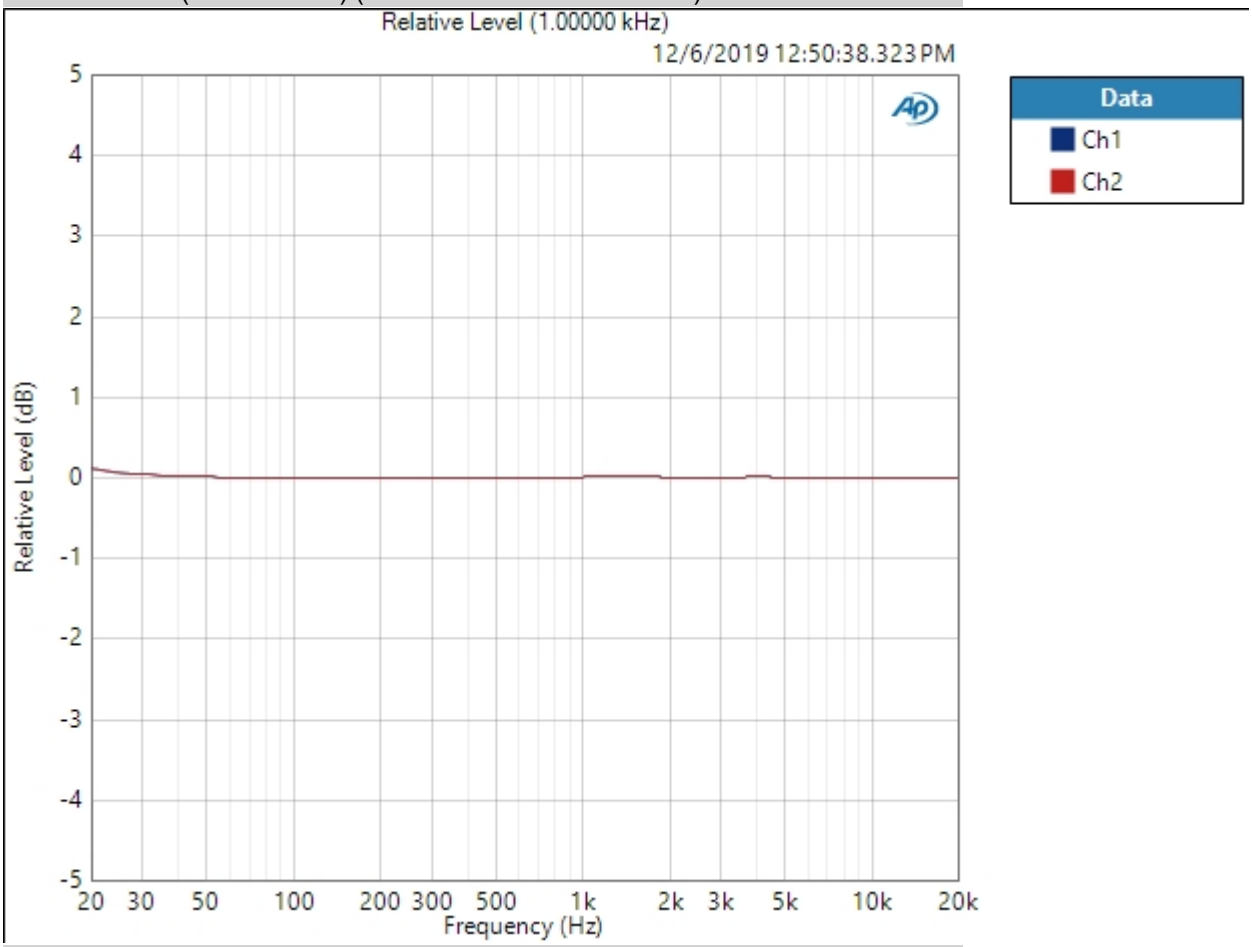


Result: PASSED

32 Ohm Low Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	660.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	50.00 ms
Secondary Source:	None
Measured 1	12/6/2019 12:50:38 PM

Relative Level (1.00000 kHz) (12/6/2019 12:50:38.323 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) (12/6/2019 12:50:38.323 PM)

Ch1 ±0.055 dB

Ch2 ±0.057 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm Low Gain : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (12/6/2019 12:50:40.348 PM)

Ch1 108.630 dB

Ch2 108.225 dB

32 Ohm Low Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
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 (12/6/2019 12:50:42.495 PM)

Ch1 0.001398 %

Ch2 0.001200 %

THD Ratio (12/6/2019 12:50:42.495 PM)

Ch1 0.001251 %

Ch2 0.000955 %

Noise Ratio (12/6/2019 12:50:42.495 PM)

Ch1 0.000613 %

Ch2 0.000722 %

Distortion Product Ratio (12/6/2019 12:50:42.495 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	8.001k	9.001k	10.00k
Ch1	-0.00	-98.14	-116.31	-136.69	-137.96	-137.74	-135.47	-139.19	-137.73	-131.66
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-100.51	-118.21	-133.49	-134.40	-135.13	-139.90	-138.65	-135.18	-133.45

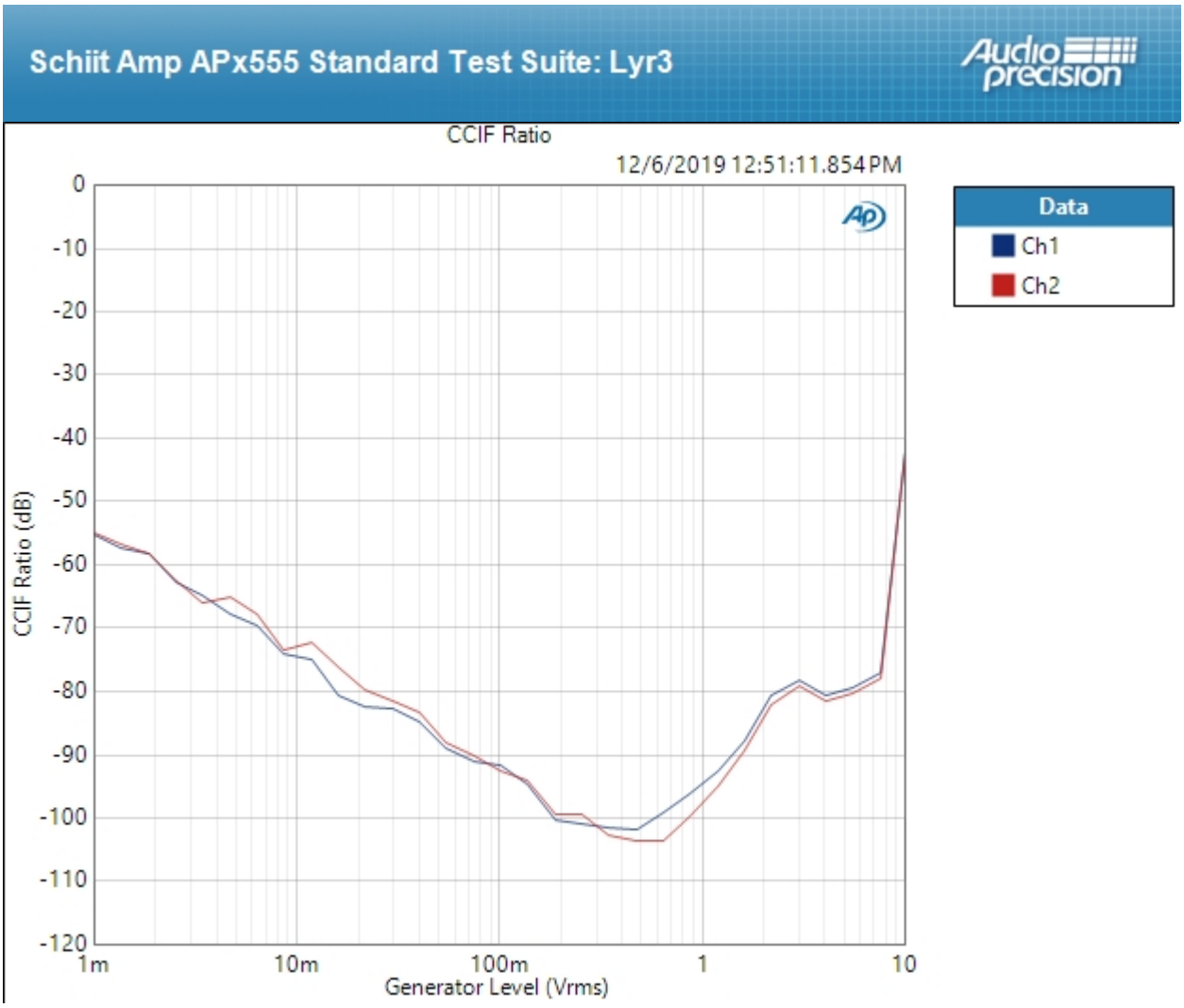
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm Low Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	10.00 Vrms
DC Offset:	0.000 V
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	10.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	12/6/2019 12:51:11 PM

CCIF Ratio (12/6/2019 12:51:11.854 PM)

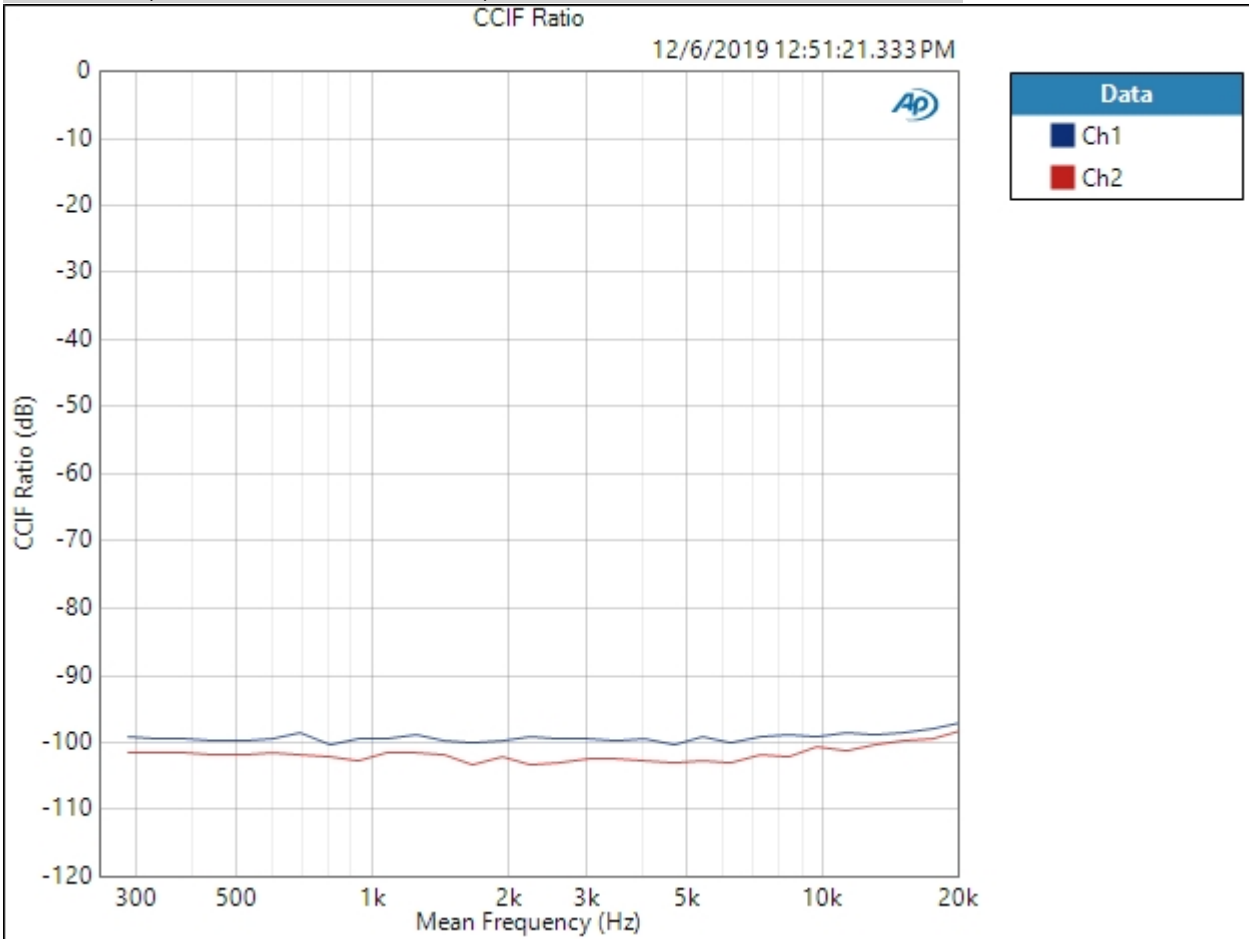


Result: PASSED

32 Ohm Low Gain : IMD Frequency Sweep (CCIF)

Generator Level:	660.0 mVrms
DC Offset:	0.000 V
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	12/6/2019 12:51:21 PM

CCIF Ratio (12/6/2019 12:51:21.333 PM)



Result: PASSED

32 Ohm Low Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	10.0000 kHz

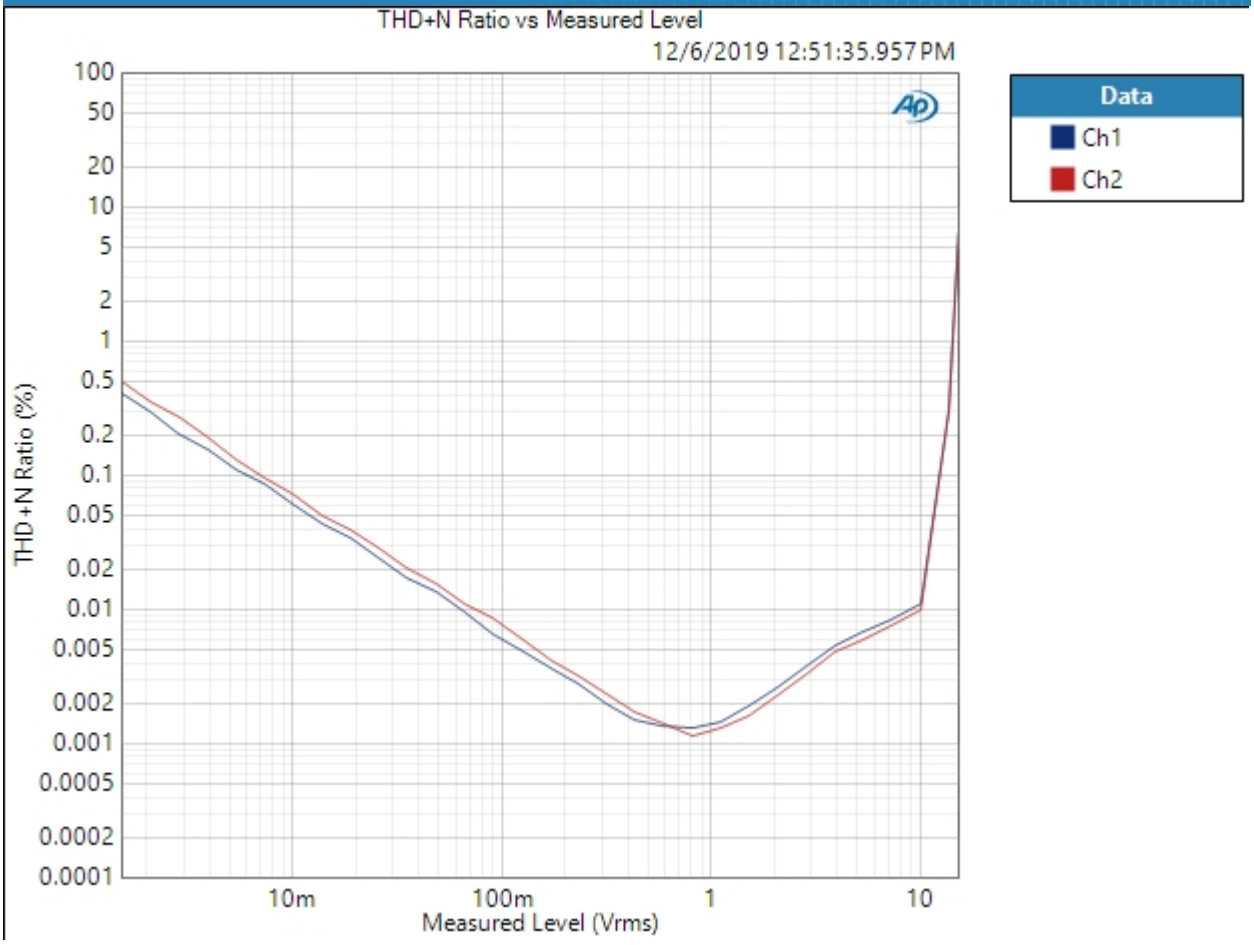
Crosstalk (12/6/2019 12:51:22.601 PM)

Ch1 72.939 dB
Ch2 72.943 dB

32 Ohm Low Gain : Stepped Level Sweep

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	100.0 mVrms
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	12/6/2019 12:51:35 PM

THD+N Ratio vs Measured Level (12/6/2019 12:51:35.957 PM)



Result: PASSED

32 Ohm High Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
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:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
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

32 Ohm High Gain : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz

RMS Level (12/6/2019 12:52:10.256 PM)

Ch1 1.010 Vrms
Ch2 1.011 Vrms

32 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

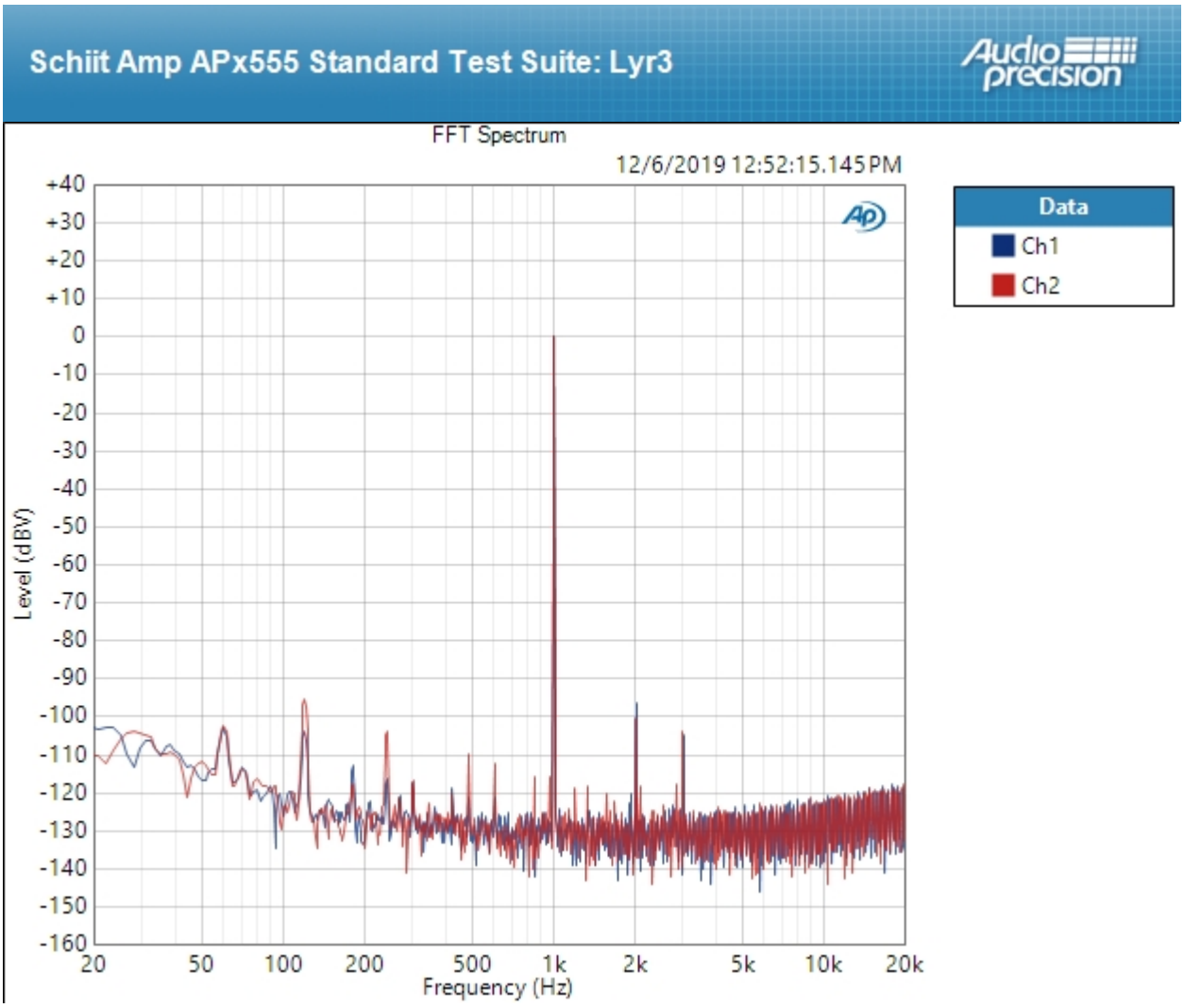
DC Level (12/6/2019 12:52:11.412 PM)

Ch1 1.113 mV
Ch2 -38.49 uV

32 Ohm High Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	12/6/2019 12:52:15 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 (12/6/2019 12:52:15.145 PM)

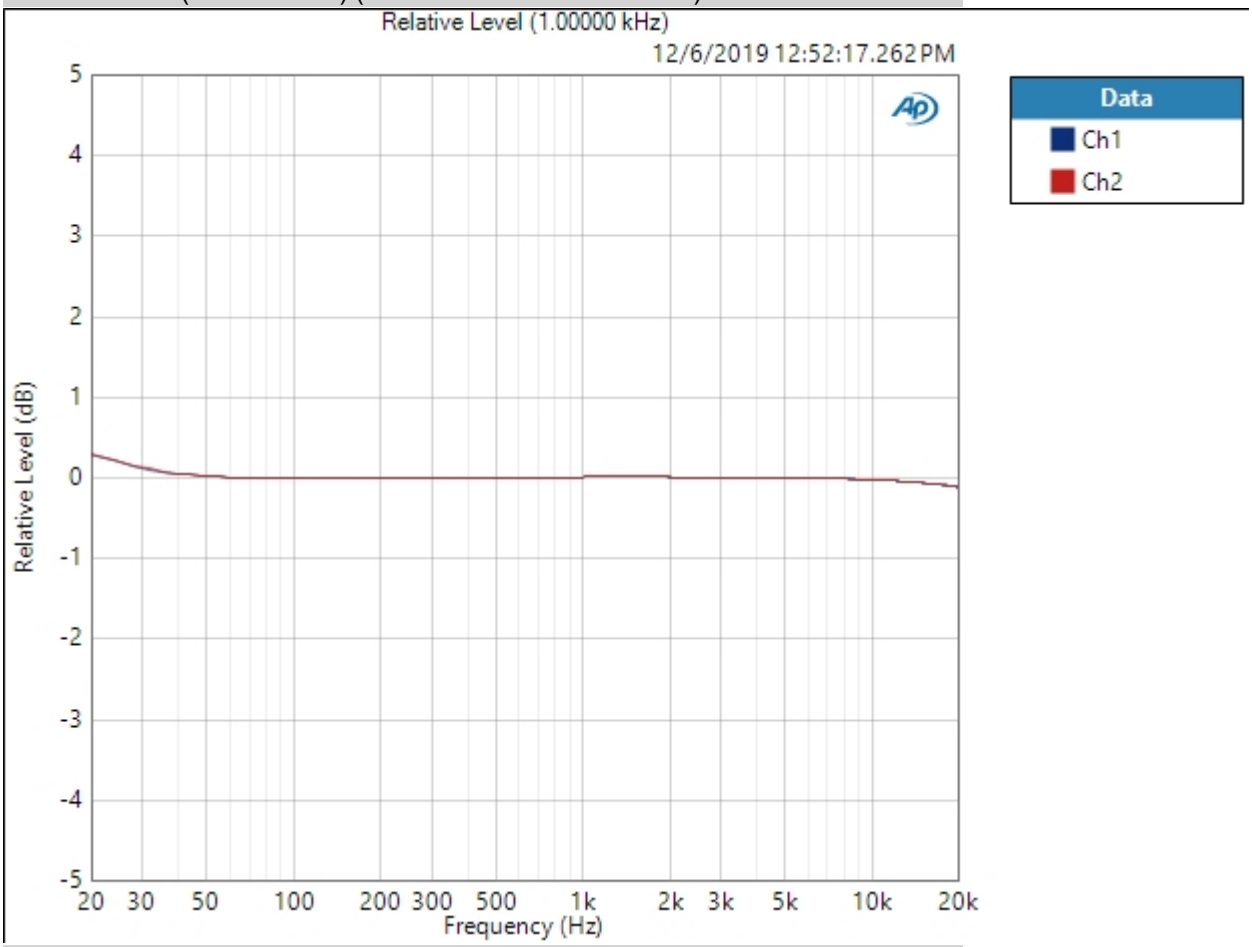


Result: PASSED

32 Ohm High Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	140.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	50.00 ms
Secondary Source:	None
Measured 1	12/6/2019 12:52:17 PM

Relative Level (1.00000 kHz) (12/6/2019 12:52:17.262 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) (12/6/2019 12:52:17.262 PM)

Ch1 ±0.212 dB

Ch2 ±0.206 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm High Gain : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (12/6/2019 12:52:19.256 PM)

Ch1 92.764 dB

Ch2 92.645 dB

32 Ohm High Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
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 (12/6/2019 12:52:21.389 PM)

Ch1	0.004059 %
Ch2	0.004256 %

THD Ratio (12/6/2019 12:52:21.389 PM)

Ch1	0.001757 %
Ch2	0.001270 %

Noise Ratio (12/6/2019 12:52:21.389 PM)

Ch1	0.003639 %
Ch2	0.004050 %

Distortion Product Ratio (12/6/2019 12:52:21.389 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	8.001k	9.001k	10.00k
Ch1	-0.00	-96.23	-104.46	-121.98	-116.99	-122.82	-117.90	-118.45	-119.83	-118.77
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-99.96	-106.05	-118.45	-118.76	-124.34	-116.97	-120.17	-115.15	-117.19

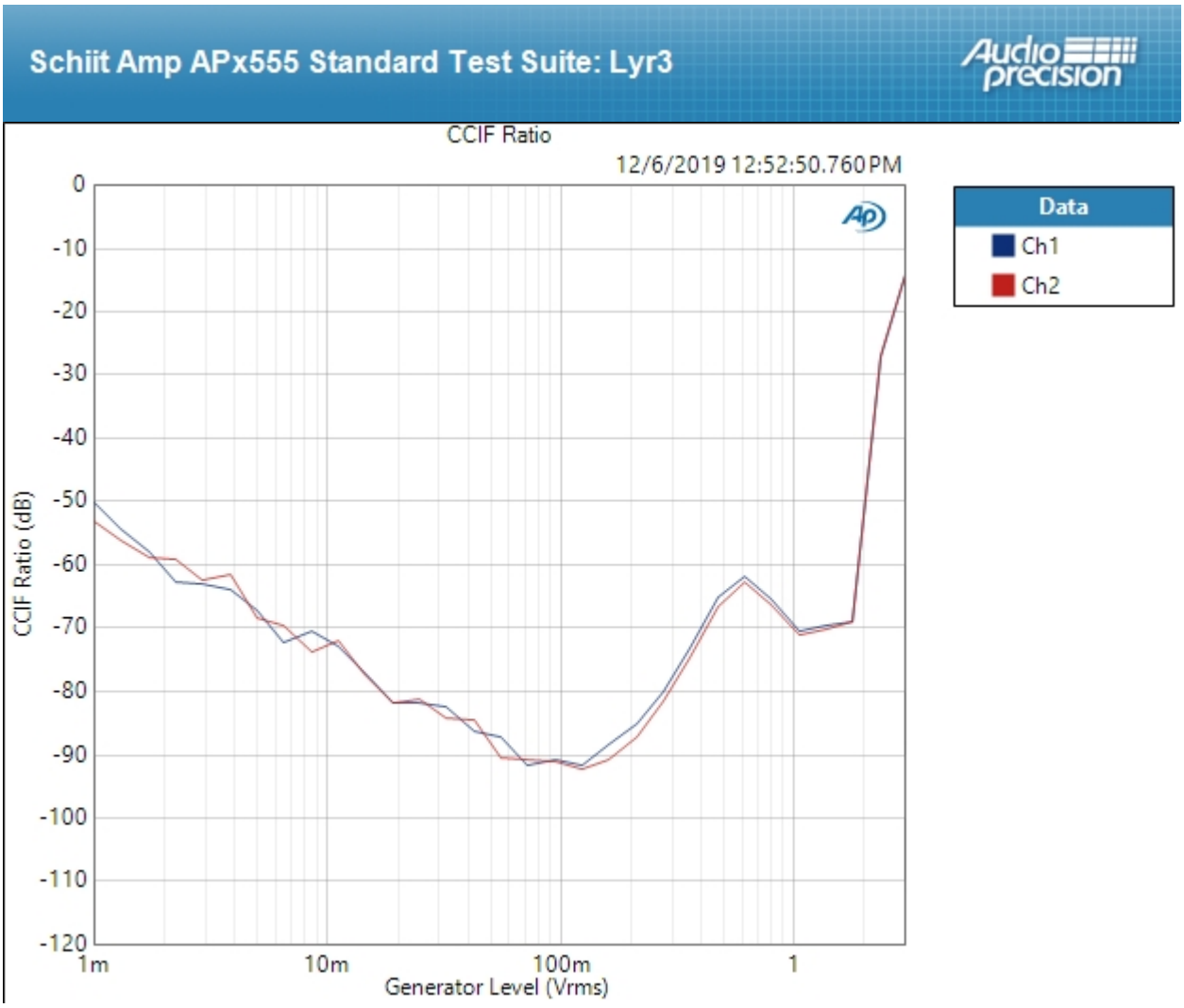
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm High Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	3.000 Vrms
DC Offset:	0.000 V
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	3.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	12/6/2019 12:52:50 PM

CCIF Ratio (12/6/2019 12:52:50.760 PM)

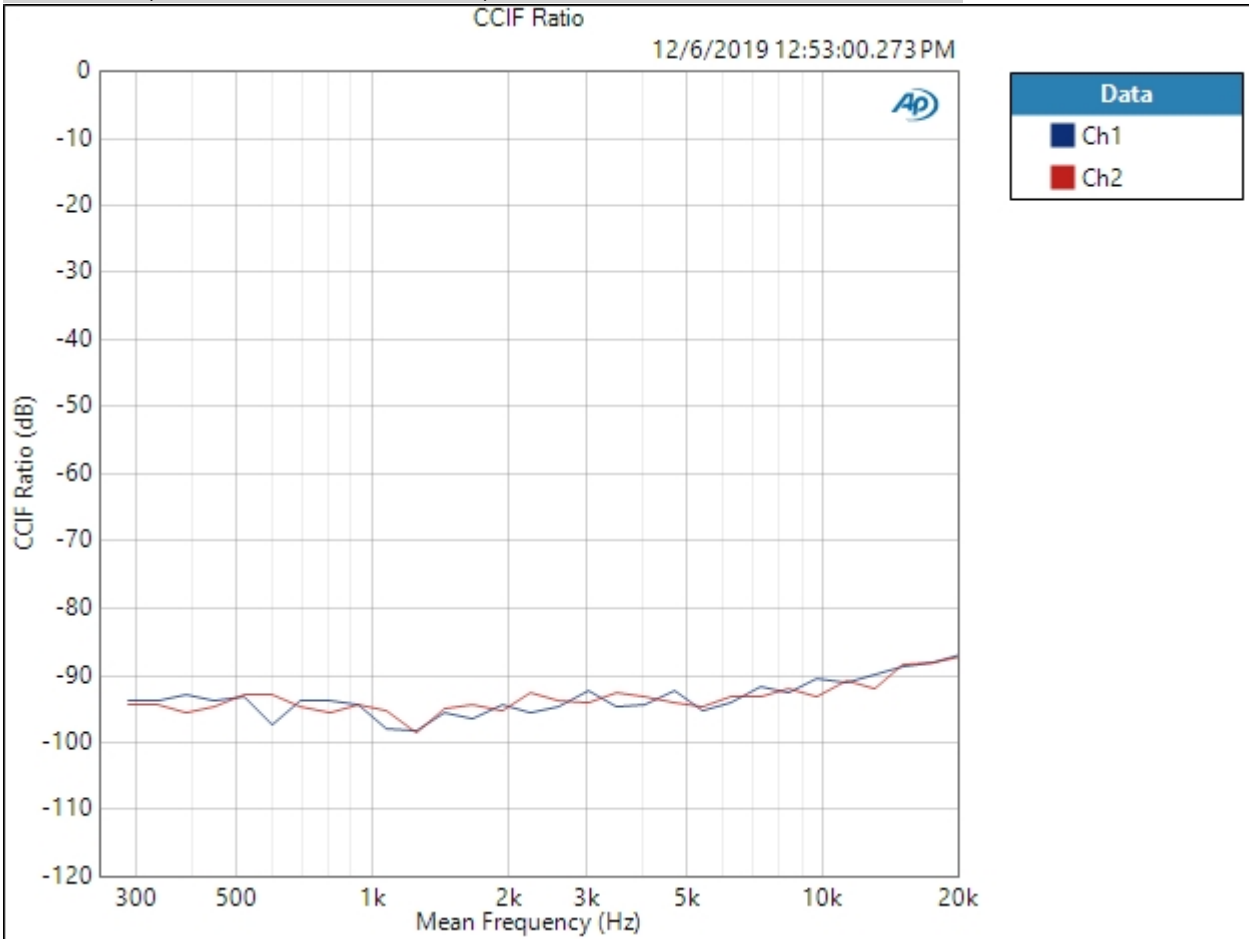


Result: PASSED

32 Ohm High Gain : IMD Frequency Sweep (CCIF)

Generator Level:	140.0 mVrms
DC Offset:	0.000 V
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	12/6/2019 12:53:00 PM

CCIF Ratio (12/6/2019 12:53:00.273 PM)



Result: PASSED

32 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	140.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (12/6/2019 12:53:01.519 PM)

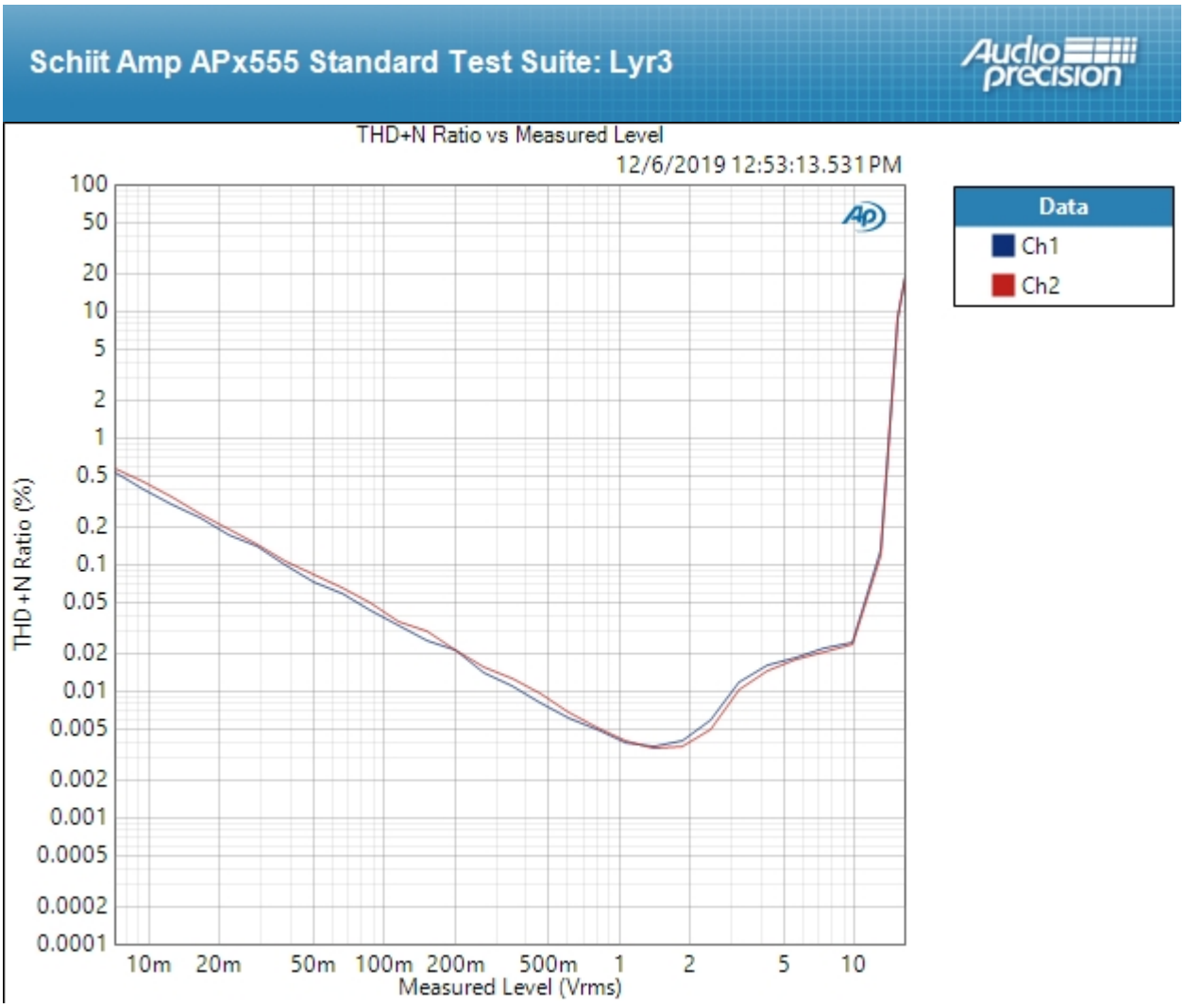
Ch1 74.216 dB

Ch2 72.034 dB

32 Ohm High Gain : Stepped Level Sweep

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	100.0 mVrms
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	4.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	12/6/2019 12:53:13 PM

THD+N Ratio vs Measured Level (12/6/2019 12:53:13.531 PM)



Result: PASSED

Preamp : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
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:	100.0 mVrms
dBm (Output Power):	600.0 ohm
W(watts) (Output Power):	8.000 ohm
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

Preamp : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz

RMS Level (12/6/2019 12:54:37.930 PM)

Ch1 1.011 Vrms
Ch2 1.010 Vrms

Preamp : 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

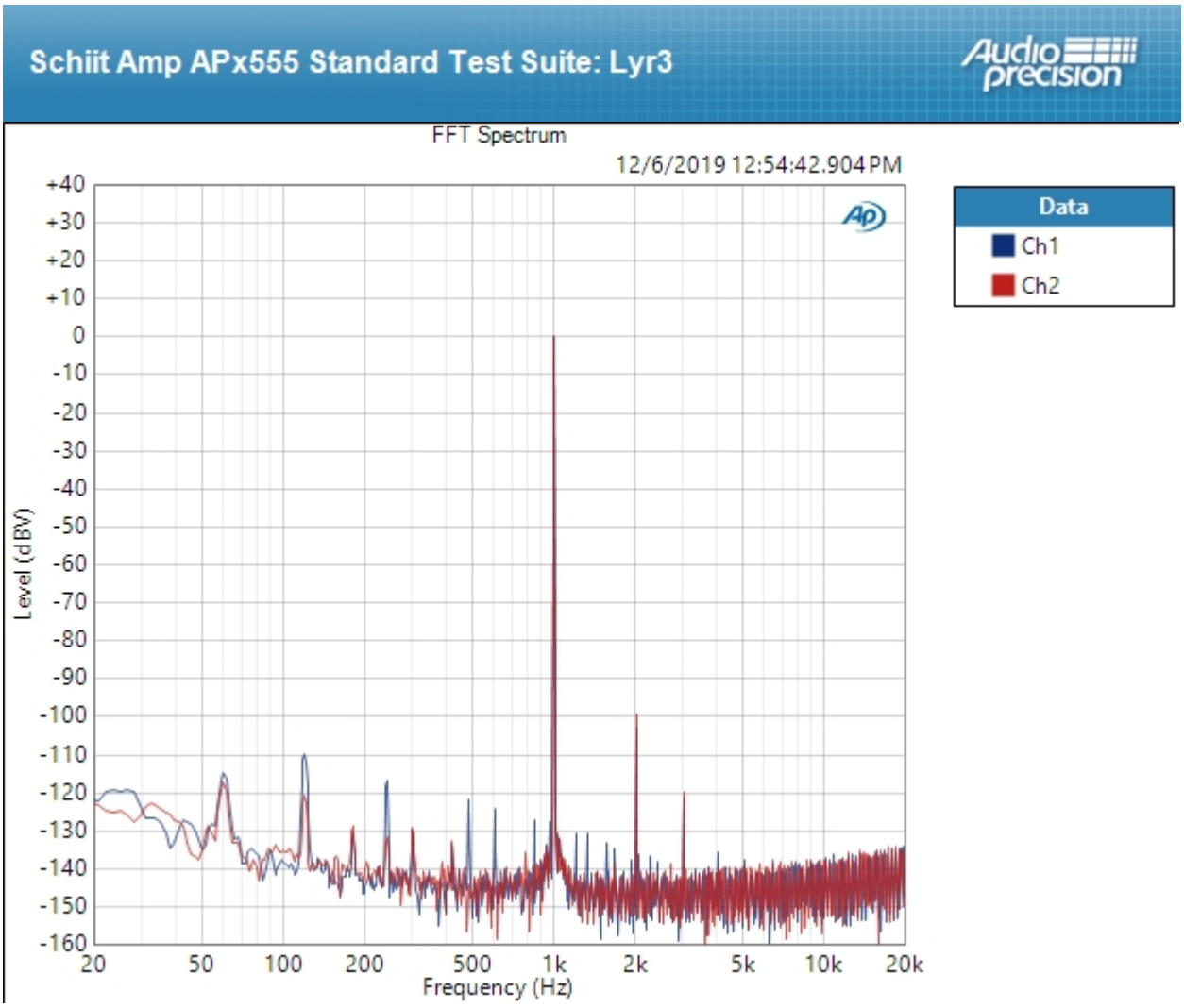
DC Level (12/6/2019 12:54:39.098 PM)

Ch1 -43.18 uV
Ch2 461.5 uV

Preamp : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	12/6/2019 12:54:42 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 (12/6/2019 12:54:42.904 PM)

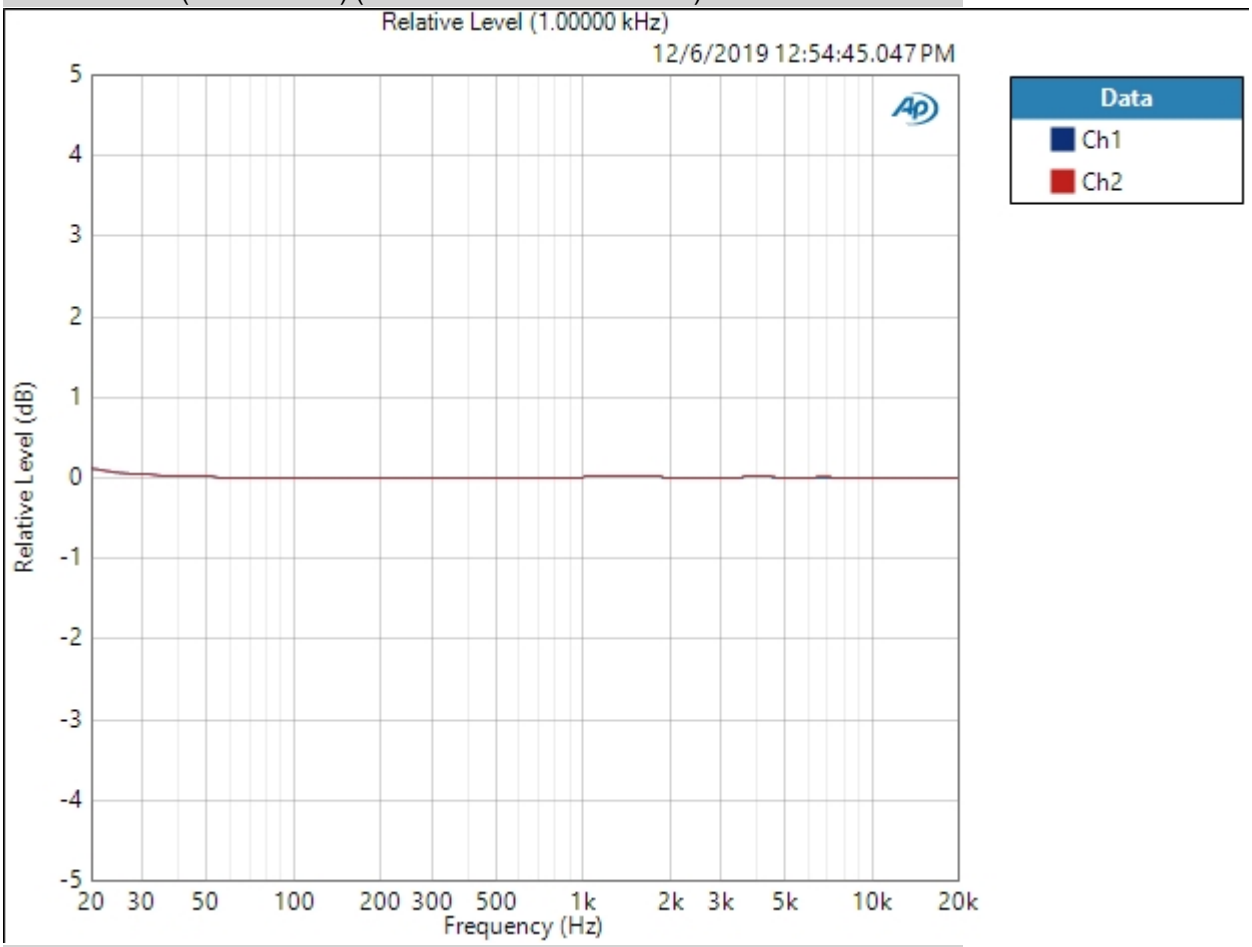


Result: PASSED

Preamp : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	660.0 mVrms
DC Offset:	0.000 V
EQ:	None
Pre-Sweep:	100.0 ms
Sweep:	350.0 ms
Extend Acquisition By:	50.00 ms
Secondary Source:	None
Measured 1	12/6/2019 12:54:45 PM

Relative Level (1.00000 kHz) (12/6/2019 12:54:45.047 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) (12/6/2019 12:54:45.047 PM)

Ch1 ±0.057 dB

Ch2 ±0.055 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Preamp : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (12/6/2019 12:54:47.092 PM)

Ch1 108.342 dB

Ch2 108.526 dB

Preamp : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
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 (12/6/2019 12:54:49.248 PM)

Ch1	0.001030 %
Ch2	0.001236 %

THD Ratio (12/6/2019 12:54:49.248 PM)

Ch1	0.000783 %
Ch2	0.001083 %

Noise Ratio (12/6/2019 12:54:49.248 PM)

Ch1	0.000678 %
Ch2	0.000600 %

Distortion Product Ratio (12/6/2019 12:54:49.248 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	8.001k	9.001k	10.00k
Ch1	-0.00	-102.25	-120.79	-133.98	-135.89	-134.92	-134.67	-135.70	-132.55	-132.82
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-99.38	-120.03	-131.48	-138.77	-138.83	-133.62	-131.86	-135.38	-133.95

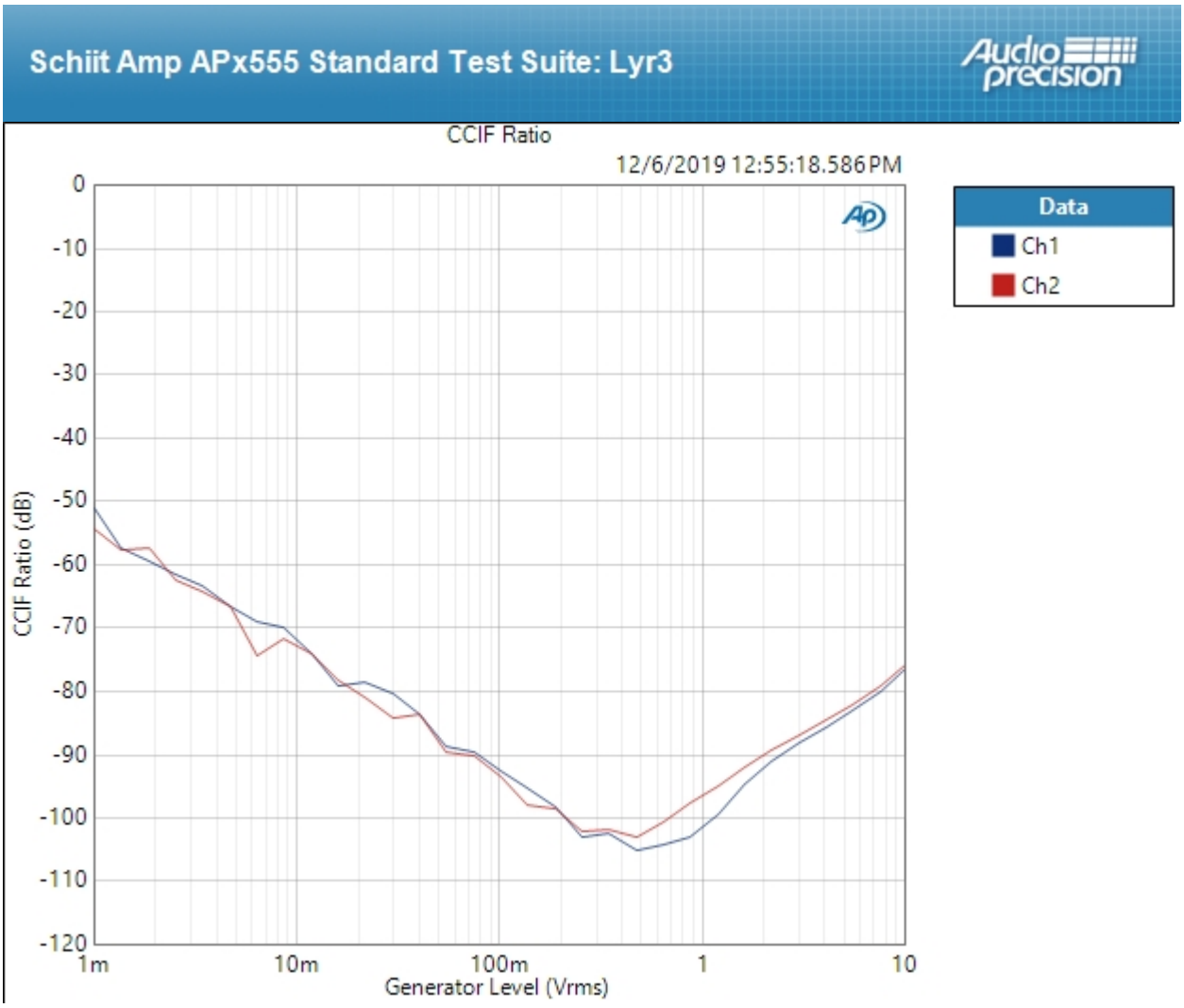
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Preamp : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	10.00 Vrms
DC Offset:	0.000 V
Mean Frequency:	12.5000 kHz
Diff Frequency:	80.0000 Hz
IMD Split:	False
Start Level:	1.000 mVrms
Stop Level:	10.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	12/6/2019 12:55:18 PM

CCIF Ratio (12/6/2019 12:55:18.586 PM)

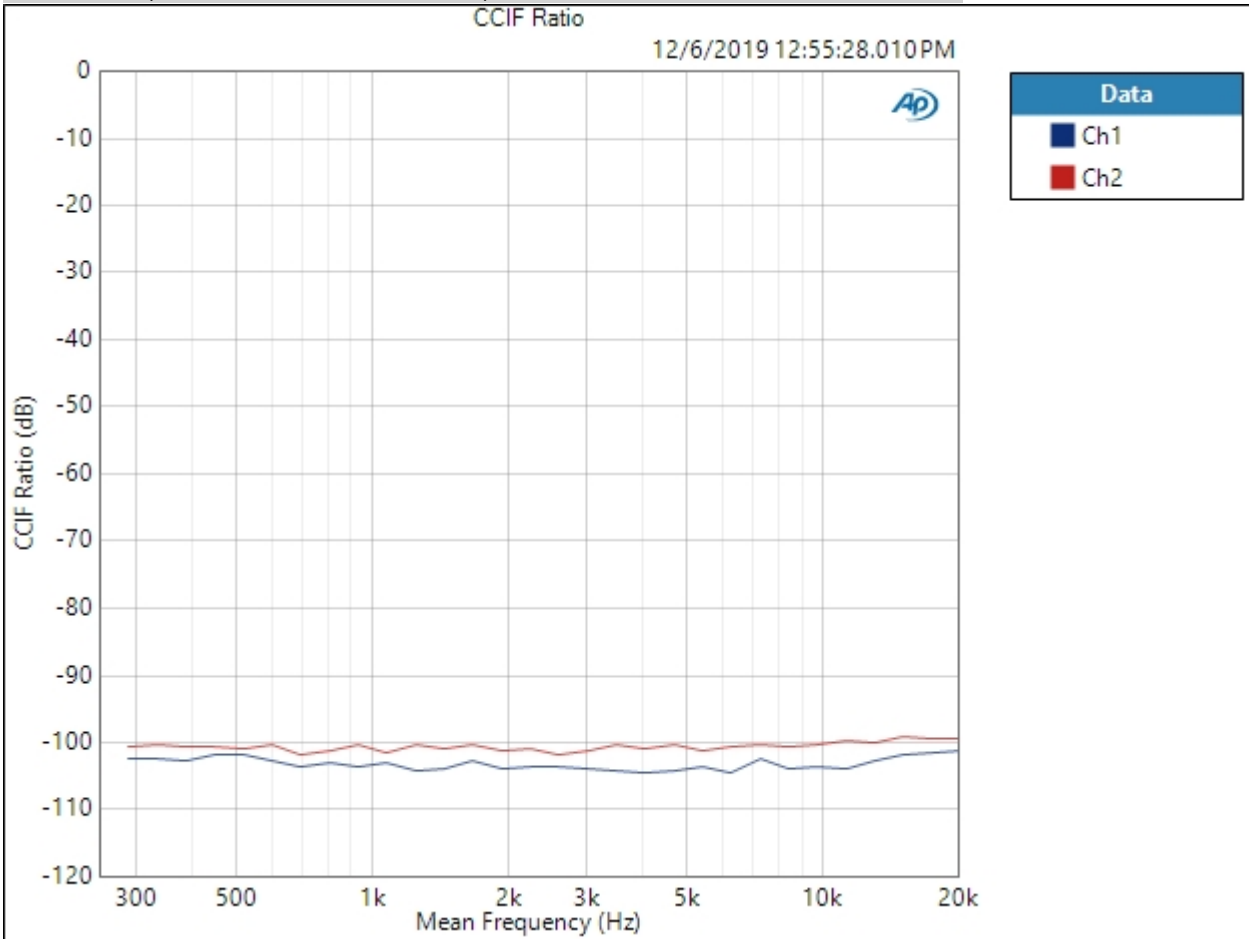


Result: PASSED

Preamp : IMD Frequency Sweep (CCIF)

Generator Level:	660.0 mVrms
DC Offset:	0.000 V
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	12/6/2019 12:55:28 PM

CCIF Ratio (12/6/2019 12:55:28.010 PM)



Result: PASSED

Preamp : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	660.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (12/6/2019 12:55:29.759 PM)

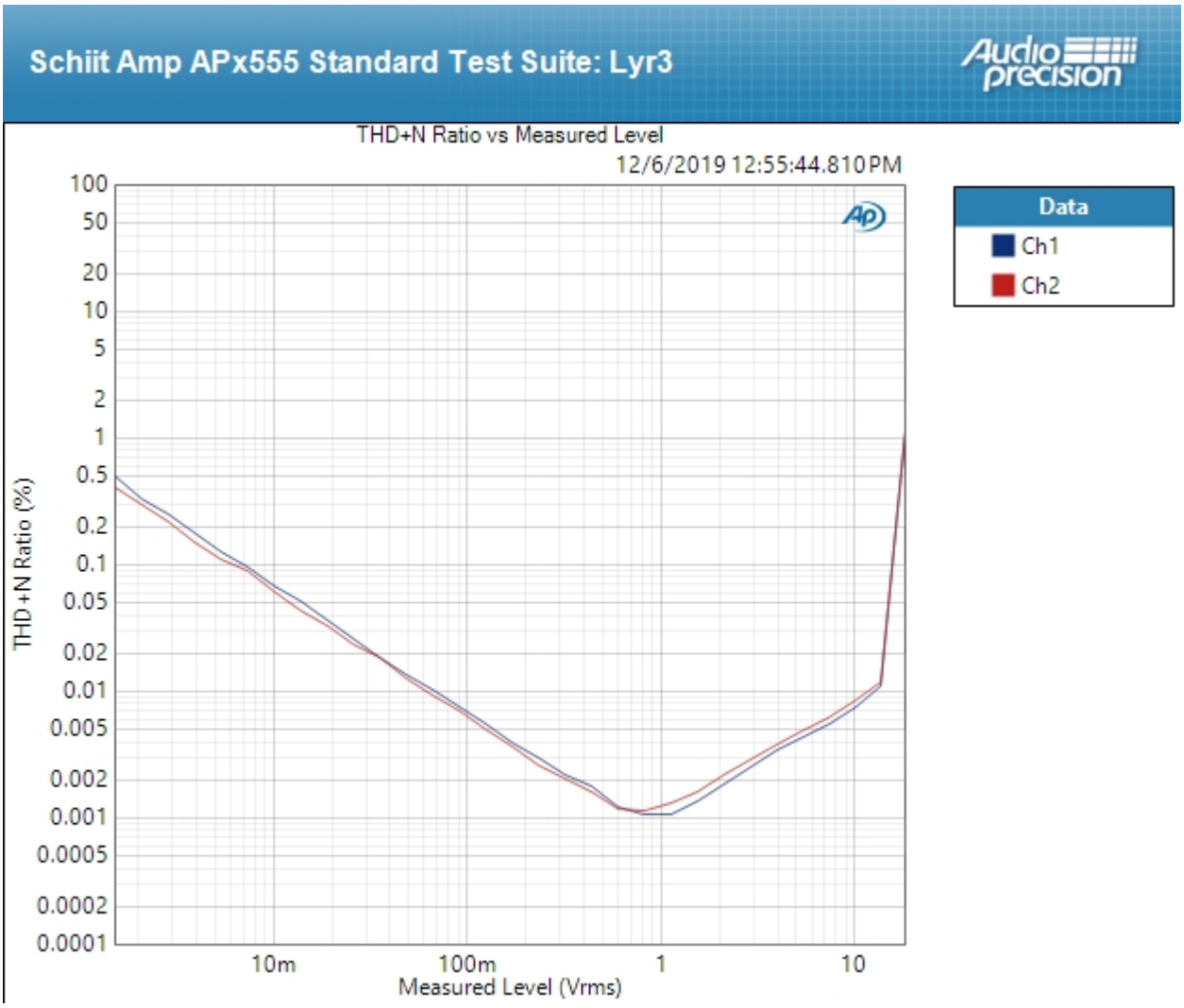
Ch1 -92.795 dB

Ch2 -91.771 dB

Preamp : Stepped Level Sweep

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	100.0 mVrms
Frequency:	1.00000 kHz
Start Level:	1.000 mVrms
Stop Level:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Low-pass Filter:	20 kHz
Weighting Filter:	Signal Path
High-pass Filter:	20 Hz
Notch Tuning Mode:	Generator Frequency
Measured 1	12/6/2019 12:55:44 PM

THD+N Ratio vs Measured Level (12/6/2019 12:55:44.810 PM)



Result: PASSED