Schiit Amp APx555 Standard Test Suite: Asgard 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 Low SE	
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 SE	
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 SE	
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 SE	

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 SE

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 SE : 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 SE : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (1/8/2020 11:18:07.502 AM)

Ch1 1.039 Vrms
Ch2 1.039 Vrms

300 Ohm Low SE : 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

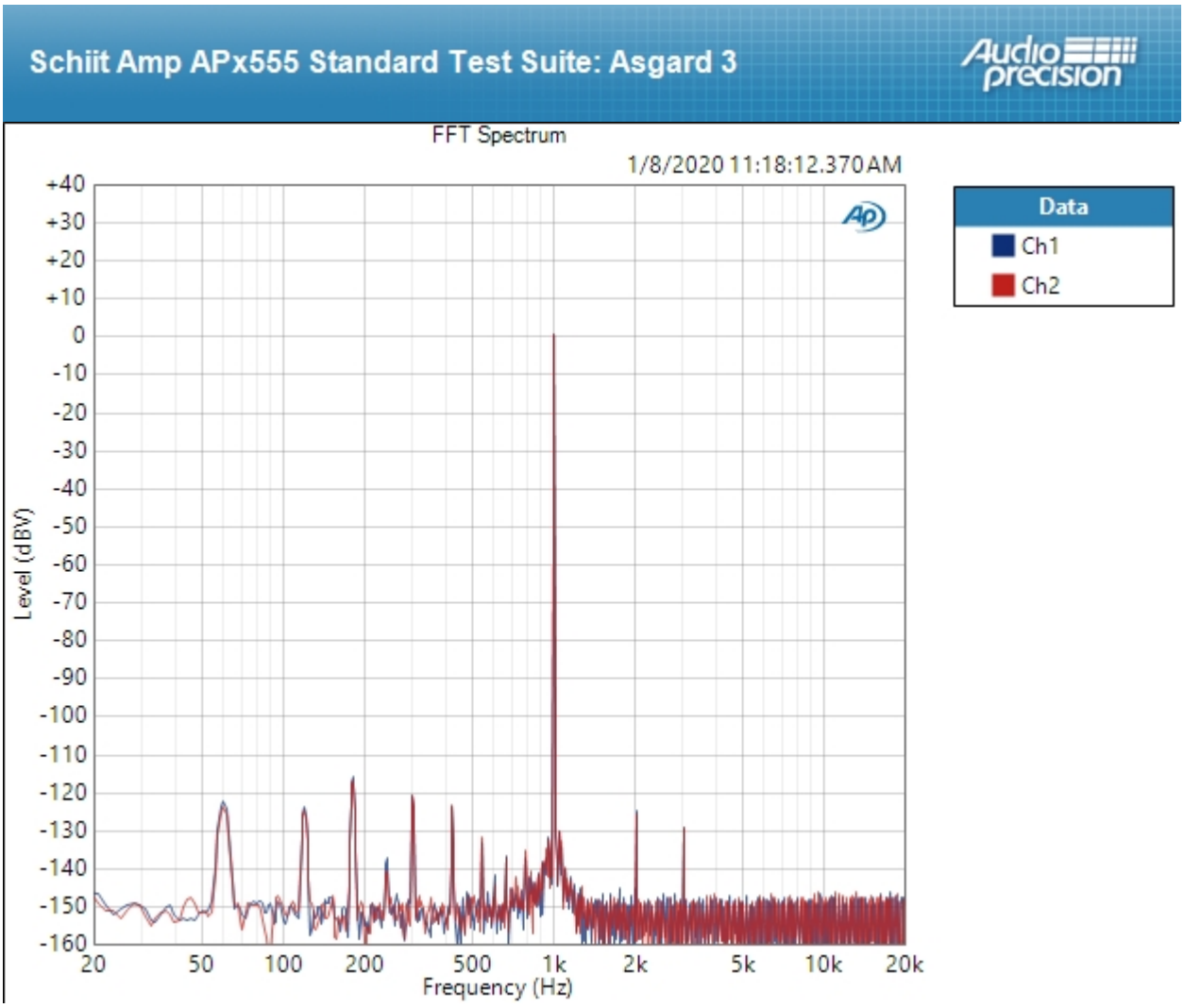
DC Level (1/8/2020 11:18:08.682 AM)

Ch1 -256.9 uV
Ch2 876.3 uV

300 Ohm Low SE : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	1/8/2020 11:18:12 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 (1/8/2020 11:18:12.370 AM)

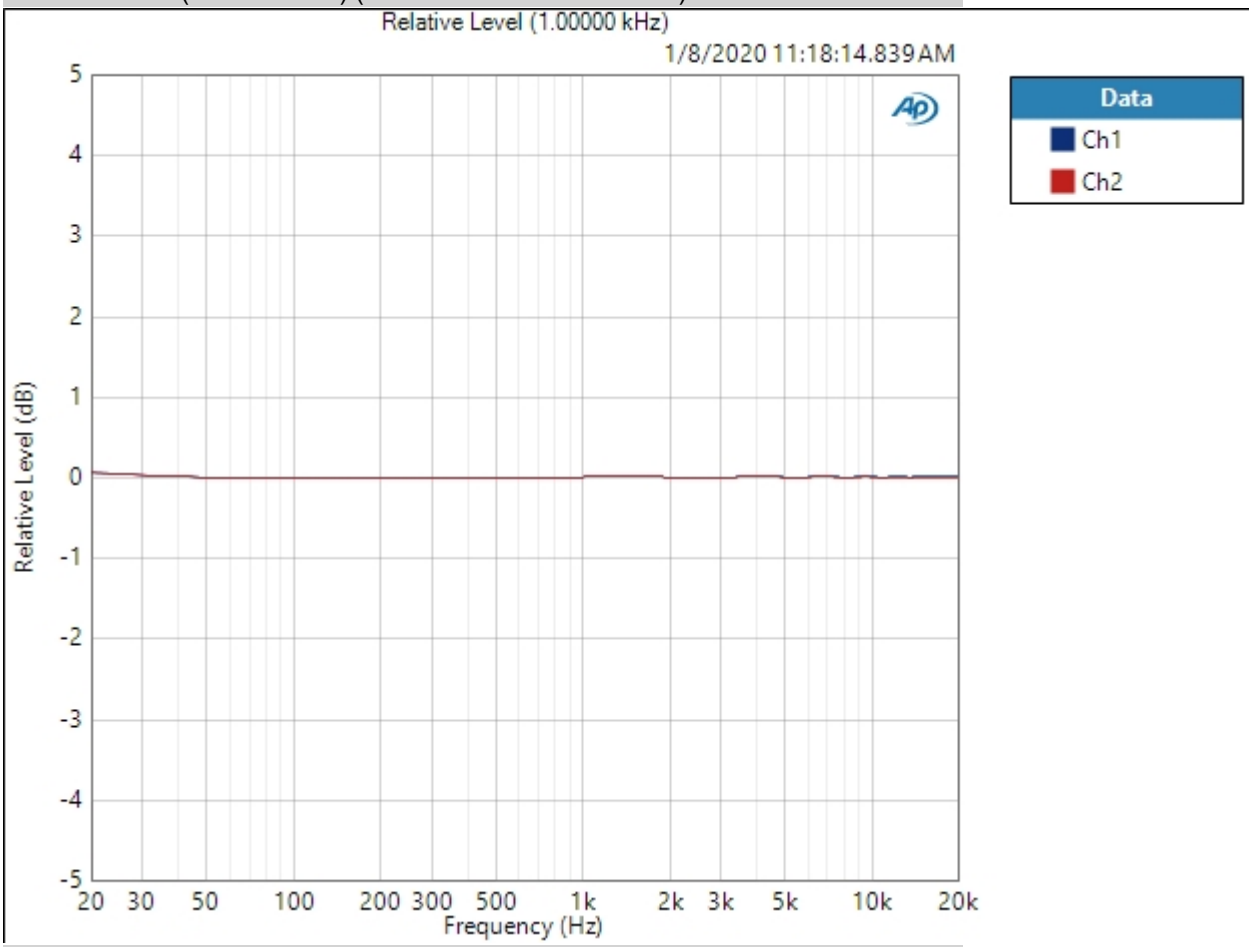


Result: PASSED

300 Ohm Low SE : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	1.000 Vrms
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	1/8/2020 11:18:14 AM

Relative Level (1.00000 kHz) (1/8/2020 11:18:14.839 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) (1/8/2020 11:18:14.839 AM)

Ch1 ±0.037 dB

Ch2 ±0.037 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

300 Ohm Low SE : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (1/8/2020 11:18:16.857 AM)

Ch1 117.253 dB

Ch2 117.413 dB

300 Ohm Low SE : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
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 (1/8/2020 11:18:18.936 AM)

Ch1 0.000274 %

Ch2 0.000267 %

THD Ratio (1/8/2020 11:18:18.936 AM)

Ch1 0.000073 %

Ch2 0.000069 %

Noise Ratio (1/8/2020 11:18:18.936 AM)

Ch1 0.000267 %

Ch2 0.000256 %

Distortion Product Ratio (1/8/2020 11:18:18.936 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	8.001k	9.001k	10.00k
Ch1	-0.00	-125.30	-127.70	-144.63	-143.04	-141.70	-148.62	-147.75	-141.09	-145.44
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-125.17	-129.51	-141.85	-145.08	-147.59	-147.14	-146.16	-144.32	-144.50

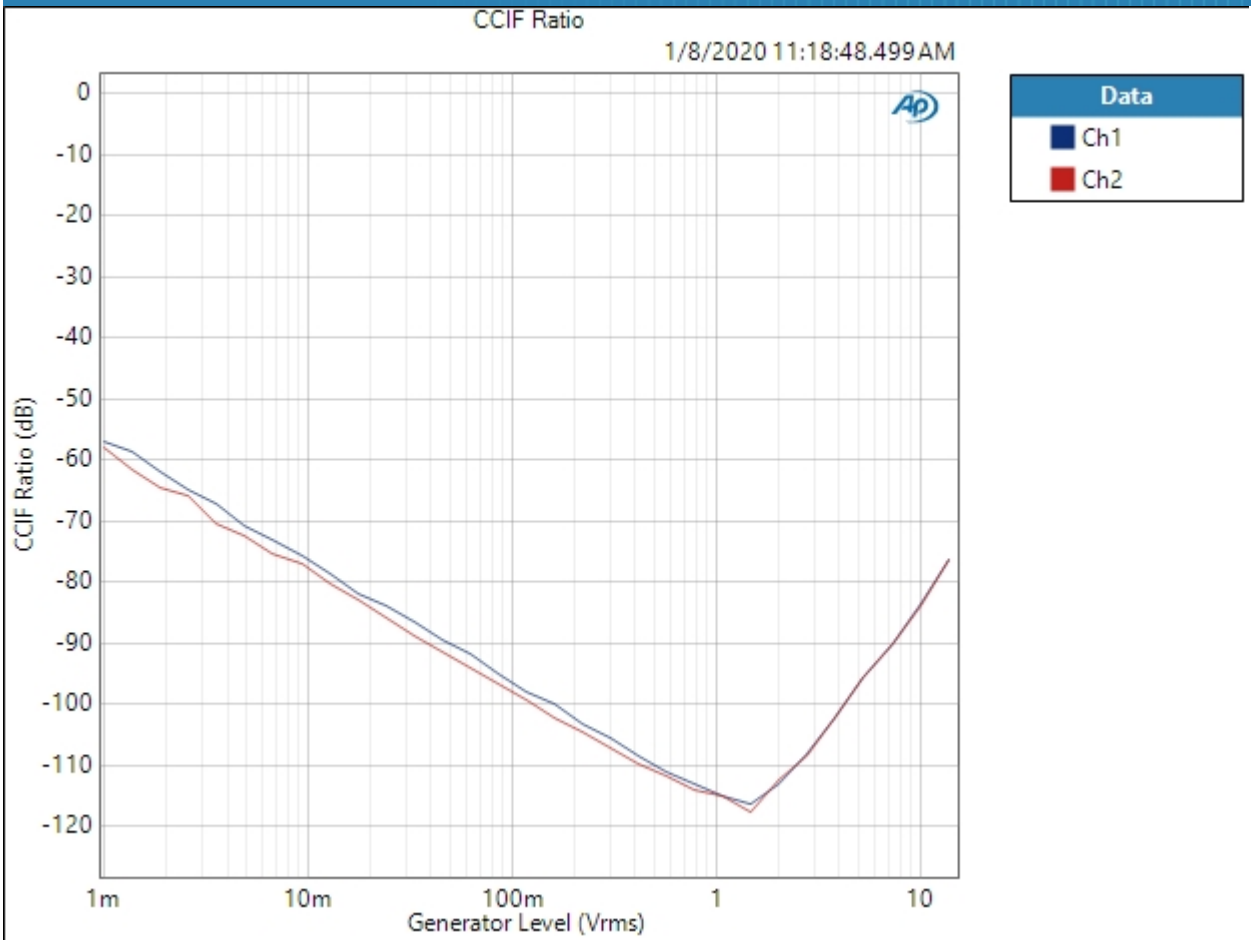
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm Low SE : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	13.33 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:	13.33 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	1/8/2020 11:18:48 AM

CCIF Ratio (1/8/2020 11:18:48.499 AM)

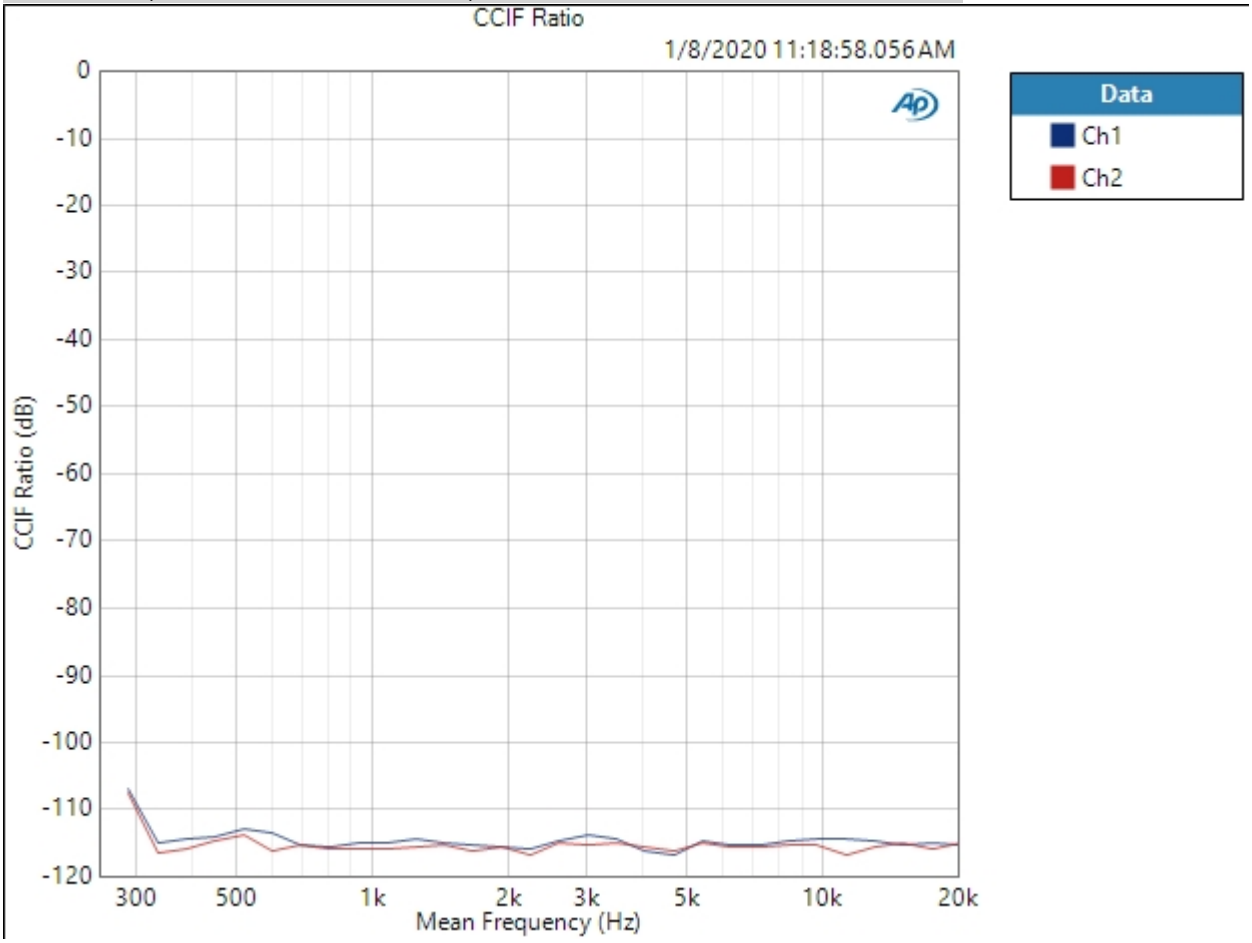


Result: PASSED

300 Ohm Low SE : IMD Frequency Sweep (CCIF)

Generator Level:	1.000 Vrms
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	1/8/2020 11:18:58 AM

CCIF Ratio (1/8/2020 11:18:58.056 AM)



Result: PASSED

300 Ohm Low SE : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	DAC Generator
Generator Level:	1.000 Vrms
DC Offset:	0.000 V
Frequency:	10.0000 kHz

Crosstalk (1/8/2020 11:18:59.355 AM)

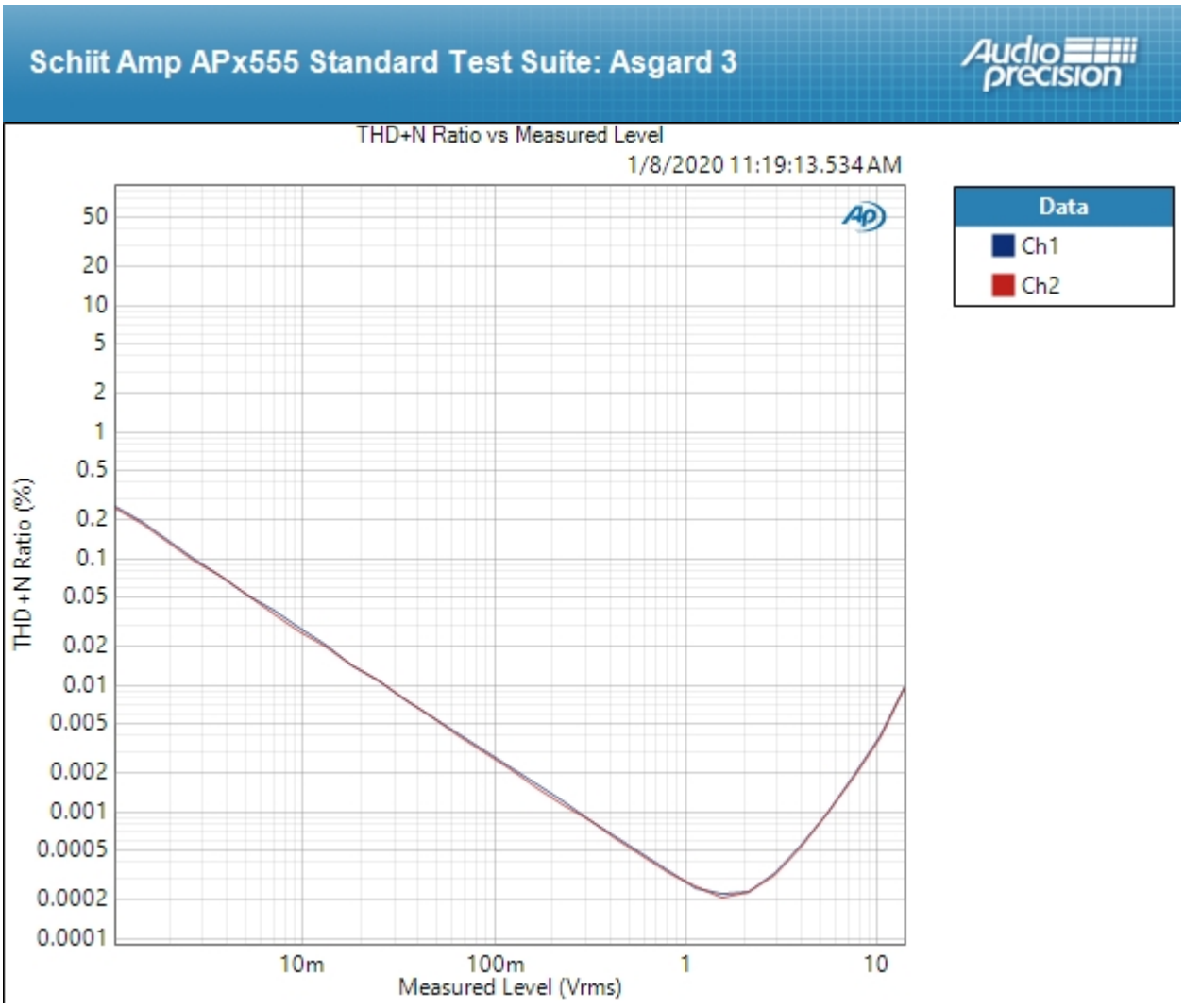
Ch1 82.341 dB

Ch2 86.297 dB

300 Ohm Low SE : 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:	13.33 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	1/8/2020 11:19:13 AM

THD+N Ratio vs Measured Level (1/8/2020 11:19:13.534 AM)



Result: PASSED

300 Ohm High SE : 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 SE : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz

RMS Level (1/8/2020 11:20:01.237 AM)

Ch1 1.046 Vrms
Ch2 1.048 Vrms

300 Ohm High SE : 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

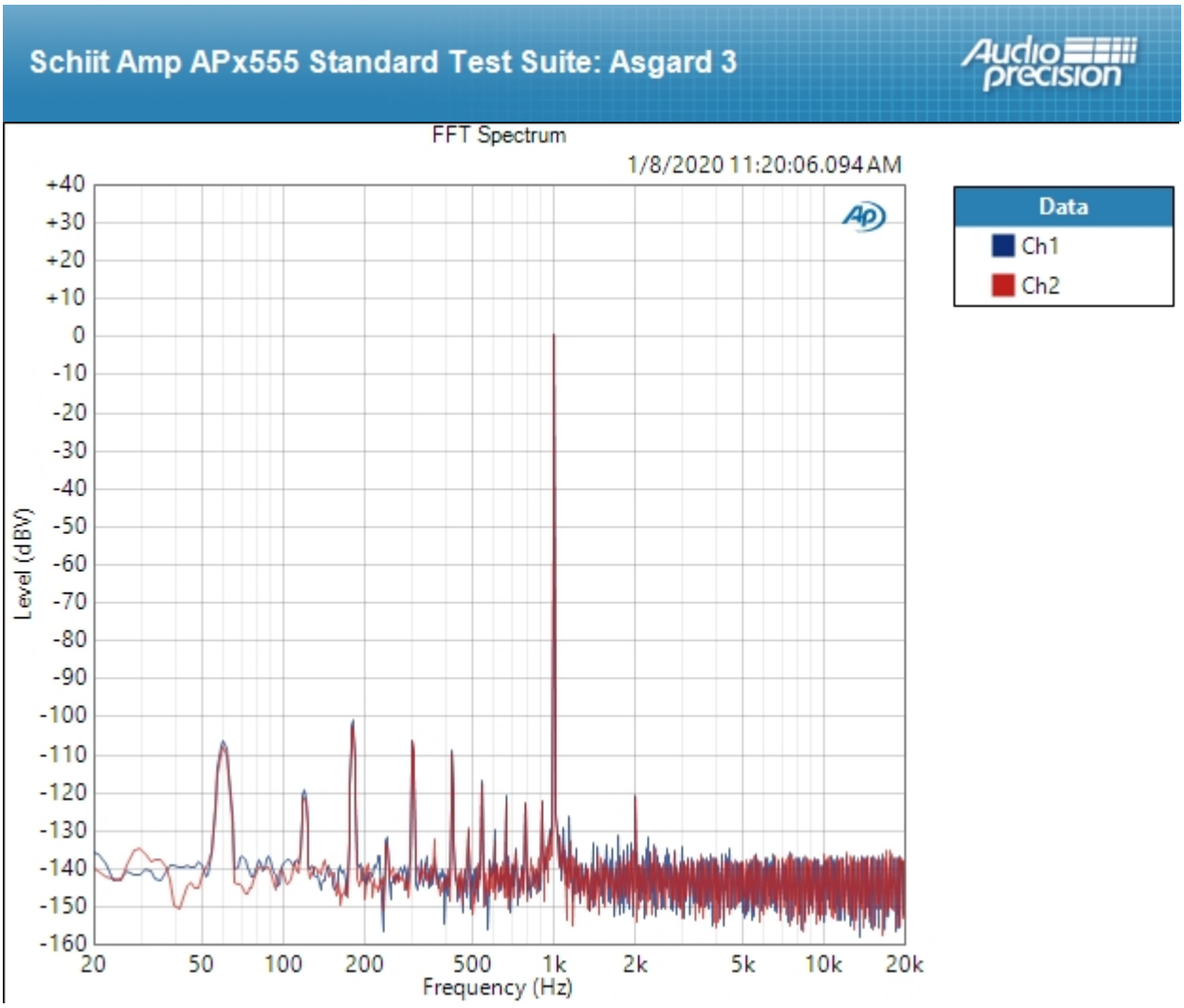
DC Level (1/8/2020 11:20:02.386 AM)

Ch1 -1.471 mV
Ch2 0.964 mV

300 Ohm High SE : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	1/8/2020 11:20:06 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 (1/8/2020 11:20:06.094 AM)

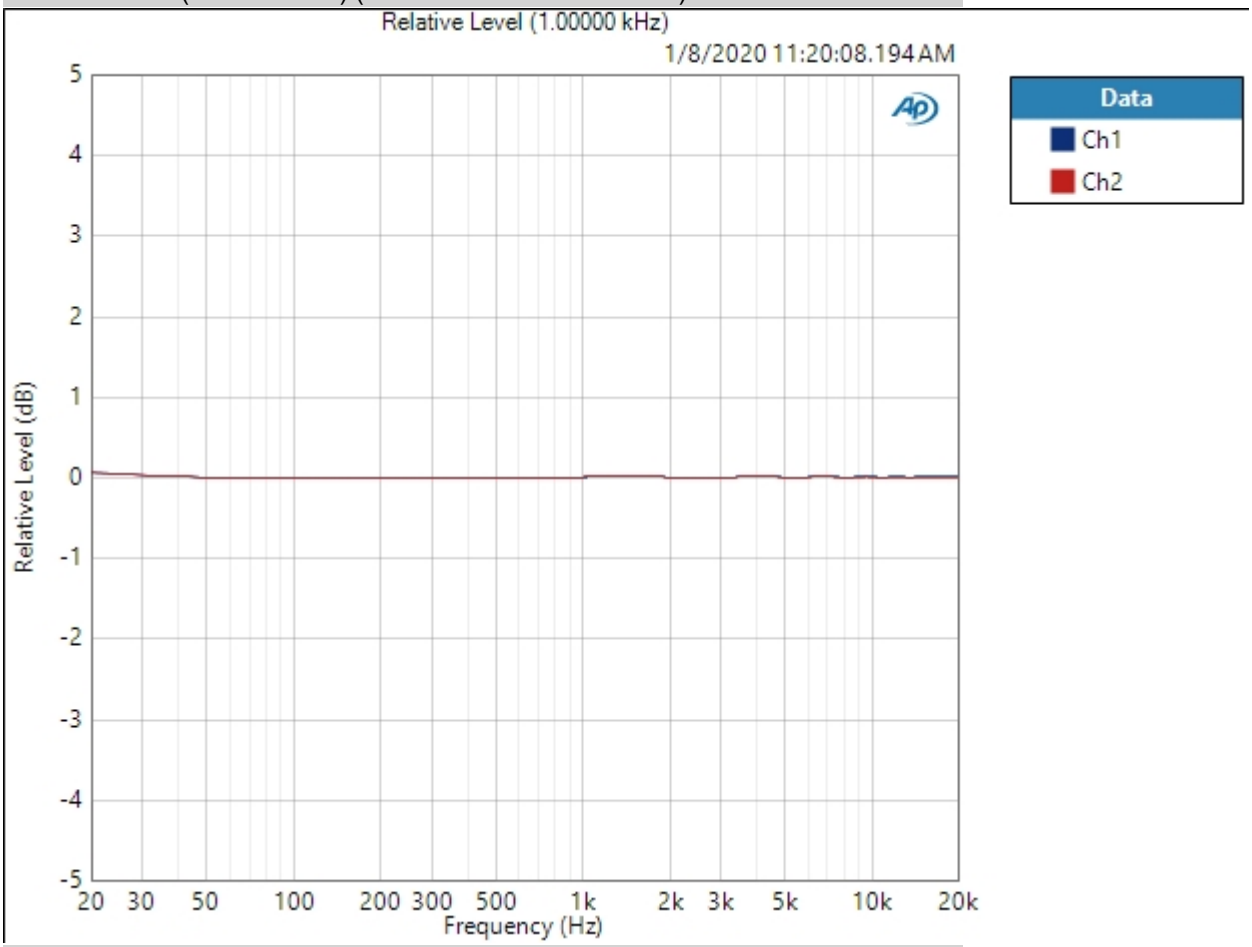


Result: PASSED

300 Ohm High SE : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	150.0 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	1/8/2020 11:20:08 AM

Relative Level (1.00000 kHz) (1/8/2020 11:20:08.194 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) (1/8/2020 11:20:08.194 AM)

Ch1 ±0.038 dB

Ch2 ±0.037 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

300 Ohm High SE : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (1/8/2020 11:20:10.203 AM)

Ch1 104.420 dB

Ch2 105.035 dB

300 Ohm High SE : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 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 (1/8/2020 11:20:12.562 AM)

Ch1 0.001271 %

Ch2 0.001134 %

THD Ratio (1/8/2020 11:20:12.562 AM)

Ch1 0.000136 %

Ch2 0.000119 %

Noise Ratio (1/8/2020 11:20:12.562 AM)

Ch1 0.001265 %

Ch2 0.001120 %

Distortion Product Ratio (1/8/2020 11:20:12.562 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	8.001k	9.001k	10.00k
Ch1	-0.00	-119.91	-131.32	-134.16	-130.81	-132.03	-133.86	-134.84	-133.65	-136.08
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-121.90	-134.01	-132.78	-134.40	-132.44	-133.64	-136.95	-137.58	-134.21

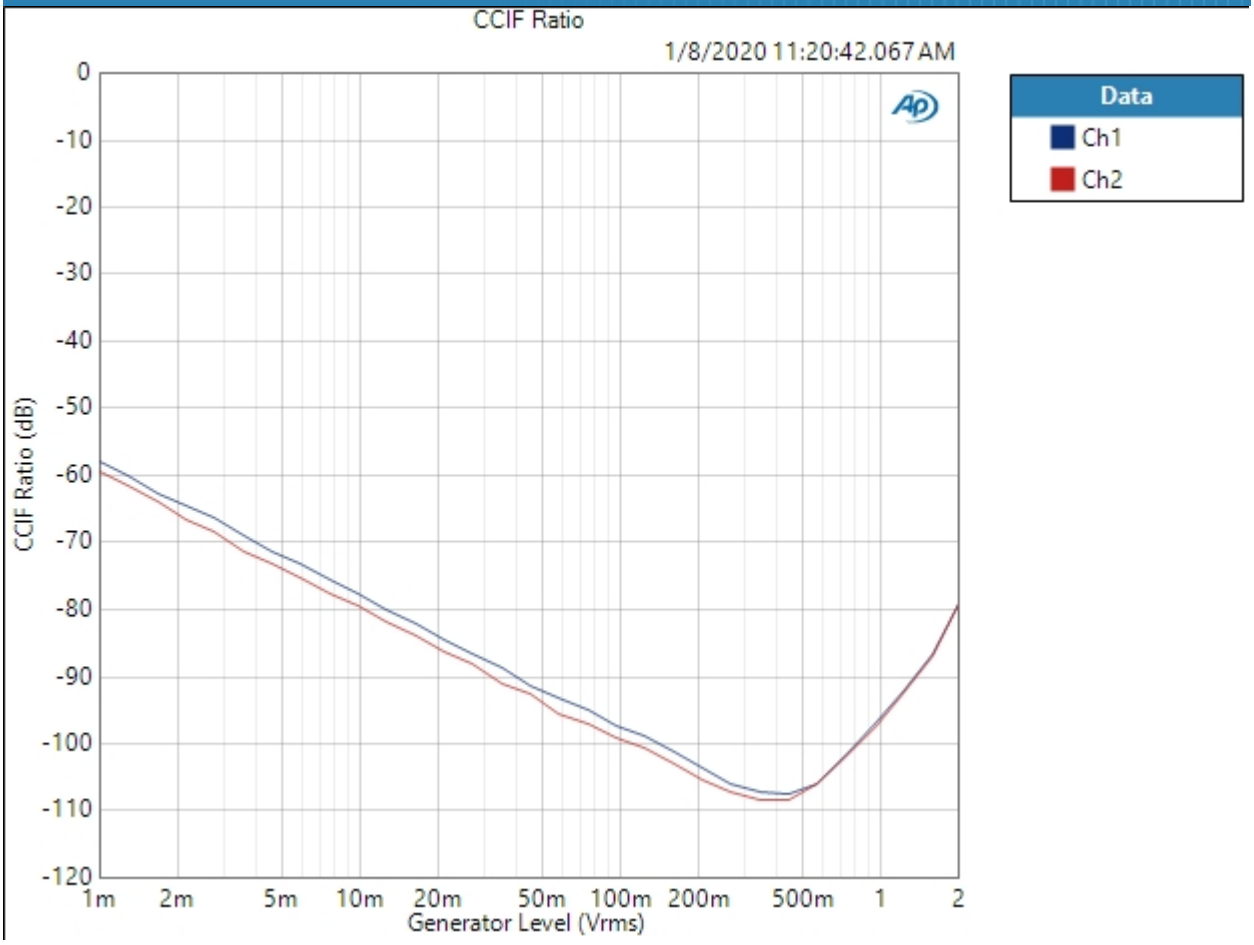
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm High SE : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	2.000 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:	2.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	1/8/2020 11:20:42 AM

CCIF Ratio (1/8/2020 11:20:42.067 AM)

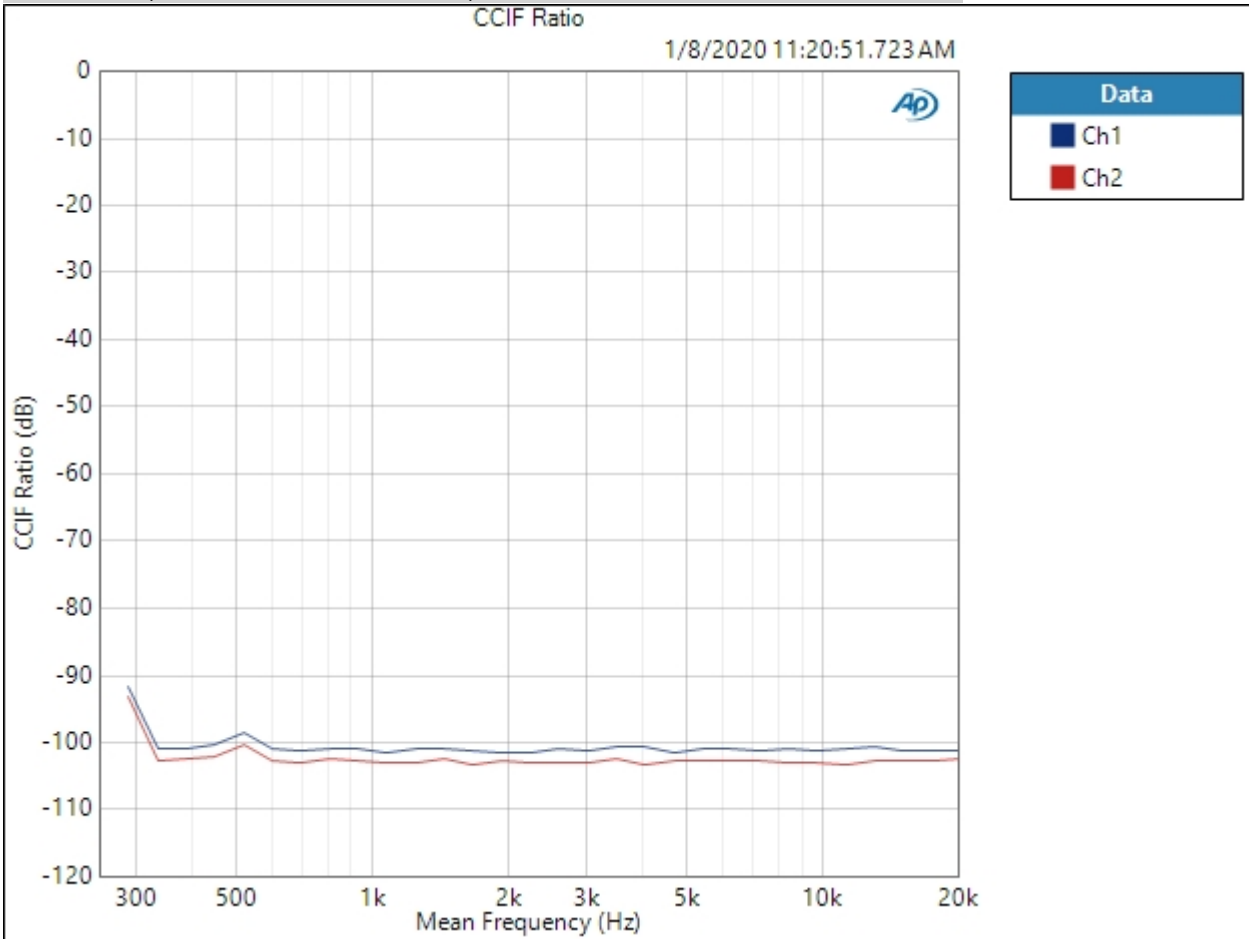


Result: PASSED

300 Ohm High SE : IMD Frequency Sweep (CCIF)

Generator Level:	150.0 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	1/8/2020 11:20:51 AM

CCIF Ratio (1/8/2020 11:20:51.723 AM)



Result: PASSED

300 Ohm High SE : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	10.0000 kHz

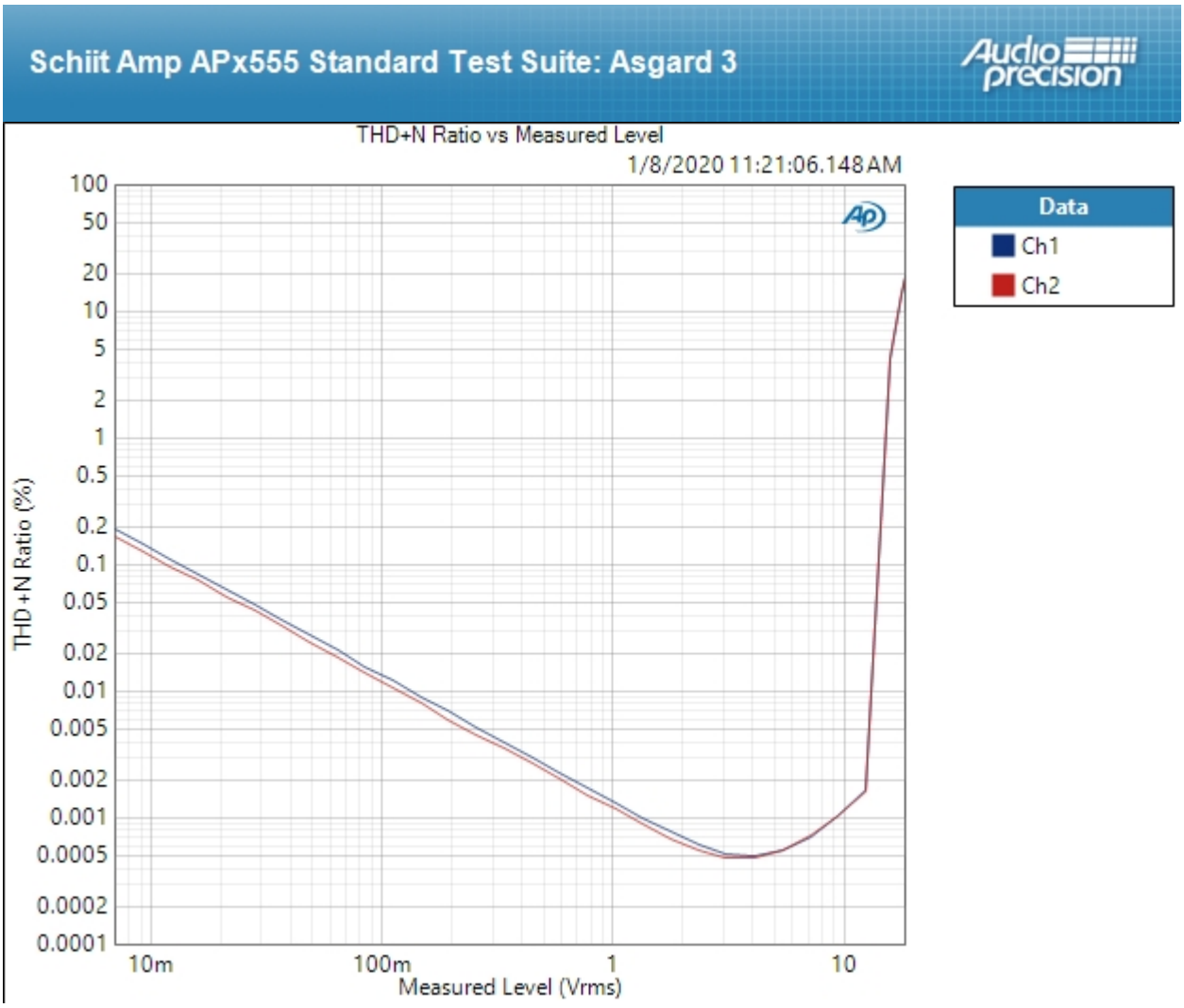
Crosstalk (1/8/2020 11:20:53.552 AM)

Ch1 90.225 dB
Ch2 89.189 dB

300 Ohm High SE : 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	1/8/2020 11:21:06 AM

THD+N Ratio vs Measured Level (1/8/2020 11:21:06.148 AM)



Result: PASSED

32 Ohm Low SE : 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 SE : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (1/8/2020 11:24:06.571 AM)

Ch1	1.030 Vrms
Ch2	1.030 Vrms

32 Ohm Low SE : 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

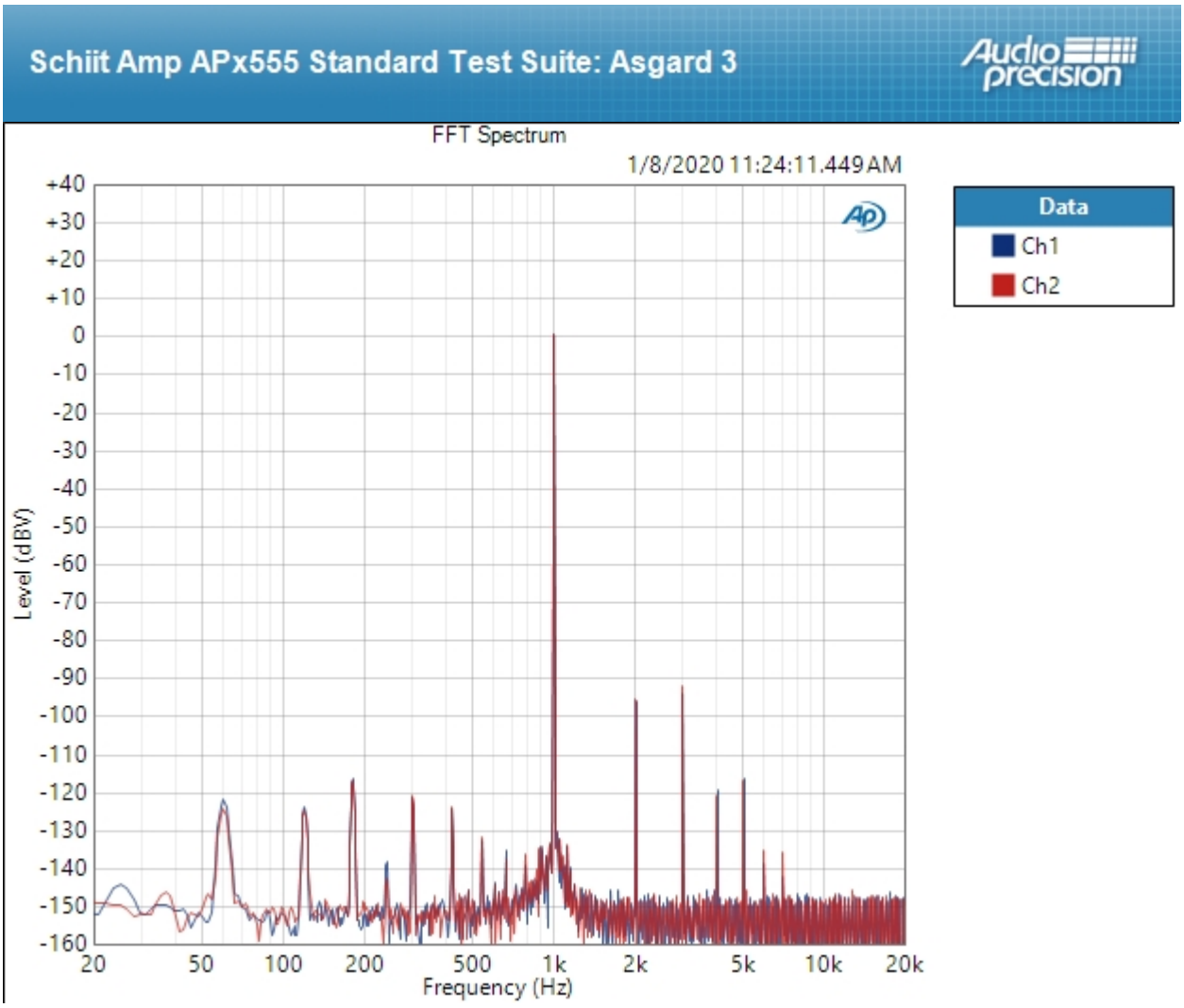
DC Level (1/8/2020 11:24:07.721 AM)

Ch1	24.62 uV
Ch2	0.938 mV

32 Ohm Low SE : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	1/8/2020 11:24:11 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 (1/8/2020 11:24:11.449 AM)

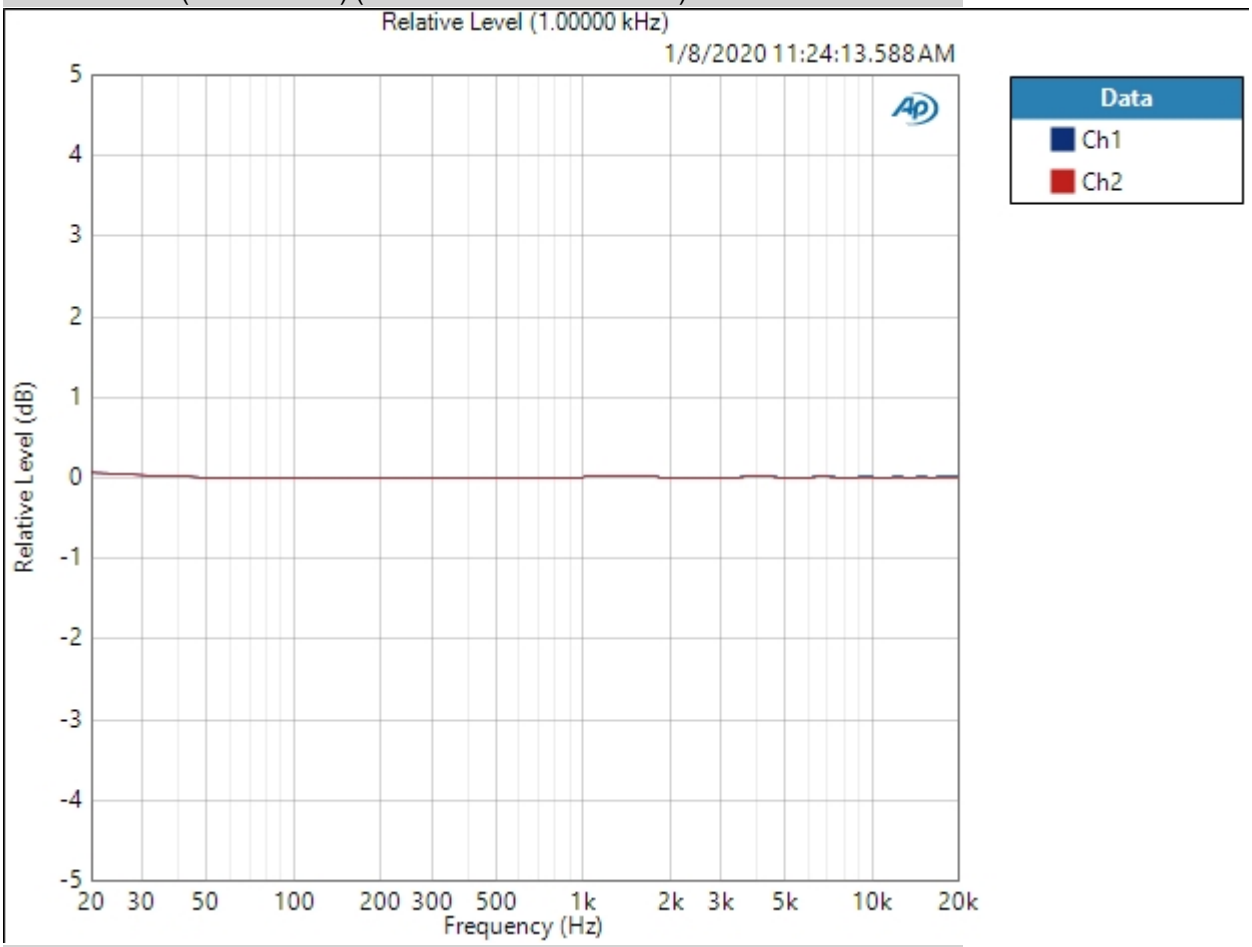


Result: PASSED

32 Ohm Low SE : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	1.000 Vrms
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	1/8/2020 11:24:13 AM

Relative Level (1.00000 kHz) (1/8/2020 11:24:13.588 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) (1/8/2020 11:24:13.588 AM)

Ch1 ±0.037 dB

Ch2 ±0.037 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm Low SE : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (1/8/2020 11:24:15.605 AM)

Ch1 117.324 dB

Ch2 117.288 dB

32 Ohm Low SE : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
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 (1/8/2020 11:24:17.714 AM)

Ch1 0.002564 %

Ch2 0.002983 %

THD Ratio (1/8/2020 11:24:17.714 AM)

Ch1 0.002545 %

Ch2 0.002964 %

Noise Ratio (1/8/2020 11:24:17.714 AM)

Ch1 0.000257 %

Ch2 0.000257 %

Distortion Product Ratio (1/8/2020 11:24:17.714 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	8.001k	9.001k	10.00k
Ch1	-0.00	-95.78	-94.20	-119.69	-116.42	-138.13	-144.57	-150.49	-143.96	-144.74
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-95.15	-92.44	-120.81	-116.73	-134.89	-135.74	-144.49	-143.28	-148.38

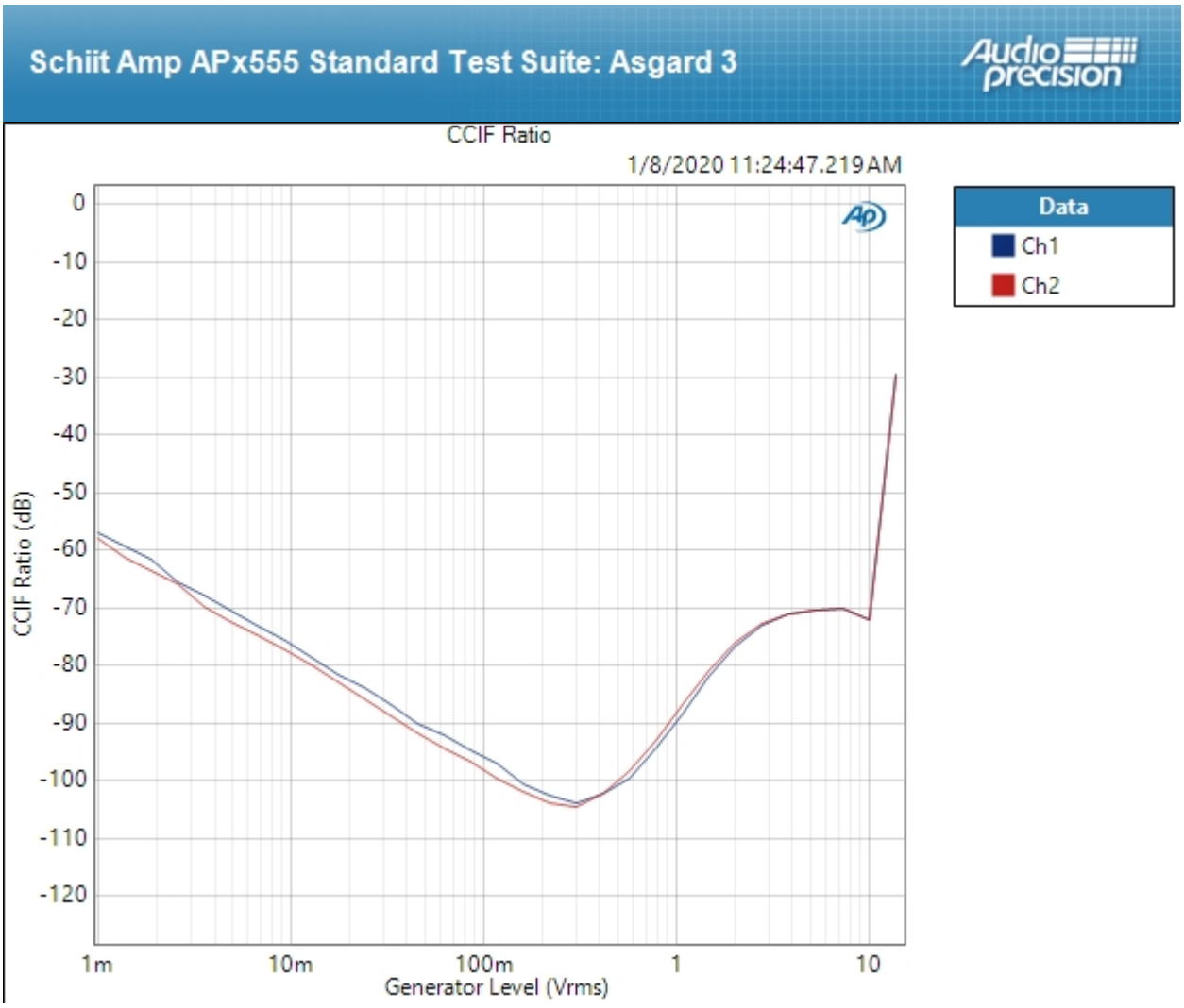
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm Low SE : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	13.33 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:	13.33 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	1/8/2020 11:24:47 AM

CCIF Ratio (1/8/2020 11:24:47.219 AM)

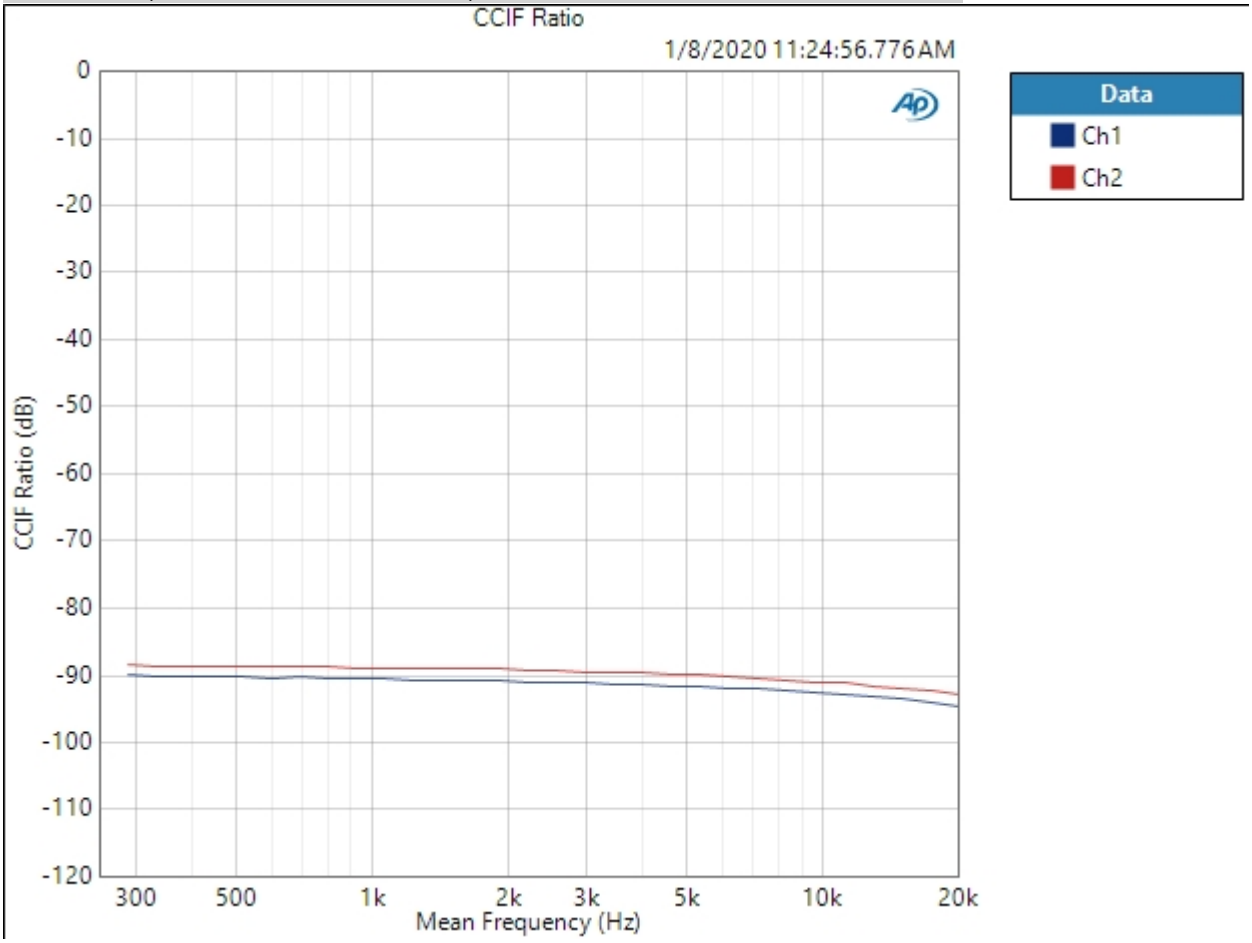


Result: PASSED

32 Ohm Low SE : IMD Frequency Sweep (CCIF)

Generator Level:	1.000 Vrms
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	1/8/2020 11:24:56 AM

CCIF Ratio (1/8/2020 11:24:56.776 AM)



Result: PASSED

32 Ohm Low SE : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	10.0000 kHz

Crosstalk (1/8/2020 11:24:58.105 AM)

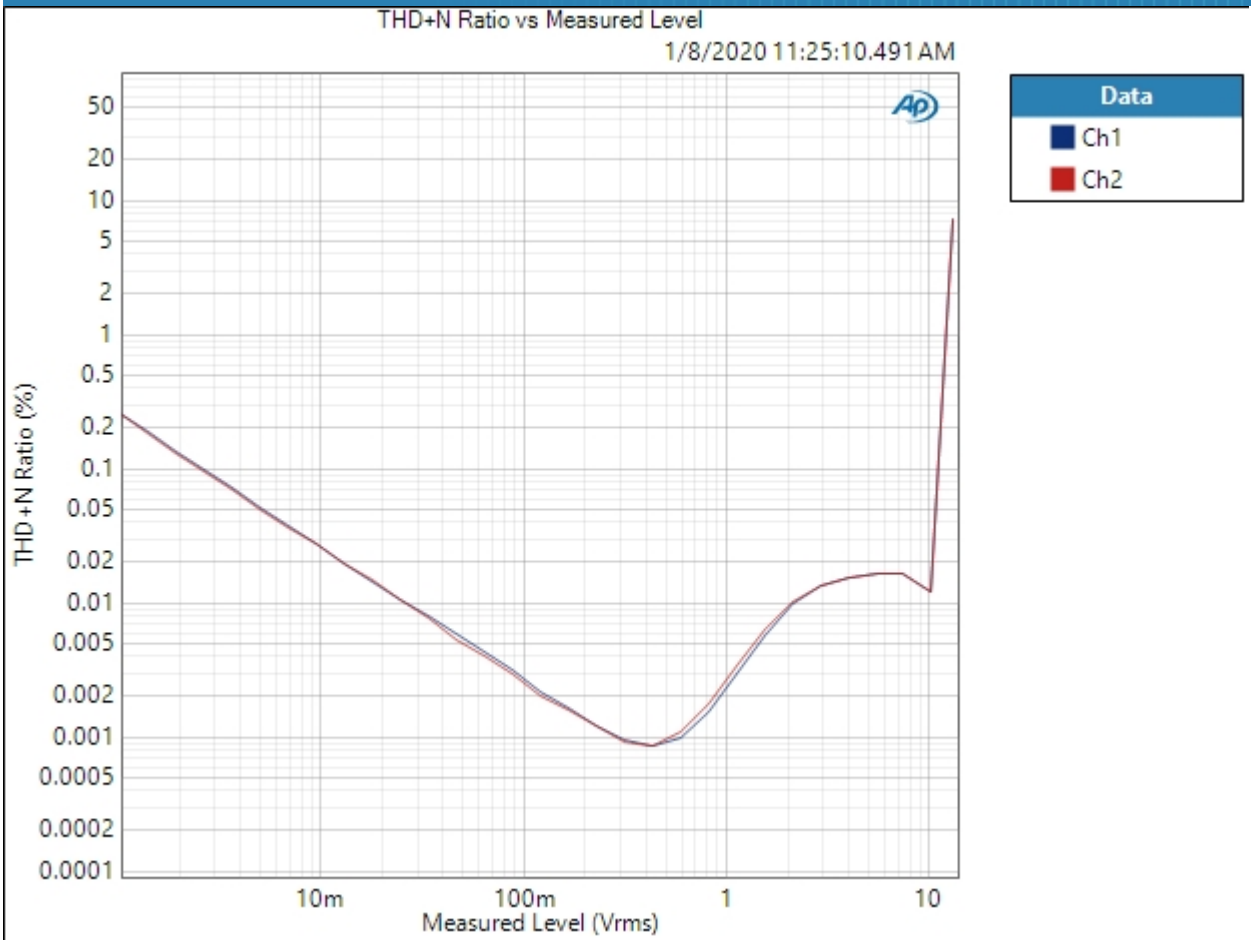
Ch1 73.859 dB

Ch2 74.263 dB

32 Ohm Low SE : 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:	13.33 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	1/8/2020 11:25:10 AM

THD+N Ratio vs Measured Level (1/8/2020 11:25:10.491 AM)



Result: PASSED

32 Ohm High SE : 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 SE : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz

RMS Level (1/8/2020 11:22:04.271 AM)

Ch1 1.028 Vrms
Ch2 1.038 Vrms

32 Ohm High SE : 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

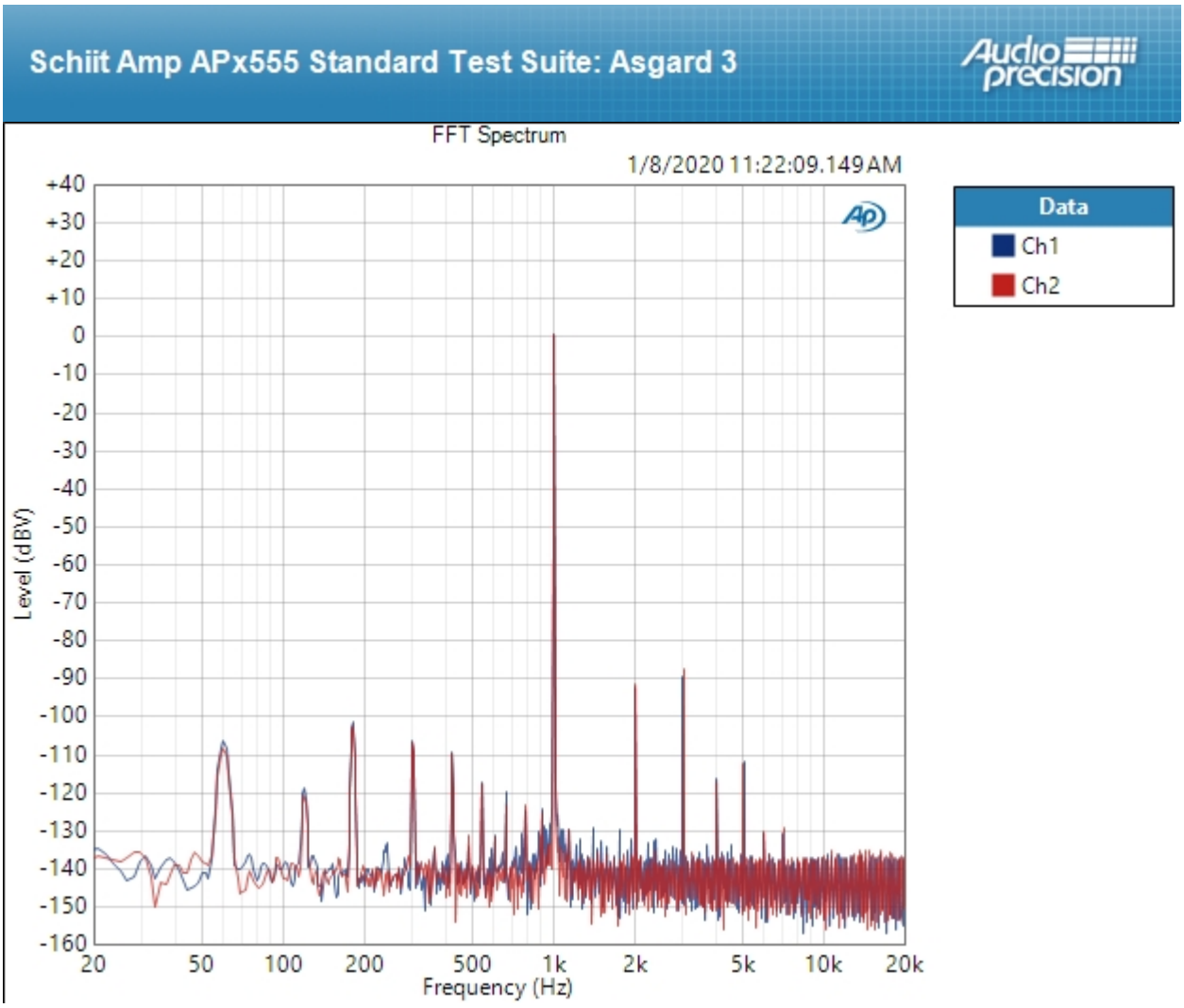
DC Level (1/8/2020 11:22:05.430 AM)

Ch1 -8.006 uV
Ch2 1.099 mV

32 Ohm High SE : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	1/8/2020 11:22:09 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 (1/8/2020 11:22:09.149 AM)

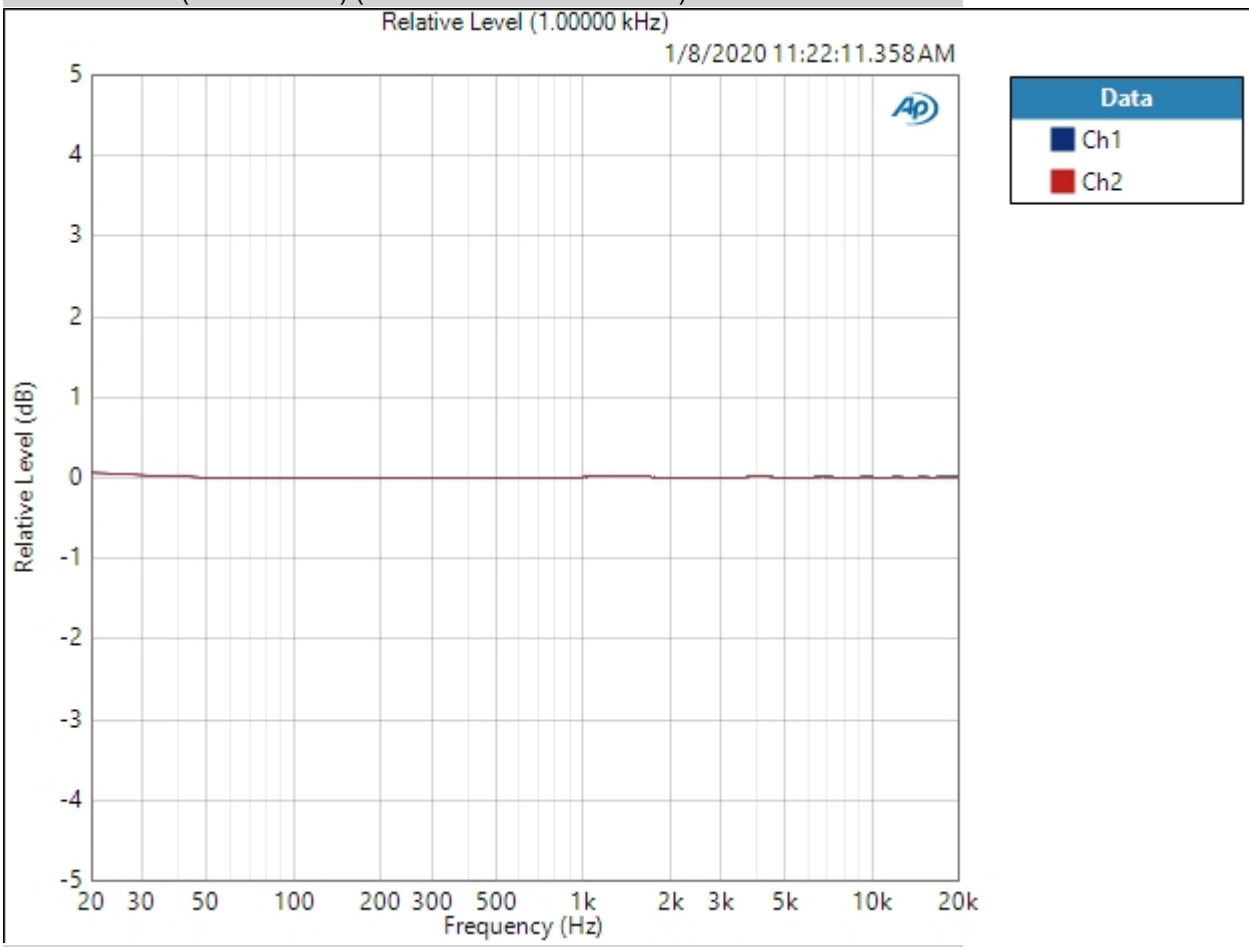


Result: PASSED

32 Ohm High SE : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	150.0 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	1/8/2020 11:22:11 AM

Relative Level (1.00000 kHz) (1/8/2020 11:22:11.358 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) (1/8/2020 11:22:11.358 AM)

Ch1 ±0.037 dB

Ch2 ±0.037 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm High SE : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (1/8/2020 11:22:13.357 AM)

Ch1 104.446 dB

Ch2 104.916 dB

32 Ohm High SE : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	150.0 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 (1/8/2020 11:22:15.436 AM)

Ch1 0.004229 %

Ch2 0.005022 %

THD Ratio (1/8/2020 11:22:15.436 AM)

Ch1 0.004025 %

Ch2 0.004877 %

Noise Ratio (1/8/2020 11:22:15.436 AM)

Ch1 0.001262 %

Ch2 0.001127 %

Distortion Product Ratio (1/8/2020 11:22:15.436 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	8.001k	9.001k	10.00k
Ch1	-0.00	-92.64	-89.73	-115.91	-111.40	-132.83	-134.03	-135.83	-132.16	-135.17
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-91.49	-87.80	-118.24	-111.67	-127.17	-127.60	-133.14	-135.66	-130.01

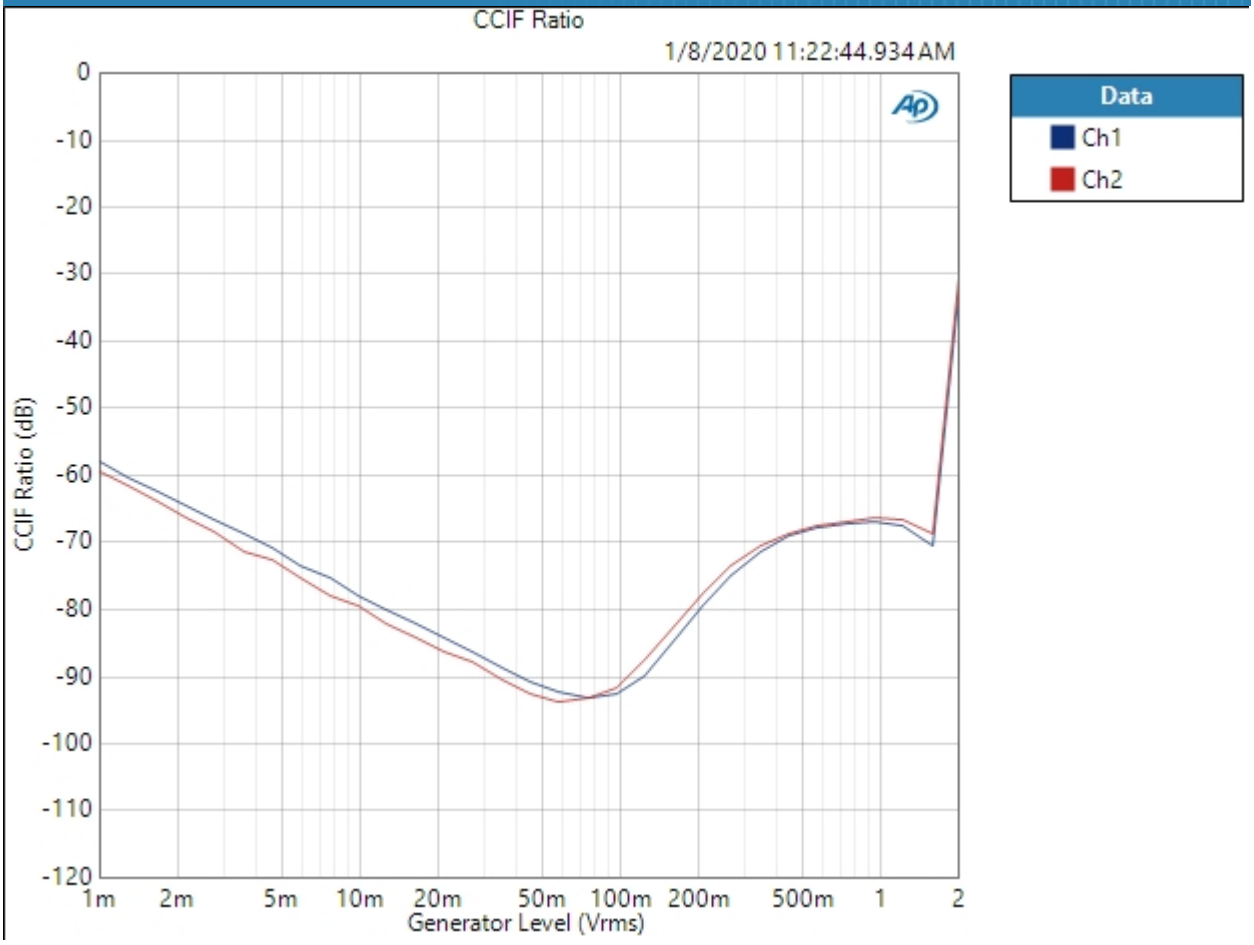
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm High SE : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	2.000 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:	2.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	1/8/2020 11:22:44 AM

CCIF Ratio (1/8/2020 11:22:44.934 AM)

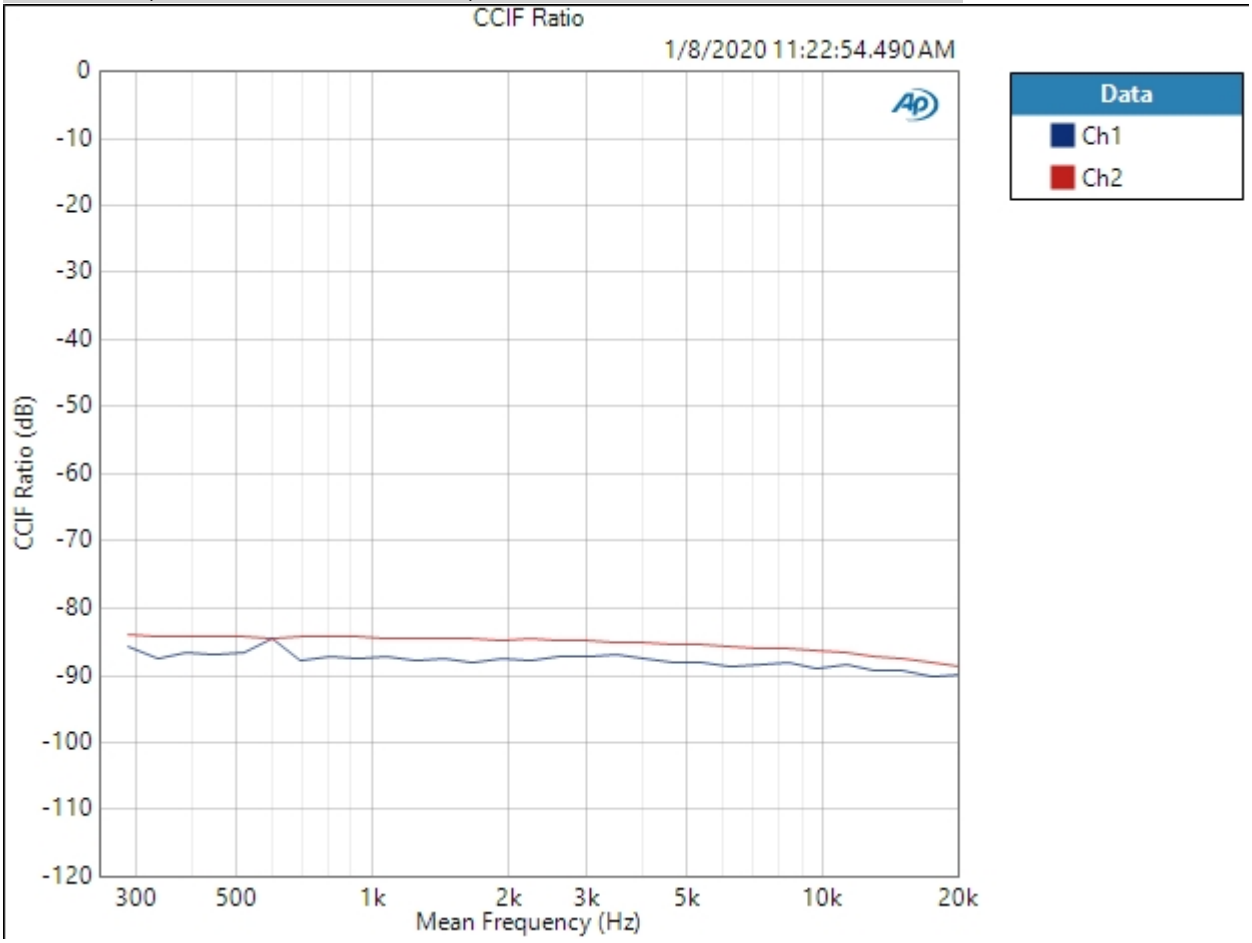


Result: PASSED

32 Ohm High SE : IMD Frequency Sweep (CCIF)

Generator Level:	150.0 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	1/8/2020 11:22:54 AM

CCIF Ratio (1/8/2020 11:22:54.490 AM)



Result: PASSED

32 Ohm High SE : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	DAC Generator
Generator Level:	150.0 mVrms
DC Offset:	0.000 V
Frequency:	10.0000 kHz

Crosstalk (1/8/2020 11:22:55.840 AM)

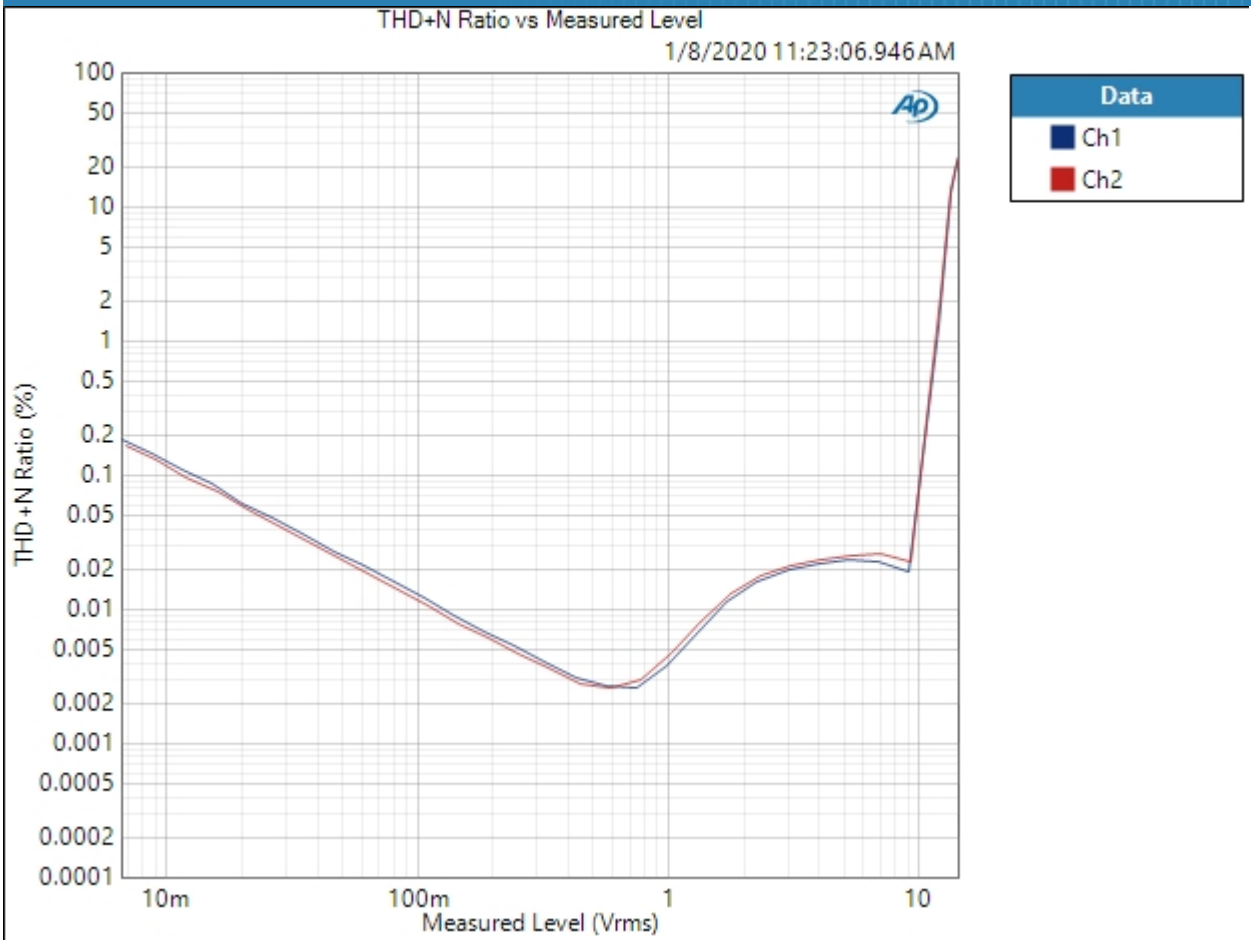
Ch1 72.566 dB

Ch2 72.190 dB

32 Ohm High SE : 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	1/8/2020 11:23:06 AM

THD+N Ratio vs Measured Level (1/8/2020 11:23:06.946 AM)



Result: PASSED

Preamp SE : 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 SE : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (1/8/2020 11:25:58.629 AM)

Ch1	1.039 Vrms
Ch2	1.039 Vrms

Preamp SE : 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

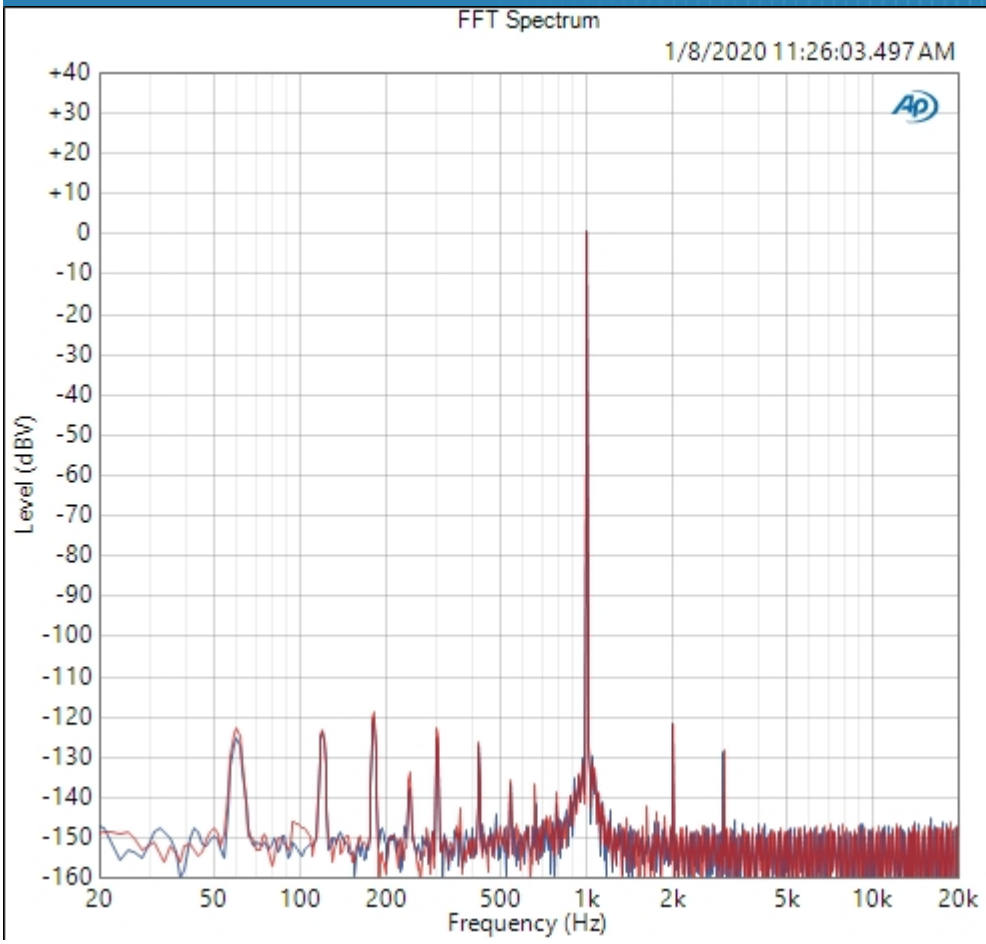
DC Level (1/8/2020 11:25:59.768 AM)

Ch1	0.979 mV
Ch2	-150.9 uV

Preamp SE : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	1/8/2020 11:26:03 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 (1/8/2020 11:26:03.497 AM)

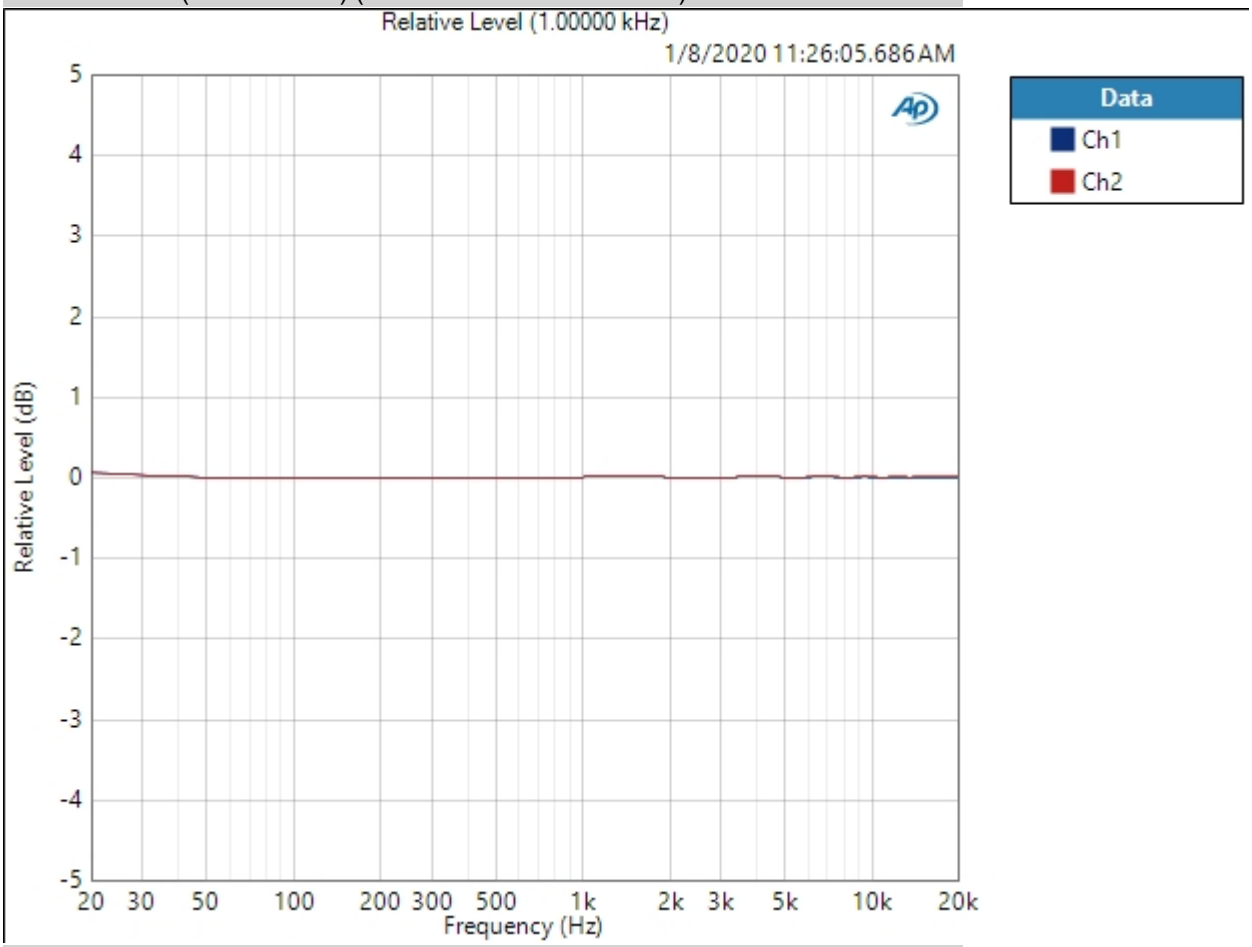


Result: PASSED

Preamp SE : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	1.000 Vrms
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	1/8/2020 11:26:05 AM

Relative Level (1.00000 kHz) (1/8/2020 11:26:05.686 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) (1/8/2020 11:26:05.686 AM)

Ch1 ±0.037 dB

Ch2 ±0.038 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Preamp SE : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (1/8/2020 11:26:07.672 AM)

Ch1 118.130 dB

Ch2 117.592 dB

Preamp SE : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
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 (1/8/2020 11:26:10.011 AM)

Ch1 0.004446 %

Ch2 0.002972 %

THD Ratio (1/8/2020 11:26:10.011 AM)

Ch1 0.000095 %

Ch2 0.000093 %

Noise Ratio (1/8/2020 11:26:10.011 AM)

Ch1 0.000211 %

Ch2 0.000236 %

Distortion Product Ratio (1/8/2020 11:26:10.011 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	8.001k	9.001k	10.00k
Ch1	-0.00	-121.51	-129.04	-142.70	-147.20	-144.04	-146.61	-146.03	-141.55	-142.19
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.001k	9.001k	10.00k
Ch2	-0.00	-121.72	-129.08	-141.49	-146.94	-147.23	-143.11	-140.52	-143.26	-148.28

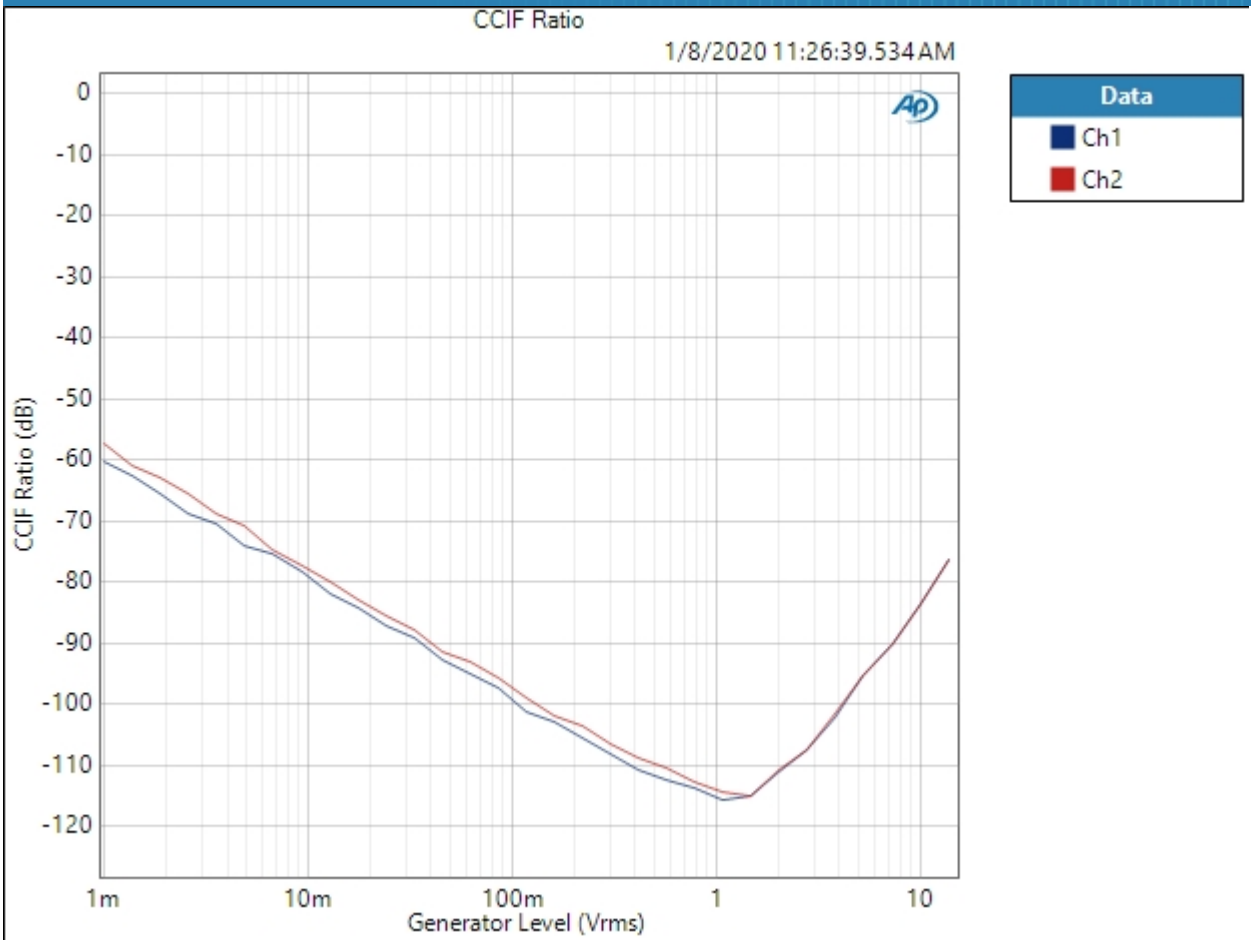
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Preamp SE : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	13.33 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:	13.33 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	1/8/2020 11:26:39 AM

CCIF Ratio (1/8/2020 11:26:39.534 AM)

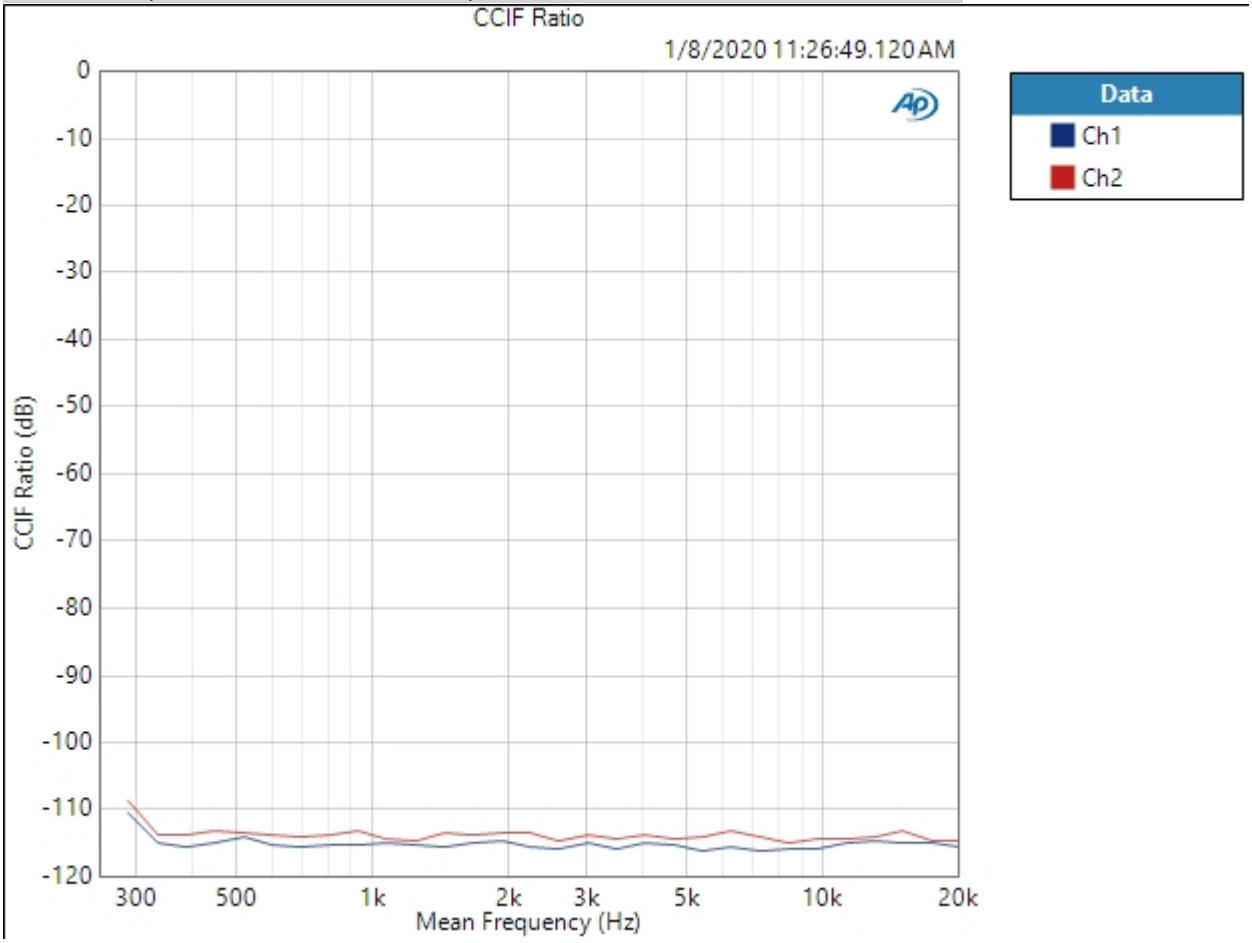


Result: PASSED

Preamp SE : IMD Frequency Sweep (CCIF)

Generator Level:	1.000 Vrms
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	1/8/2020 11:26:49 AM

CCIF Ratio (1/8/2020 11:26:49.120 AM)



Result: PASSED

Preamp SE : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	10.0000 kHz

Crosstalk (1/8/2020 11:26:50.379 AM)

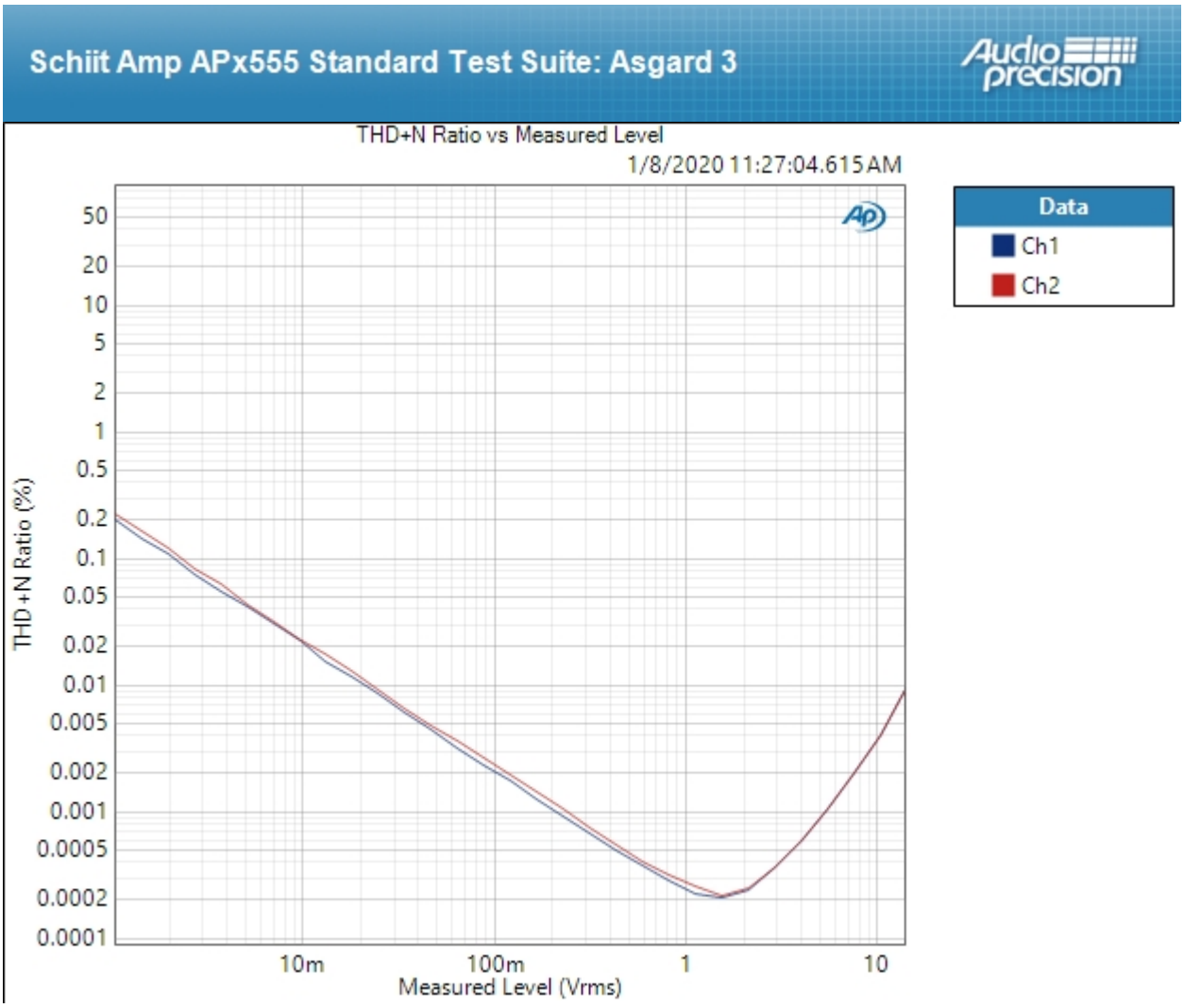
Ch1 -82.162 dB

Ch2 -86.785 dB

Preamp SE : 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:	13.33 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	1/8/2020 11:27:04 AM

THD+N Ratio vs Measured Level (1/8/2020 11:27:04.615 AM)



Result: PASSED