Schiit Amp APx555 Standard Test Suite: Magni Heresy

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:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (11/6/2019 11:13:06.319 AM)

Ch1	0.993 Vrms
Ch2	0.993 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

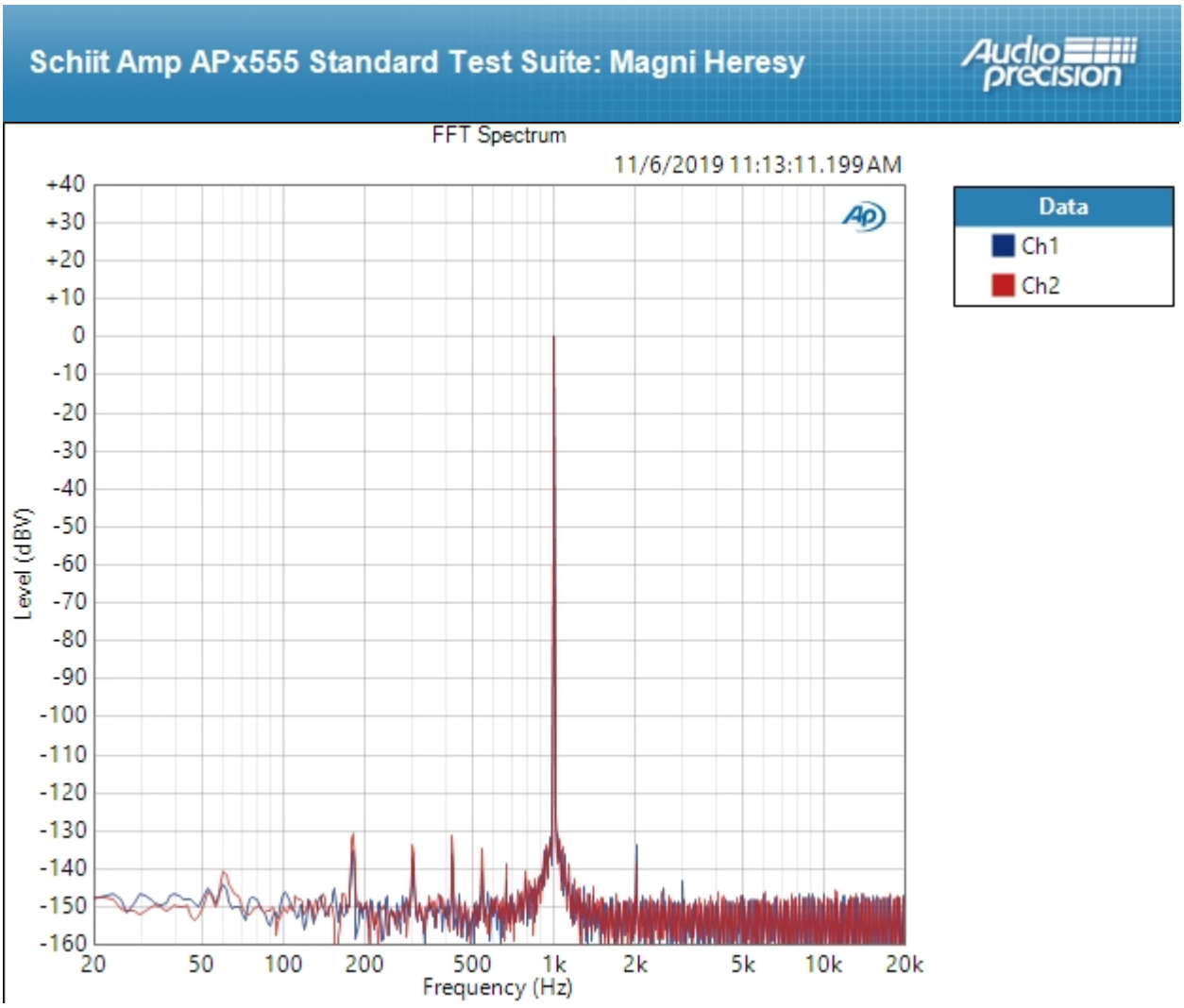
DC Level (11/6/2019 11:13:07.509 AM)

Ch1	-2.152 mV
Ch2	-2.001 mV

300 Ohm Low Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	11/6/2019 11:13:11 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 (11/6/2019 11:13:11.199 AM)

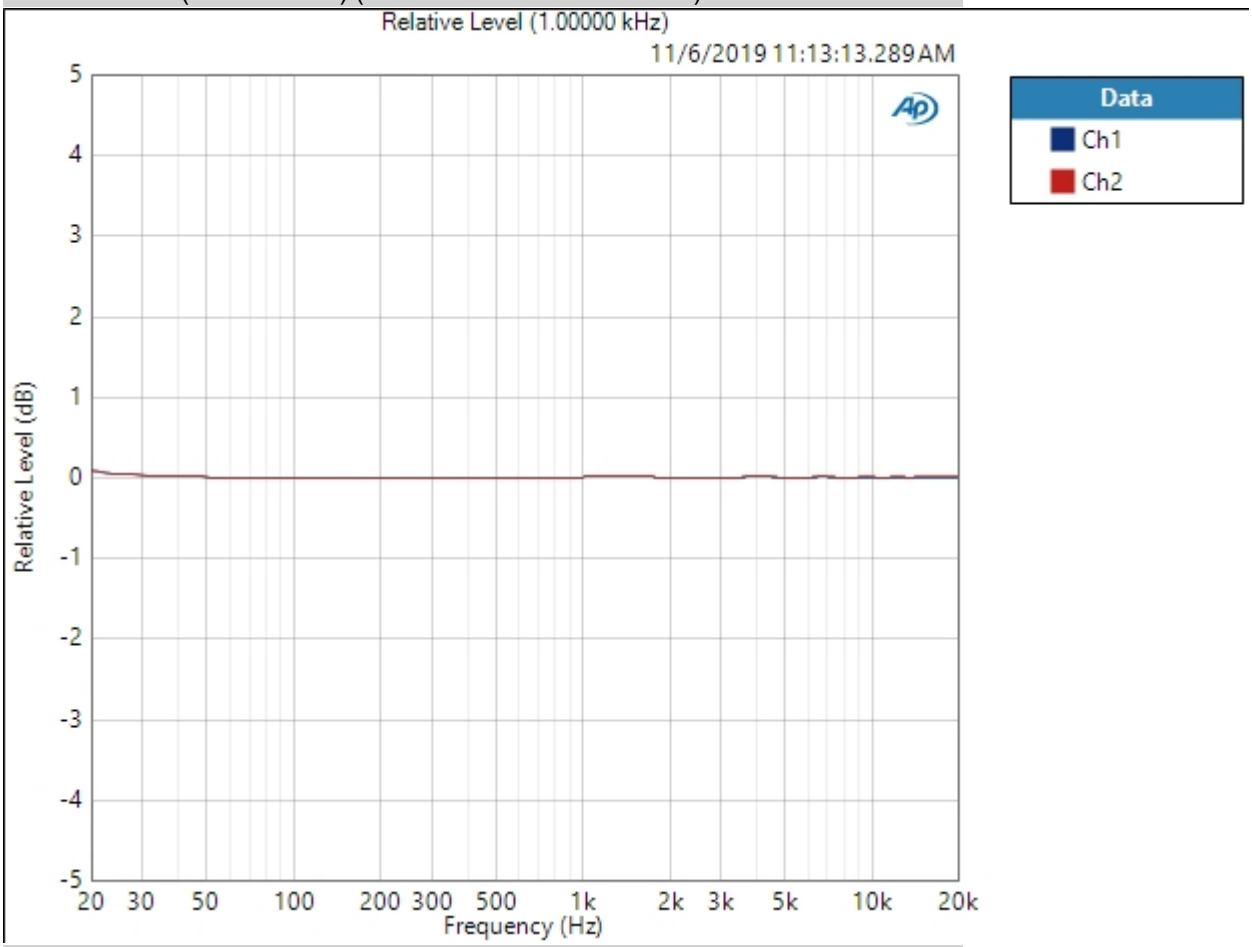


Result: PASSED

300 Ohm Low Gain : 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	11/6/2019 11:13:13 AM

Relative Level (1.00000 kHz) (11/6/2019 11:13:13.289 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) (11/6/2019 11:13:13.289 AM)

Ch1 ±0.038 dB

Ch2 ±0.038 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:	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 (11/6/2019 11:13:15.249 AM)

Ch1 118.285 dB

Ch2 118.086 dB

300 Ohm Low Gain : 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 (11/6/2019 11:13:17.310 AM)

Ch1 -115.237 dB

Ch2 -115.007 dB

THD Ratio (11/6/2019 11:13:17.310 AM)

Ch1 0.000036 %

Ch2 0.000034 %

Noise Ratio (11/6/2019 11:13:17.310 AM)

Ch1 0.000169 %

Ch2 0.000175 %

Distortion Product Ratio (11/6/2019 11:13:17.310 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch1	-0.00	-132.60	-142.42	-141.51	-143.10	-142.79	-143.97	-145.56	-145.24	-149.36
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch2	-0.00	-134.27	-140.27	-143.04	-142.37	-143.90	-145.66	-142.47	-142.15	-145.29

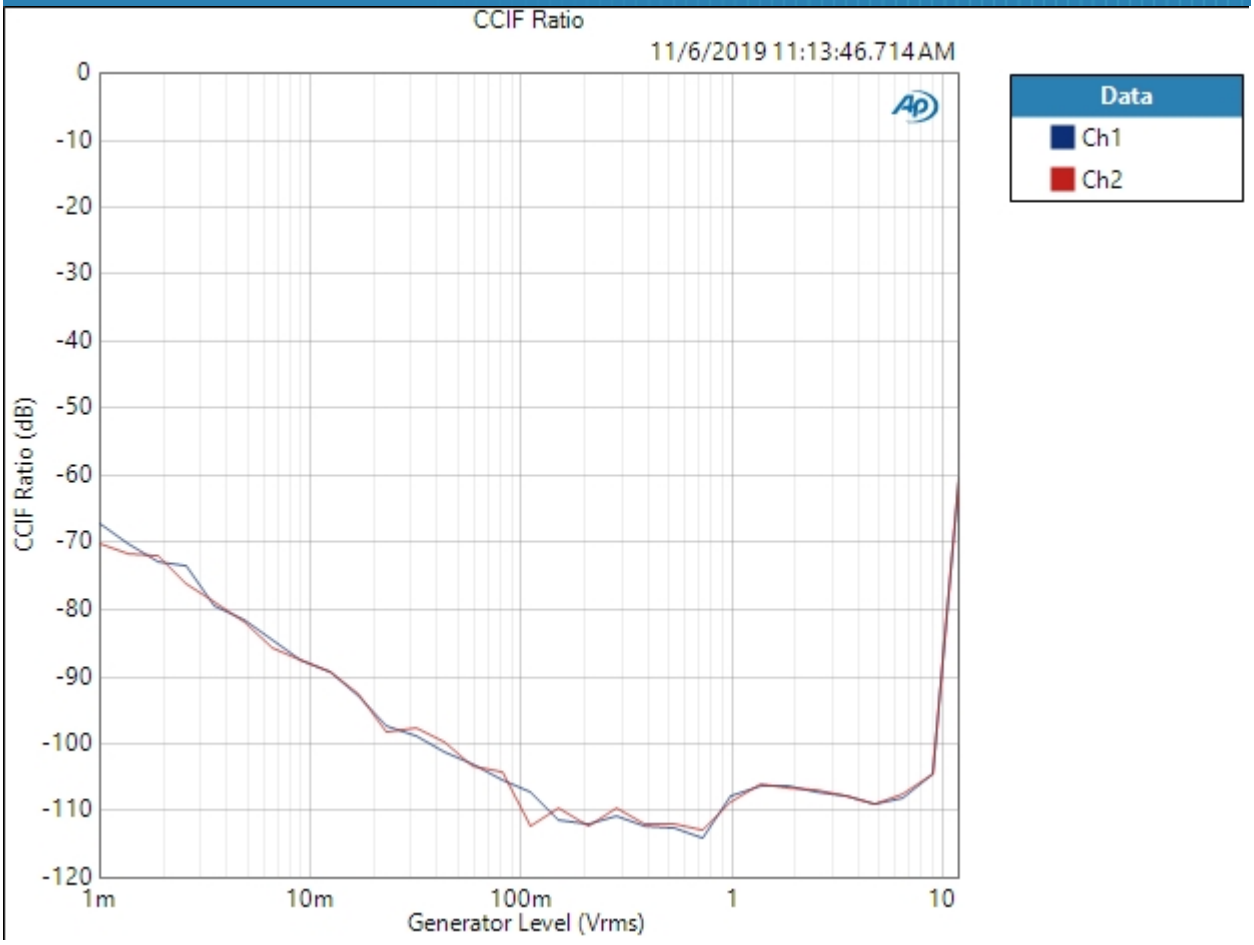
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm Low Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	12.00 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:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	11/6/2019 11:13:46 AM

CCIF Ratio (11/6/2019 11:13:46.714 AM)

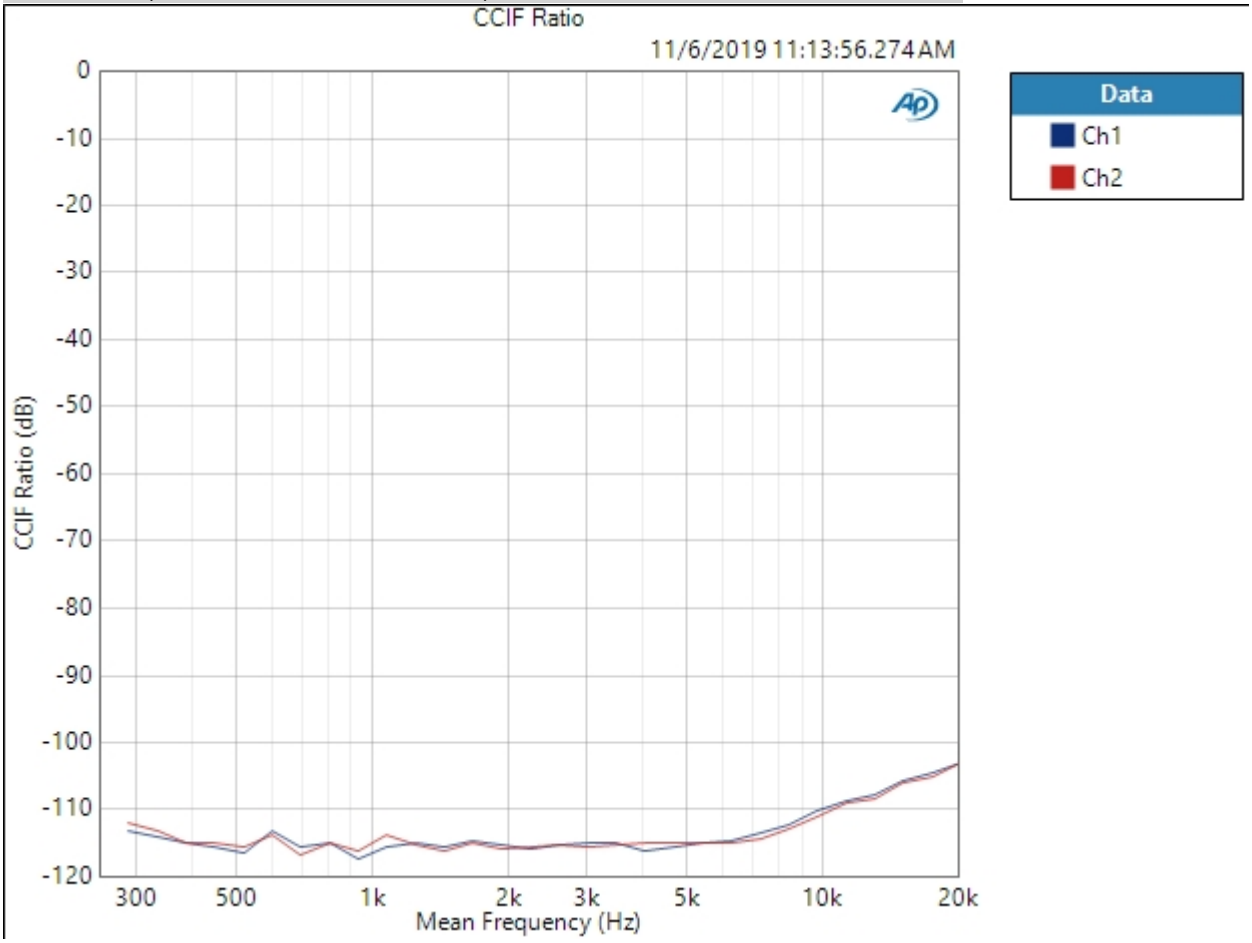


Result: PASSED

300 Ohm Low Gain : 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	11/6/2019 11:13:56 AM

CCIF Ratio (11/6/2019 11:13:56.274 AM)



Result: PASSED

300 Ohm Low Gain : Crosstalk, One Channel Undriven

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

Crosstalk (11/6/2019 11:13:57.554 AM)

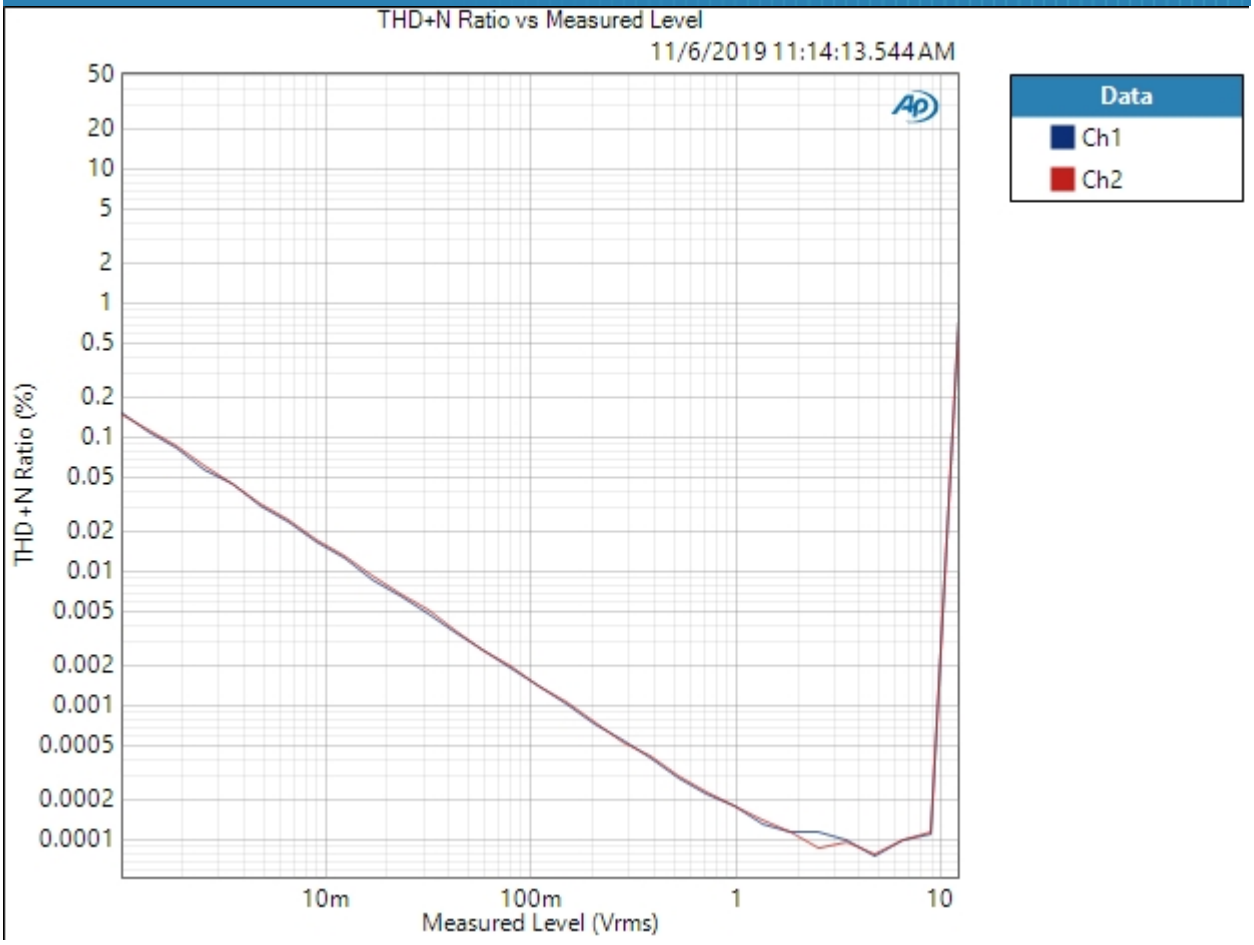
Ch1 -86.109 dB

Ch2 -86.414 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	11/6/2019 11:14:13 AM

THD+N Ratio vs Measured Level (11/6/2019 11:14:13.544 AM)



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:	175.0 mVrms
Frequency:	1.00000 kHz

RMS Level (11/6/2019 11:15:20.467 AM)

Ch1	1.023 Vrms
Ch2	1.022 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

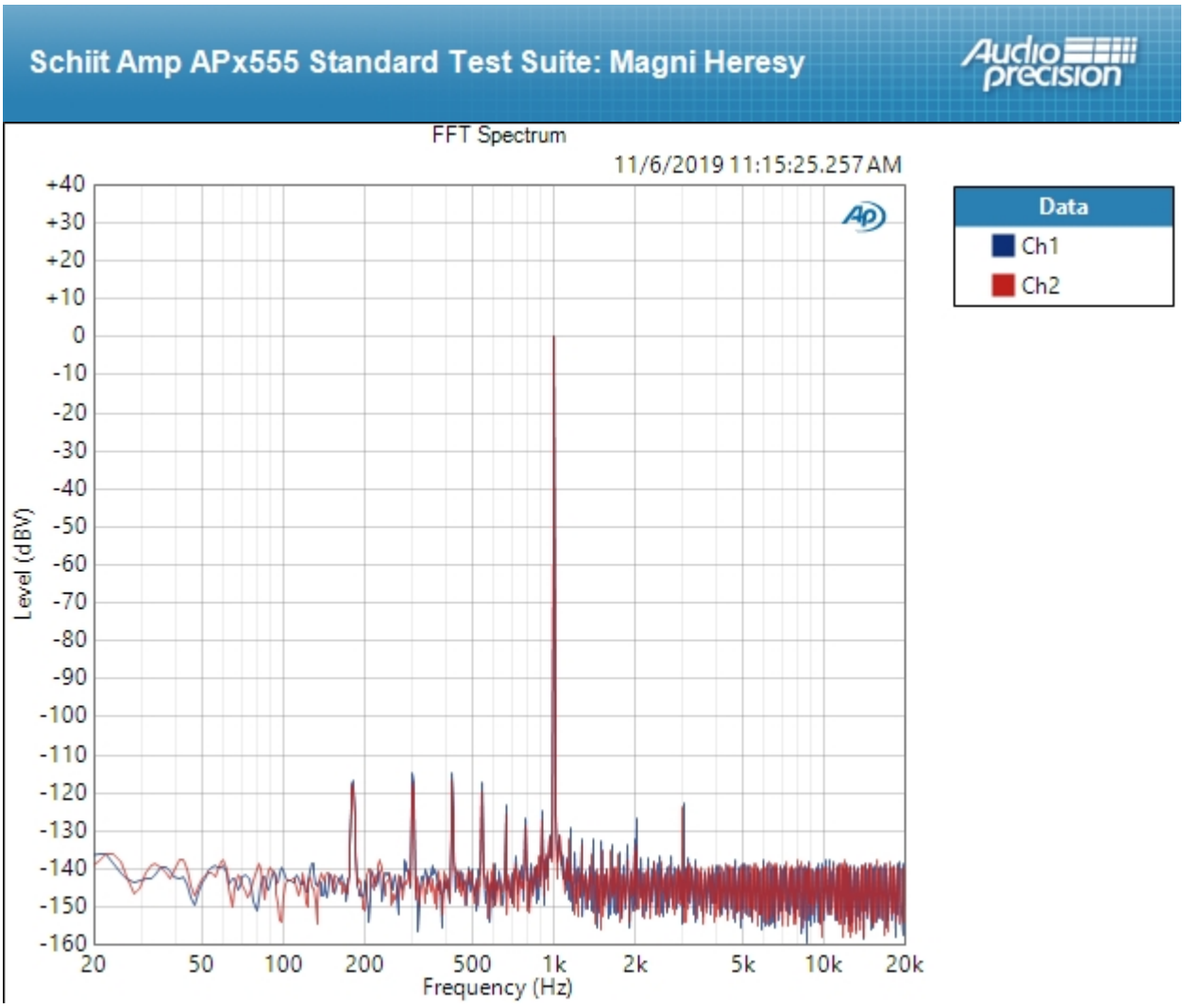
DC Level (11/6/2019 11:15:21.587 AM)

Ch1	-3.009 mV
Ch2	-2.859 mV

300 Ohm High Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	11/6/2019 11:15:25 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 (11/6/2019 11:15:25.257 AM)

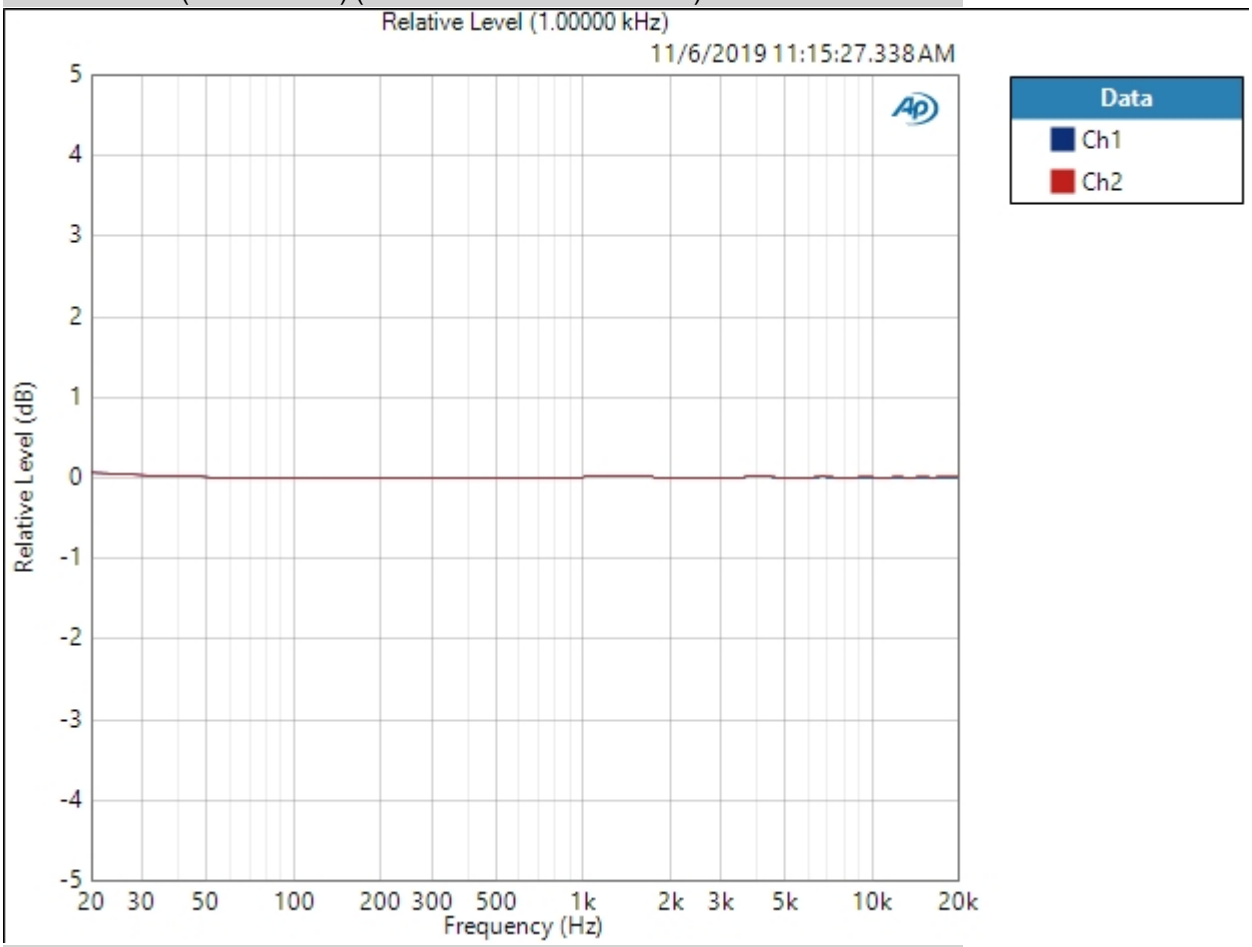


Result: PASSED

300 Ohm High Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	175.0 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	11/6/2019 11:15:27 AM

Relative Level (1.00000 kHz) (11/6/2019 11:15:27.338 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) (11/6/2019 11:15:27.338 AM)

Ch1 ±0.038 dB

Ch2 ±0.038 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:	175.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (11/6/2019 11:15:29.338 AM)

Ch1 107.754 dB

Ch2 108.192 dB

300 Ohm High Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 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 (11/6/2019 11:15:31.388 AM)

Ch1 -105.025 dB

Ch2 -105.832 dB

THD Ratio (11/6/2019 11:15:31.388 AM)

Ch1 0.000118 %

Ch2 0.000104 %

Noise Ratio (11/6/2019 11:15:31.388 AM)

Ch1 0.000544 %

Ch2 0.000498 %

Distortion Product Ratio (11/6/2019 11:15:31.388 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch1	-0.00	-124.99	-121.75	-140.51	-136.79	-135.40	-134.96	-137.42	-134.29	-138.32
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch2	-0.00	-131.90	-122.88	-138.90	-131.17	-134.04	-135.88	-135.80	-137.58	-135.69

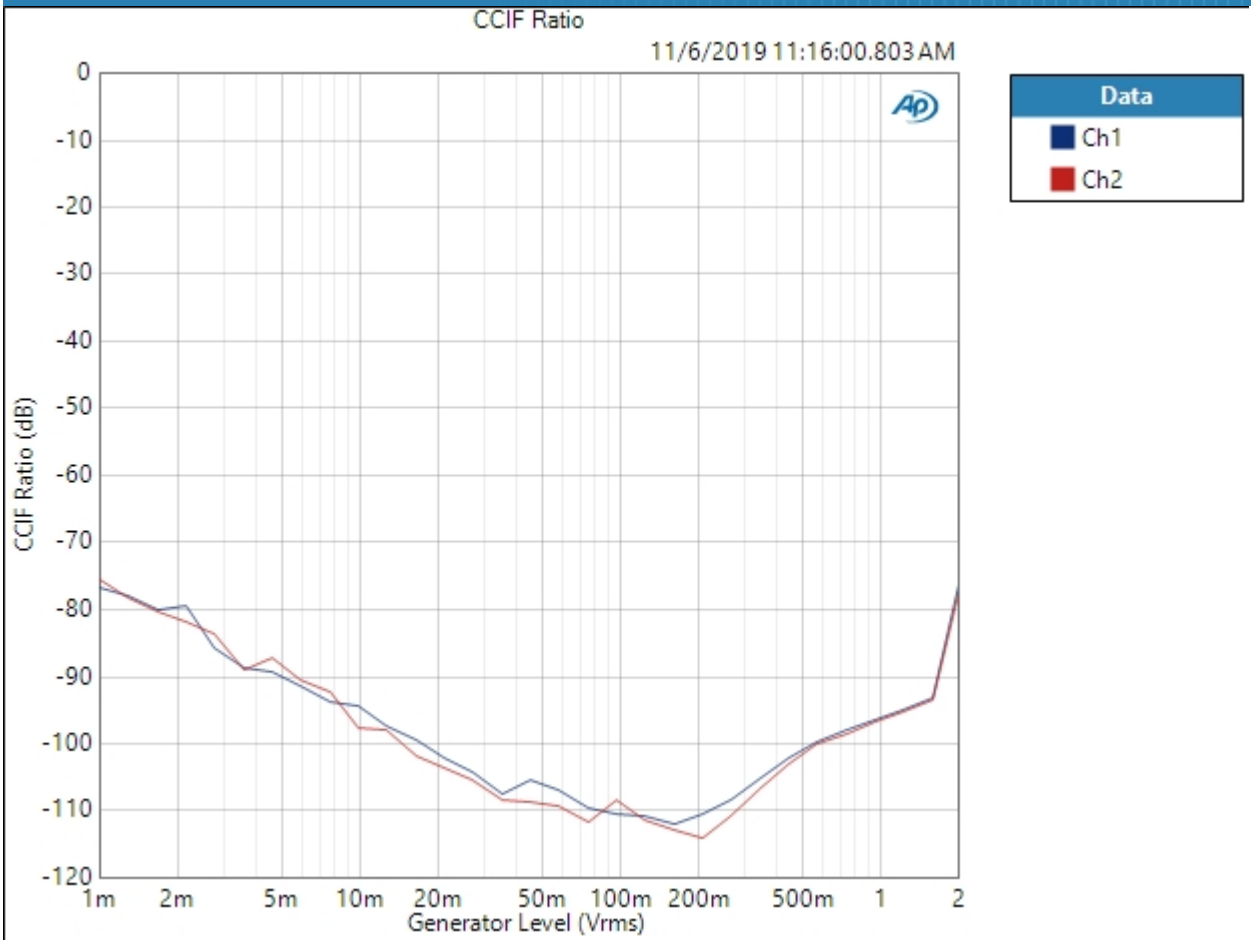
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

300 Ohm High Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	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	11/6/2019 11:16:00 AM

CCIF Ratio (11/6/2019 11:16:00.803 AM)

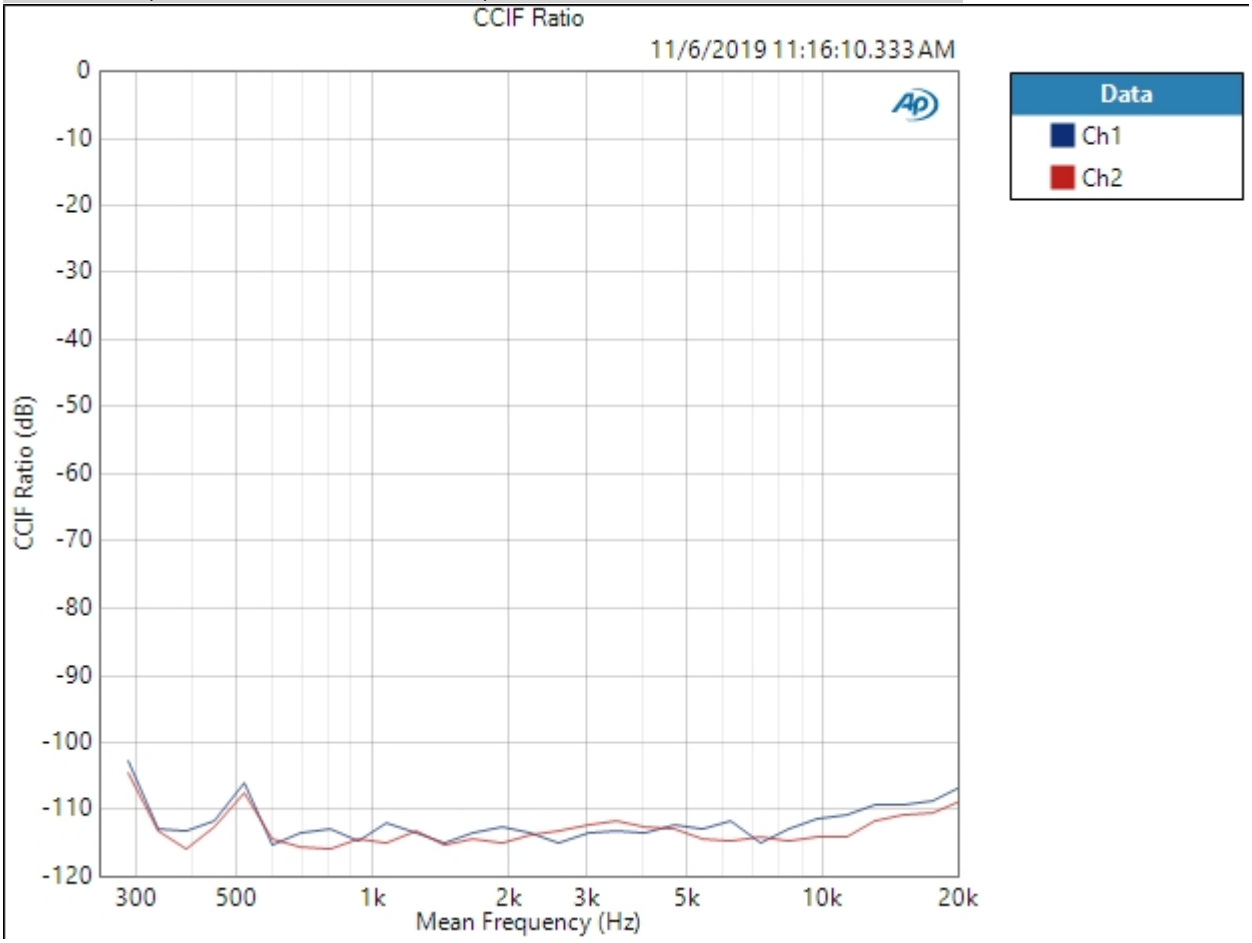


Result: PASSED

300 Ohm High Gain : IMD Frequency Sweep (CCIF)

Generator Level:	175.0 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	11/6/2019 11:16:10 AM

CCIF Ratio (11/6/2019 11:16:10.333 AM)



Result: PASSED

300 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 mVrms
Frequency:	10.0000 kHz

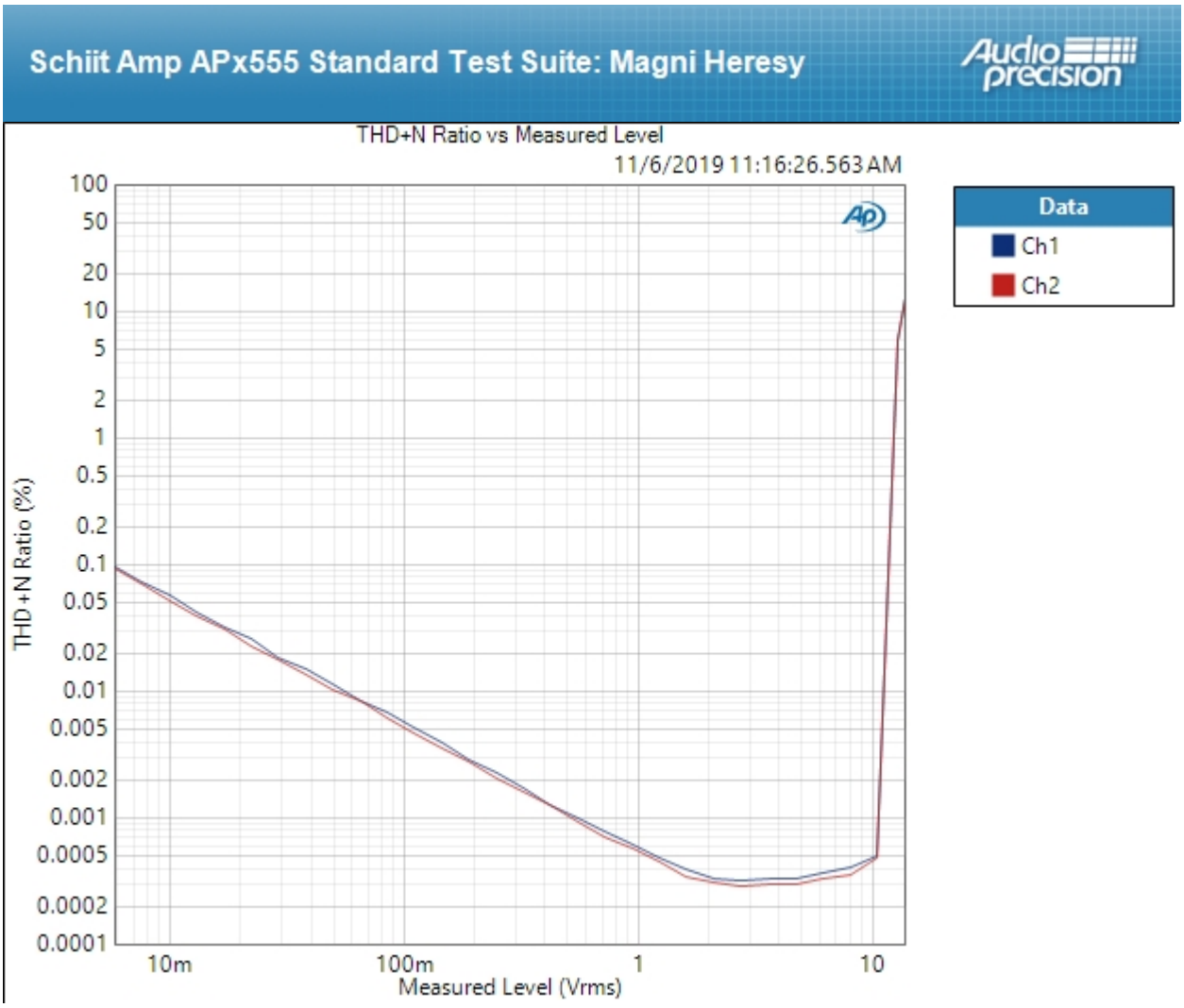
Crosstalk (11/6/2019 11:16:11.583 AM)

Ch1 -81.739 dB
Ch2 -81.620 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:	3.000 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	11/6/2019 11:16:26 AM

THD+N Ratio vs Measured Level (11/6/2019 11:16:26.563 AM)



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:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (11/6/2019 11:17:01.690 AM)

Ch1	0.984 Vrms
Ch2	0.984 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

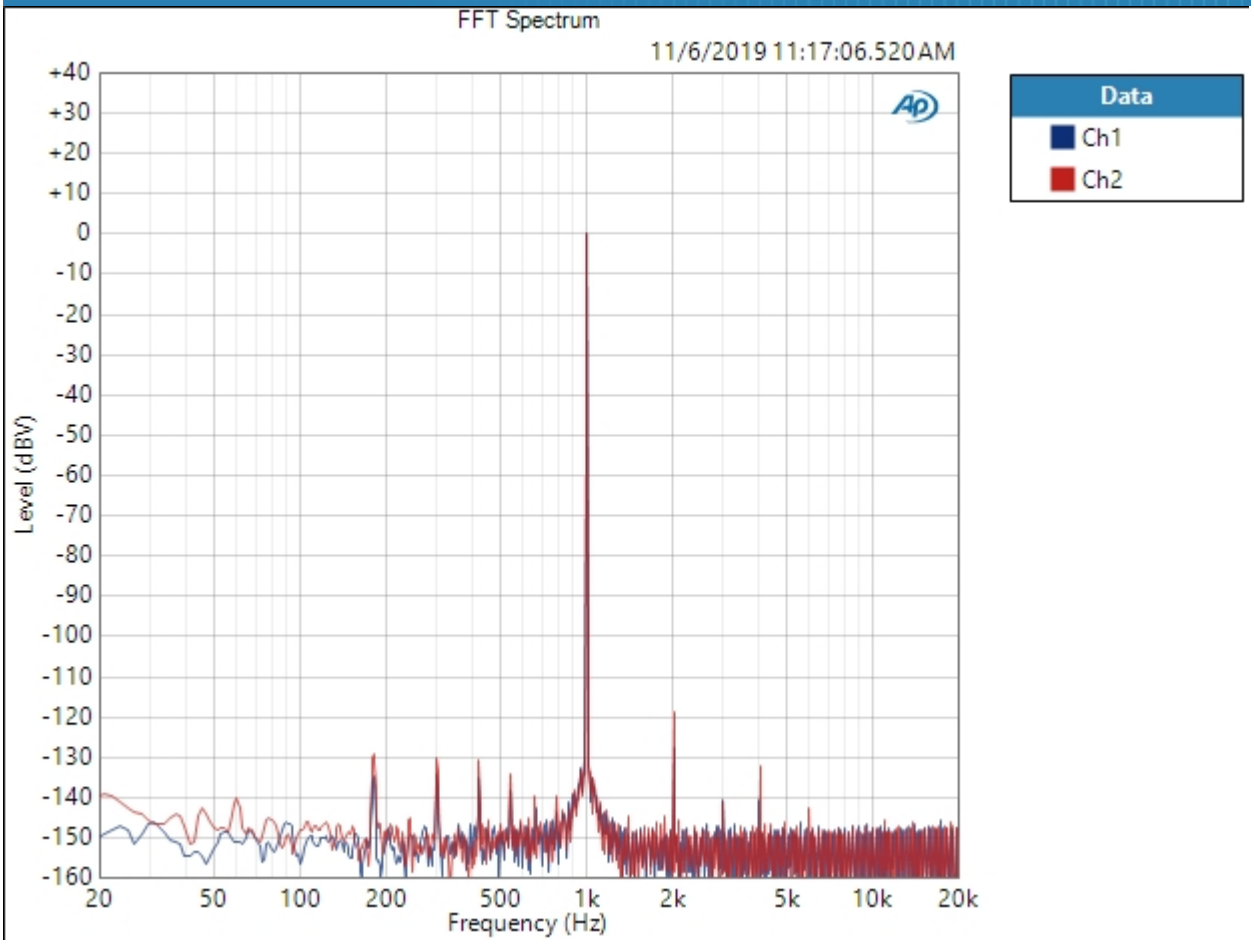
DC Level (11/6/2019 11:17:02.840 AM)

Ch1	-2.141 mV
Ch2	-1.989 mV

32 Ohm Low Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	11/6/2019 11:17:06 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 (11/6/2019 11:17:06.520 AM)

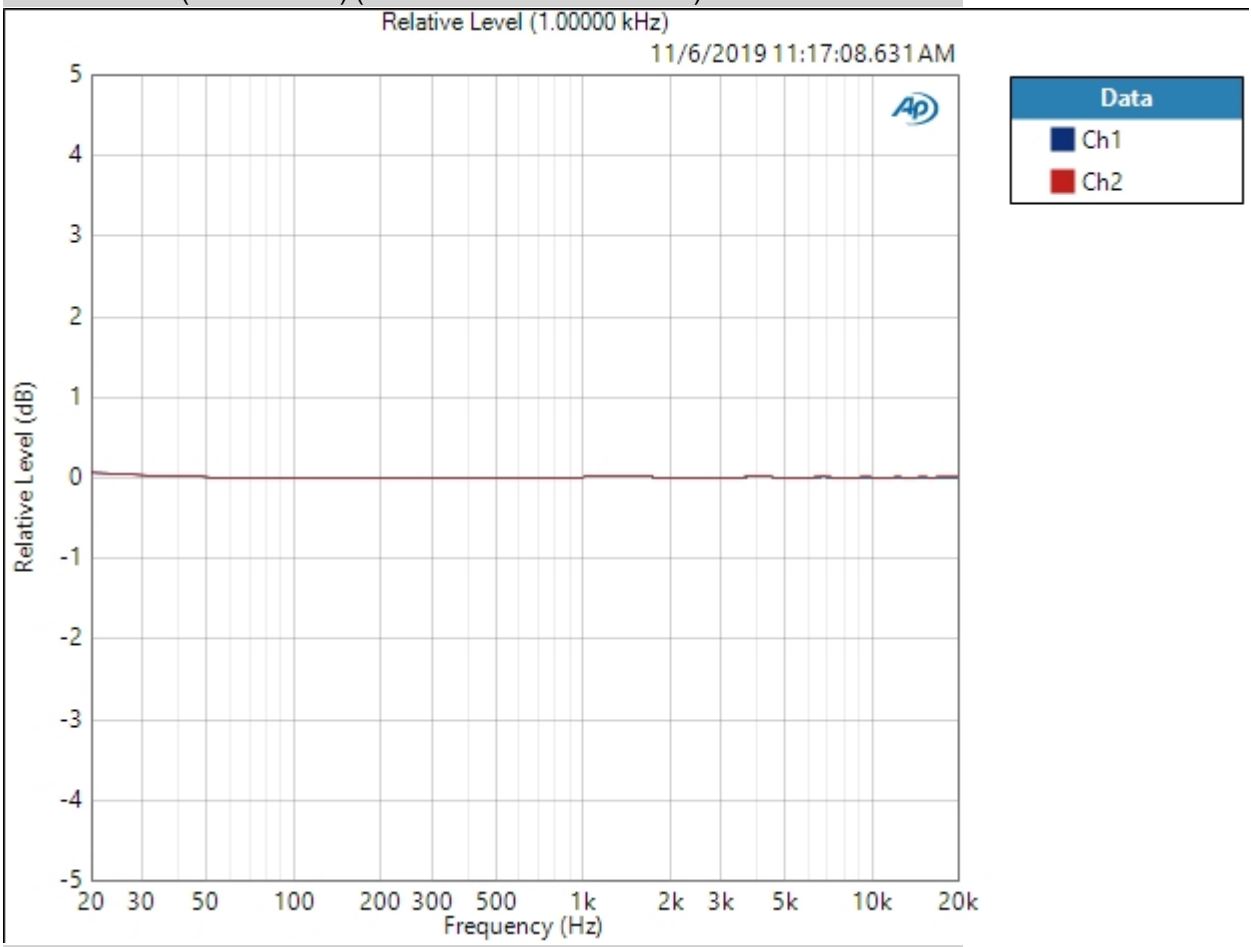


Result: PASSED

32 Ohm Low Gain : 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	11/6/2019 11:17:08 AM

Relative Level (1.00000 kHz) (11/6/2019 11:17:08.631 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) (11/6/2019 11:17:08.631 AM)

Ch1 ±0.038 dB

Ch2 ±0.038 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:	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 (11/6/2019 11:17:10.611 AM)

Ch1 118.274 dB

Ch2 118.049 dB

32 Ohm Low Gain : 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 (11/6/2019 11:17:12.681 AM)

Ch1	-114.918 dB
Ch2	-114.005 dB

THD Ratio (11/6/2019 11:17:12.681 AM)

Ch1	0.000051 %
Ch2	0.000085 %

Noise Ratio (11/6/2019 11:17:12.681 AM)

Ch1	0.000173 %
Ch2	0.000178 %

Distortion Product Ratio (11/6/2019 11:17:12.681 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch1	-0.00	-127.61	-139.86	-141.46	-145.73	-144.39	-142.50	-143.27	-142.93	-144.43
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch2	-0.00	-117.78	-135.88	-132.12	-140.21	-143.54	-141.35	-145.04	-144.83	-140.44

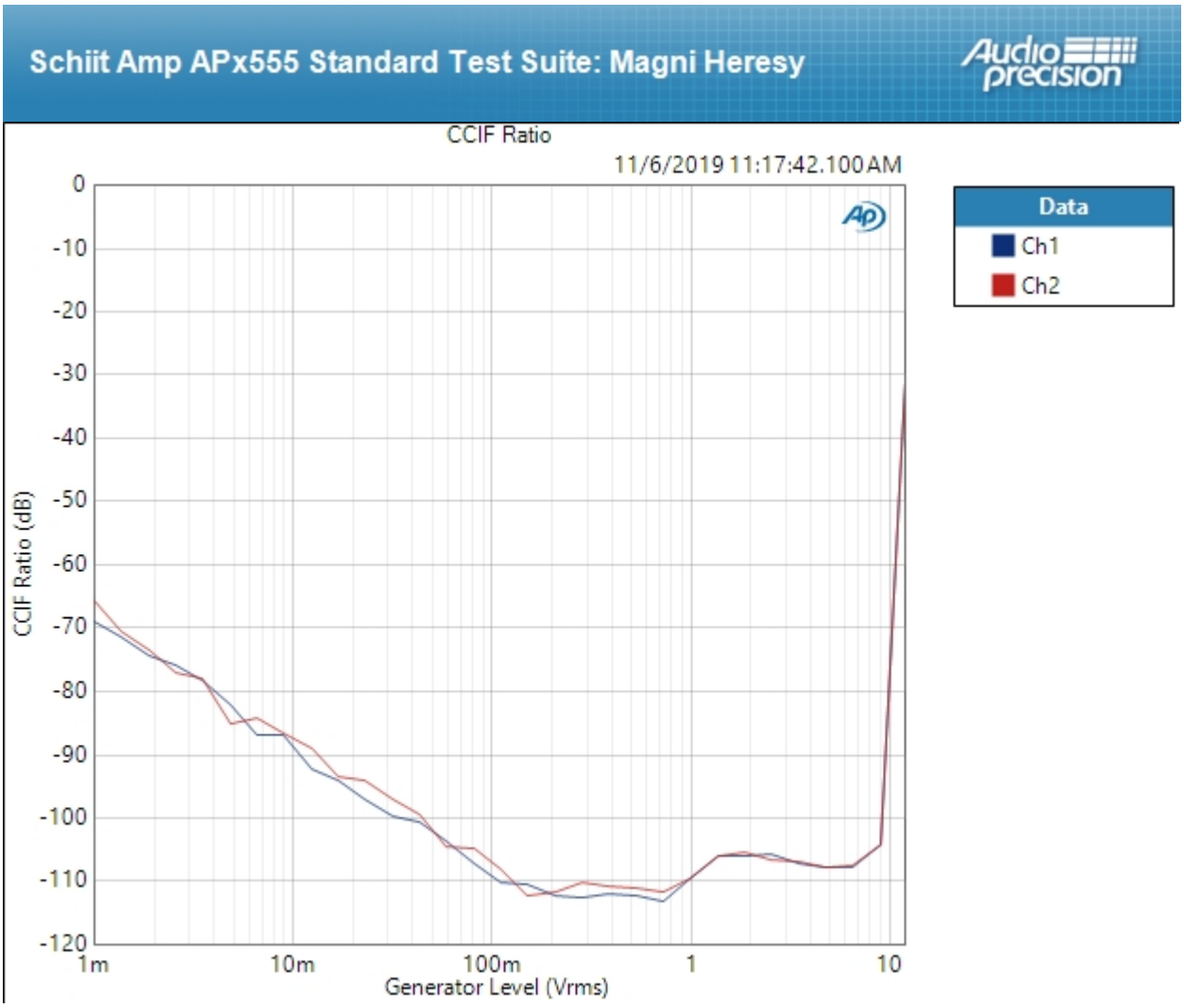
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm Low Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	12.00 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:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	11/6/2019 11:17:42 AM

CCIF Ratio (11/6/2019 11:17:42.100 AM)

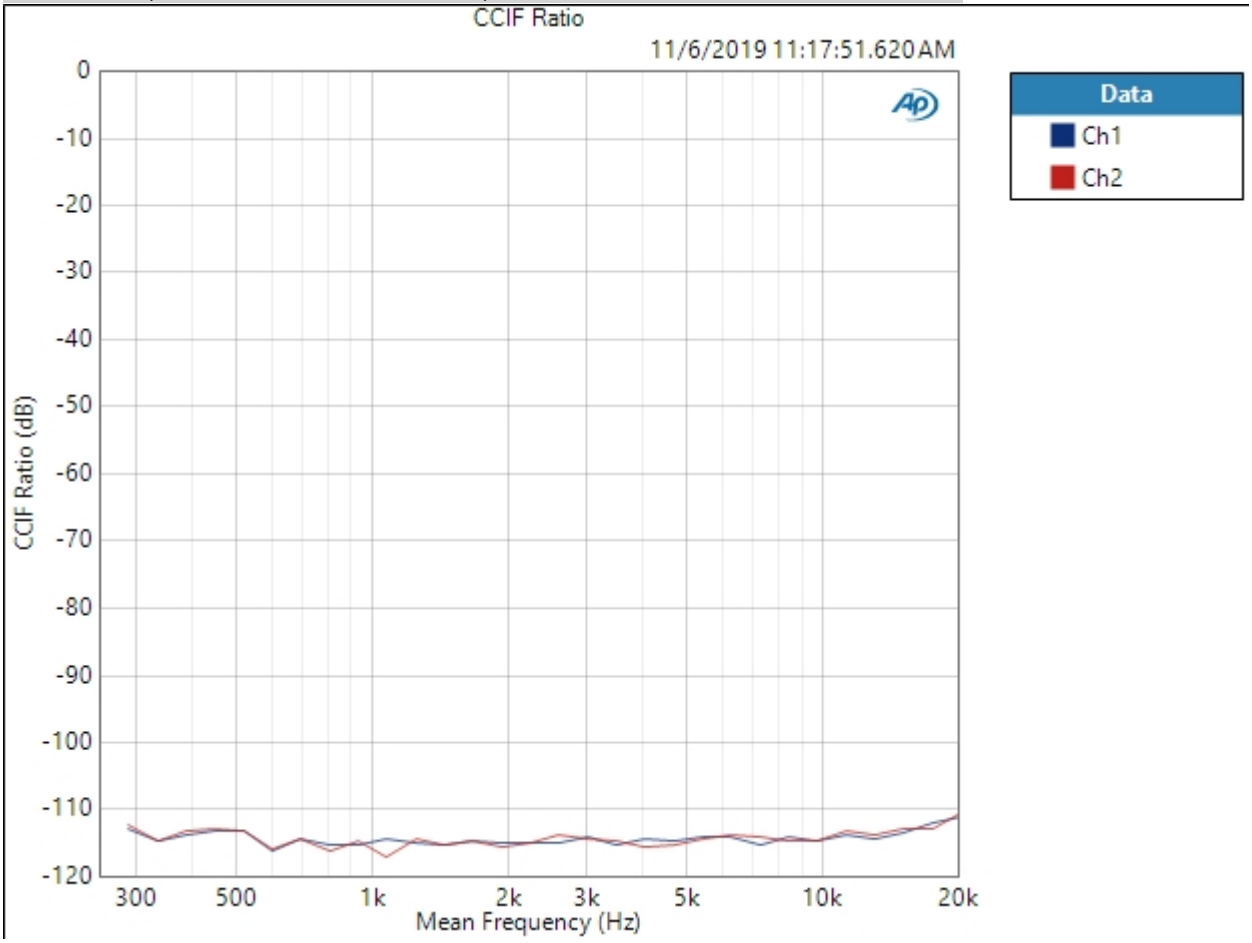


Result: PASSED

32 Ohm Low Gain : 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	11/6/2019 11:17:51 AM

CCIF Ratio (11/6/2019 11:17:51.620 AM)



Result: PASSED

32 Ohm Low Gain : Crosstalk, One Channel Undriven

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

Crosstalk (11/6/2019 11:17:52.830 AM)

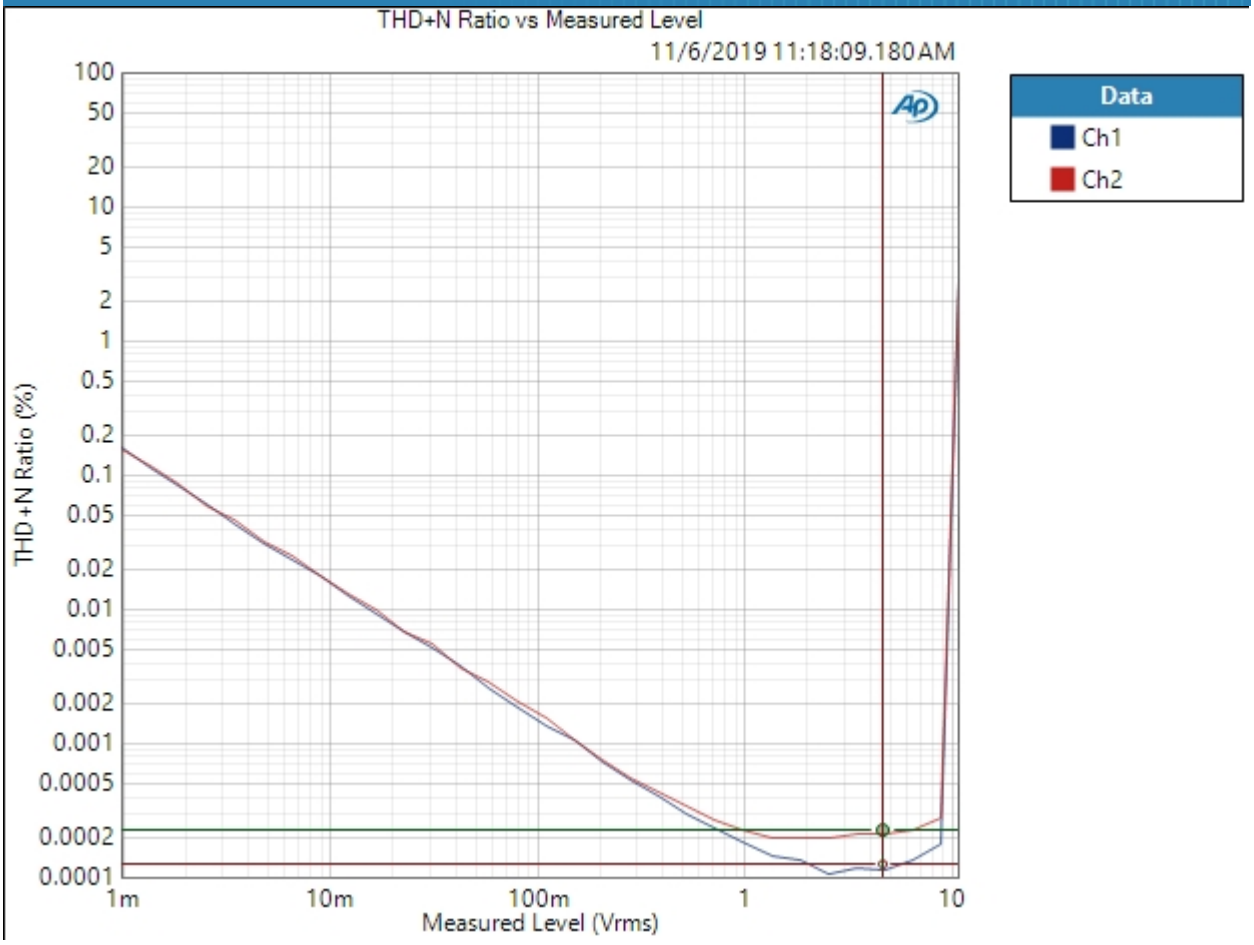
Ch1 -76.806 dB

Ch2 -75.913 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	11/6/2019 11:18:09 AM

THD+N Ratio vs Measured Level (11/6/2019 11:18:09.180 AM)



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:	175.0 mVrms
Frequency:	1.00000 kHz

RMS Level (11/6/2019 11:18:44.718 AM)

Ch1	1.013 Vrms
Ch2	1.013 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

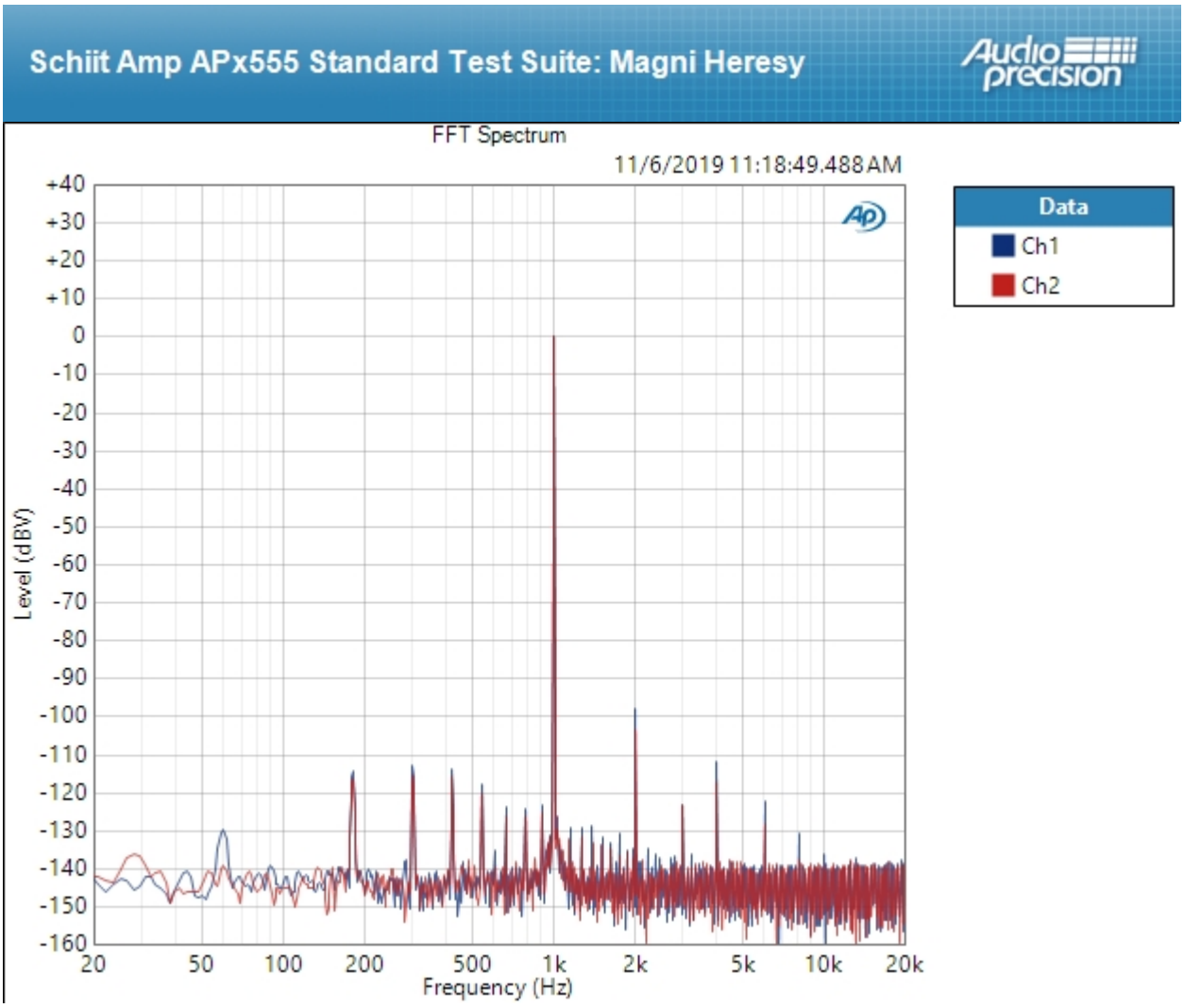
DC Level (11/6/2019 11:18:45.828 AM)

Ch1	-2.993 mV
Ch2	-2.850 mV

32 Ohm High Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	11/6/2019 11:18:49 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 (11/6/2019 11:18:49.488 AM)

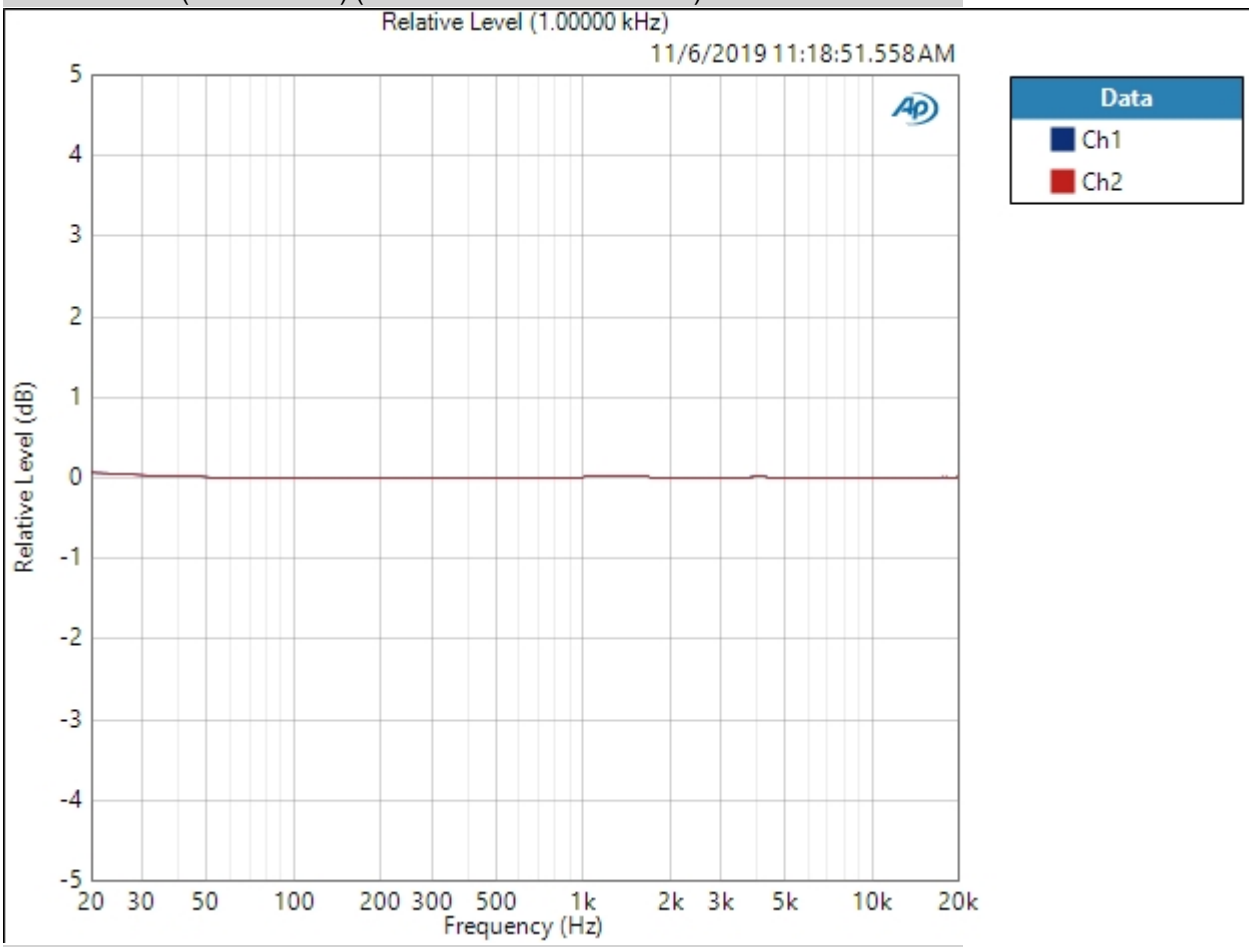


Result: PASSED

32 Ohm High Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	175.0 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	11/6/2019 11:18:51 AM

Relative Level (1.00000 kHz) (11/6/2019 11:18:51.558 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) (11/6/2019 11:18:51.558 AM)

Ch1 ±0.038 dB

Ch2 ±0.038 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:	175.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (11/6/2019 11:18:53.528 AM)

Ch1 107.585 dB

Ch2 108.377 dB

32 Ohm High Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 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 (11/6/2019 11:18:55.588 AM)

Ch1 -97.942 dB

Ch2 -100.865 dB

THD Ratio (11/6/2019 11:18:55.588 AM)

Ch1 0.001285 %

Ch2 0.000737 %

Noise Ratio (11/6/2019 11:18:55.588 AM)

Ch1 0.000584 %

Ch2 0.000533 %

Distortion Product Ratio (11/6/2019 11:18:55.588 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch1	-0.00	-98.05	-123.64	-111.47	-138.30	-122.69	-136.59	-131.61	-134.30	-134.59
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch2	-0.00	-102.94	-122.08	-116.62	-132.48	-128.26	-131.94	-137.44	-136.03	-134.45

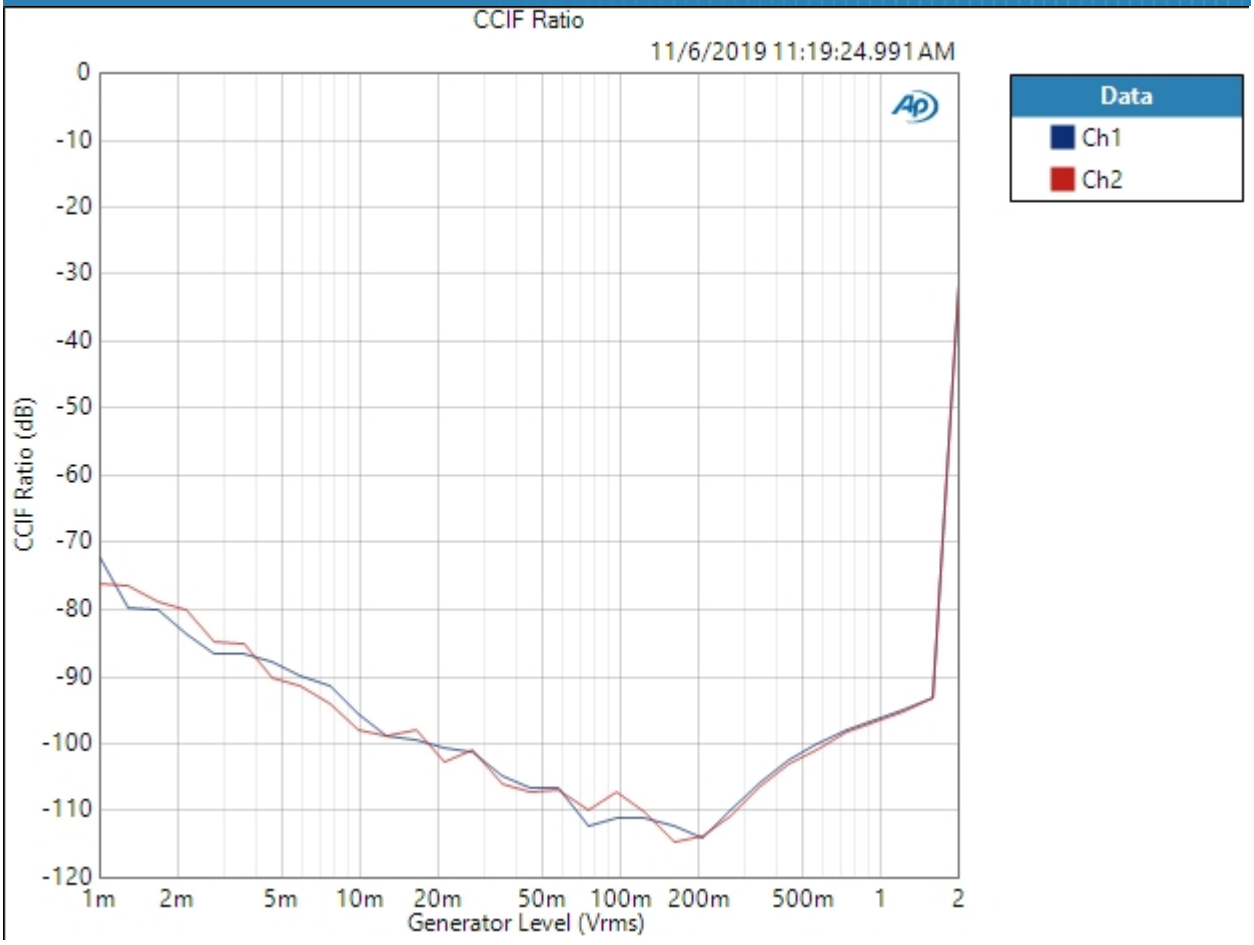
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

32 Ohm High Gain : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	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	11/6/2019 11:19:24 AM

CCIF Ratio (11/6/2019 11:19:24.991 AM)

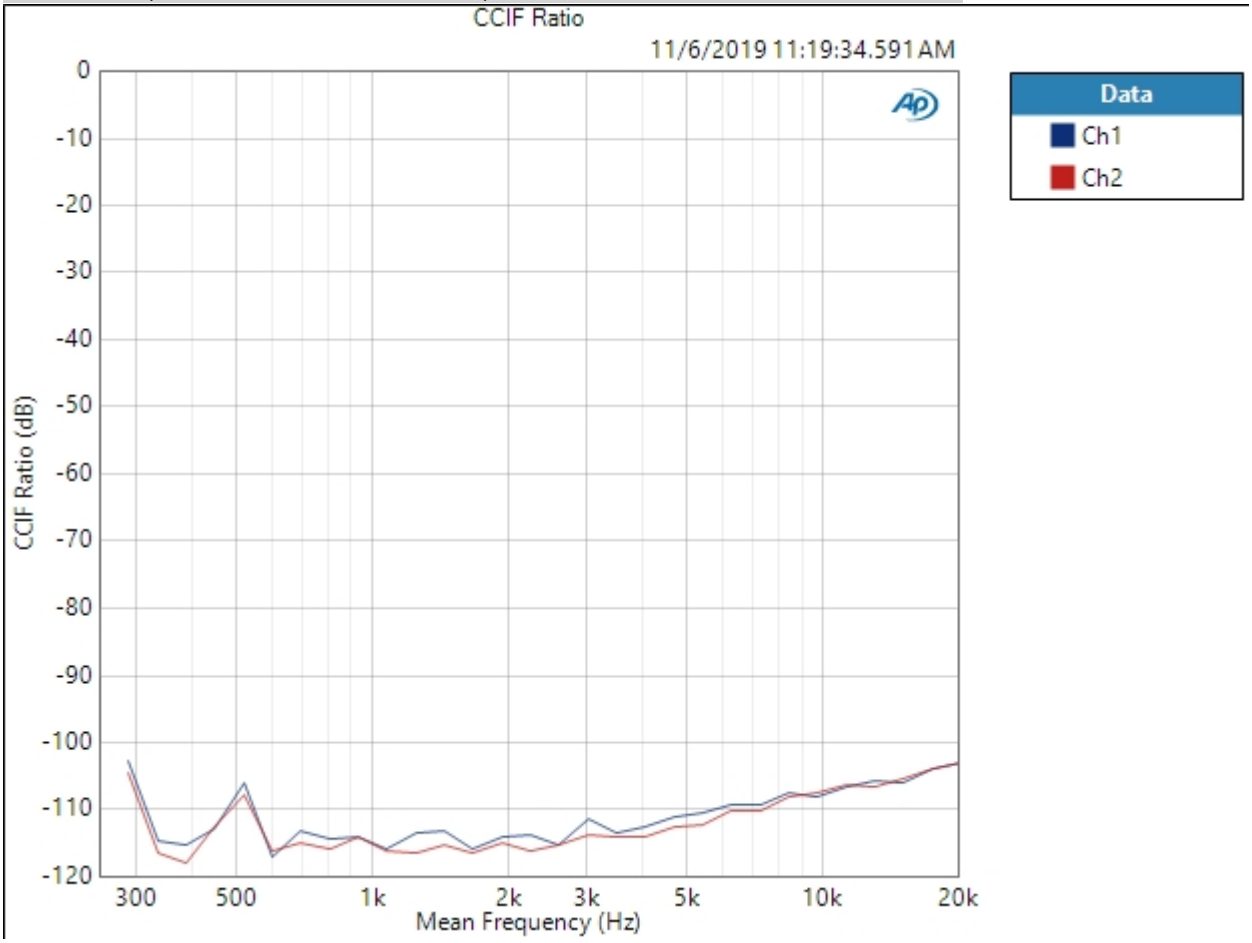


Result: PASSED

32 Ohm High Gain : IMD Frequency Sweep (CCIF)

Generator Level:	175.0 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	11/6/2019 11:19:34 AM

CCIF Ratio (11/6/2019 11:19:34.591 AM)



Result: PASSED

32 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	175.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (11/6/2019 11:19:35.871 AM)

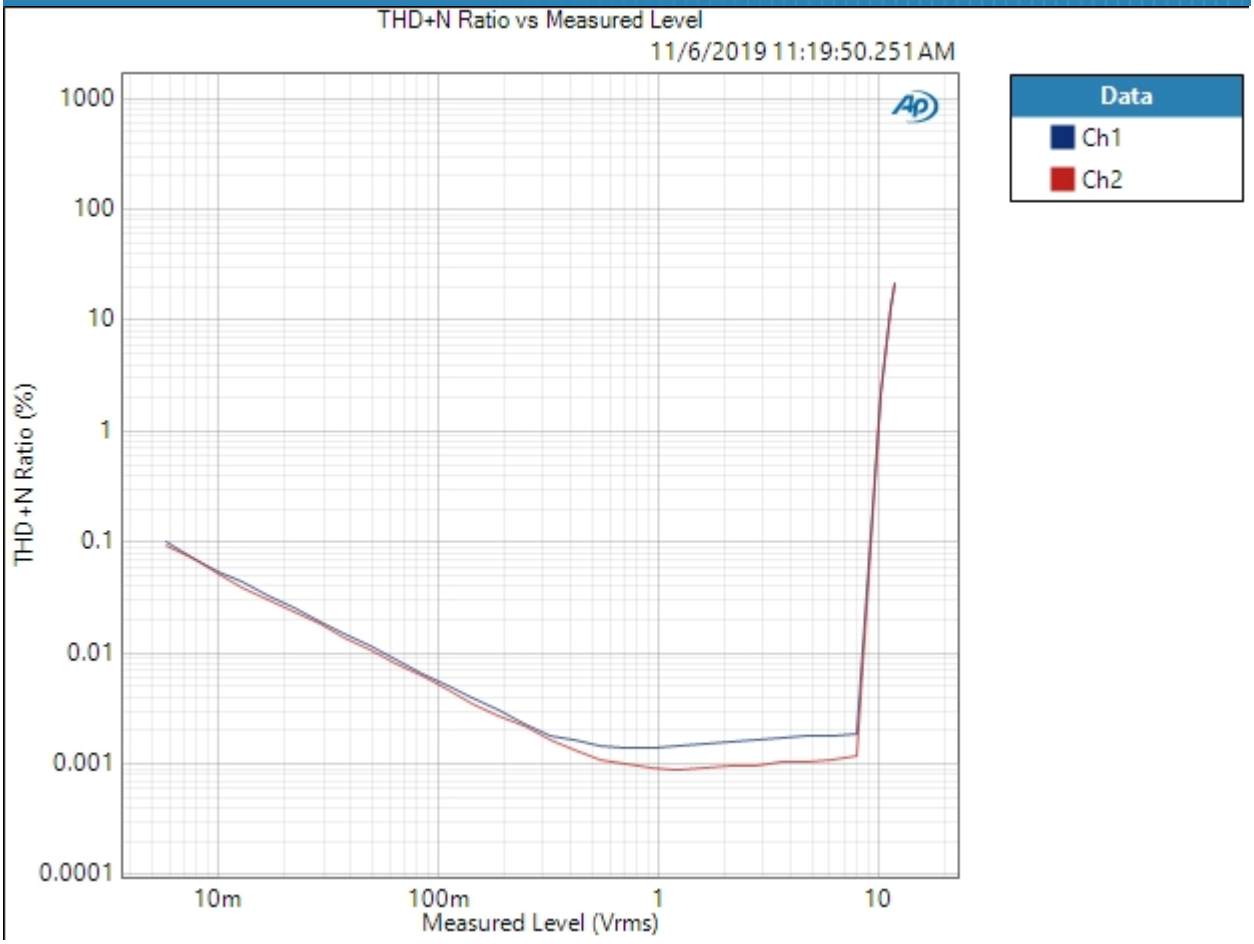
Ch1 -72.714 dB

Ch2 -72.919 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:	3.000 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	11/6/2019 11:19:50 AM

THD+N Ratio vs Measured Level (11/6/2019 11:19:50.251 AM)



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:	1.000 Vrms
Frequency:	1.00000 kHz

RMS Level (11/6/2019 11:24:31.266 AM)

Ch1	0.993 Vrms
Ch2	0.993 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

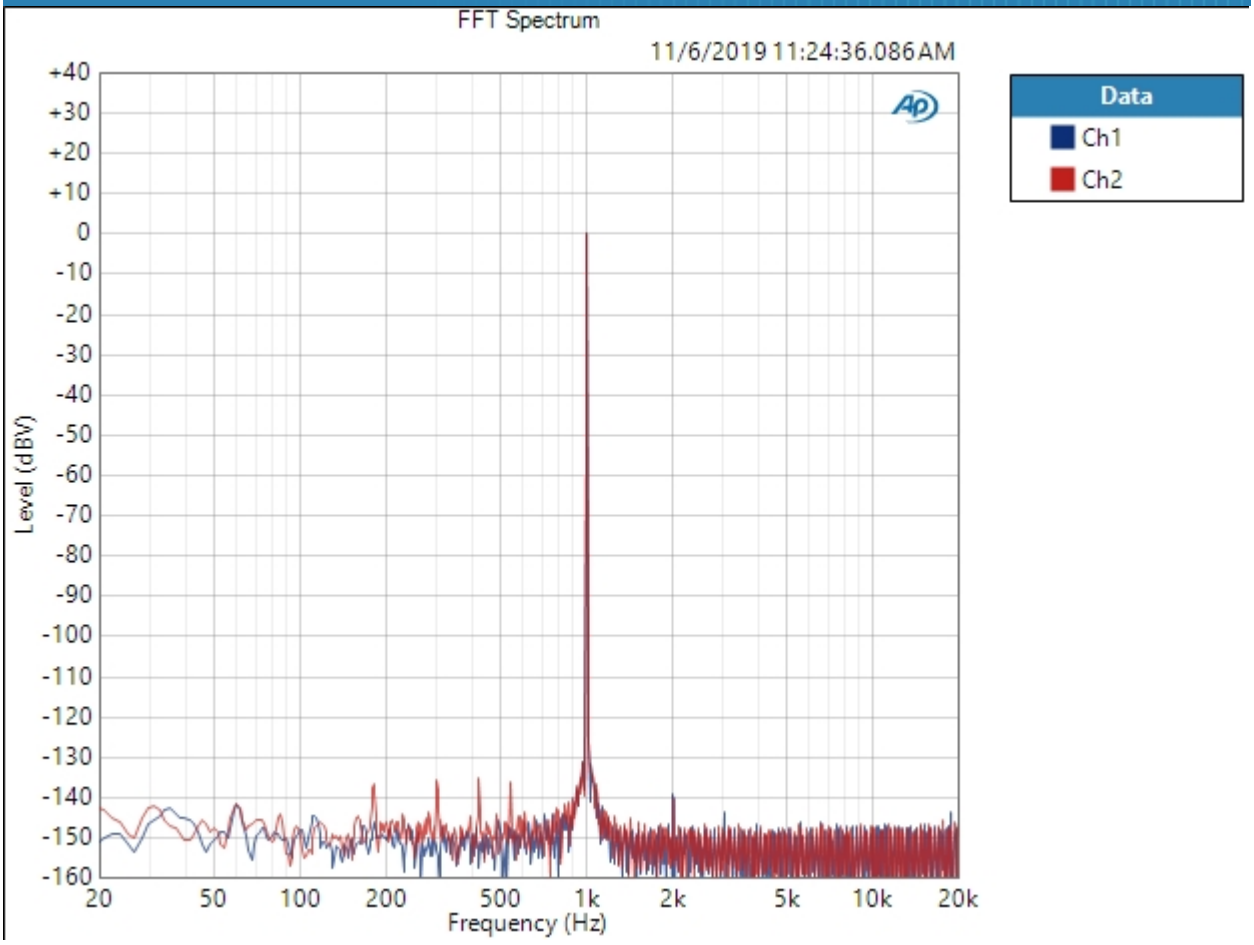
DC Level (11/6/2019 11:24:32.396 AM)

Ch1	-2.200 mV
Ch2	-2.041 mV

Preamp : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	11/6/2019 11:24:36 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 (11/6/2019 11:24:36.086 AM)

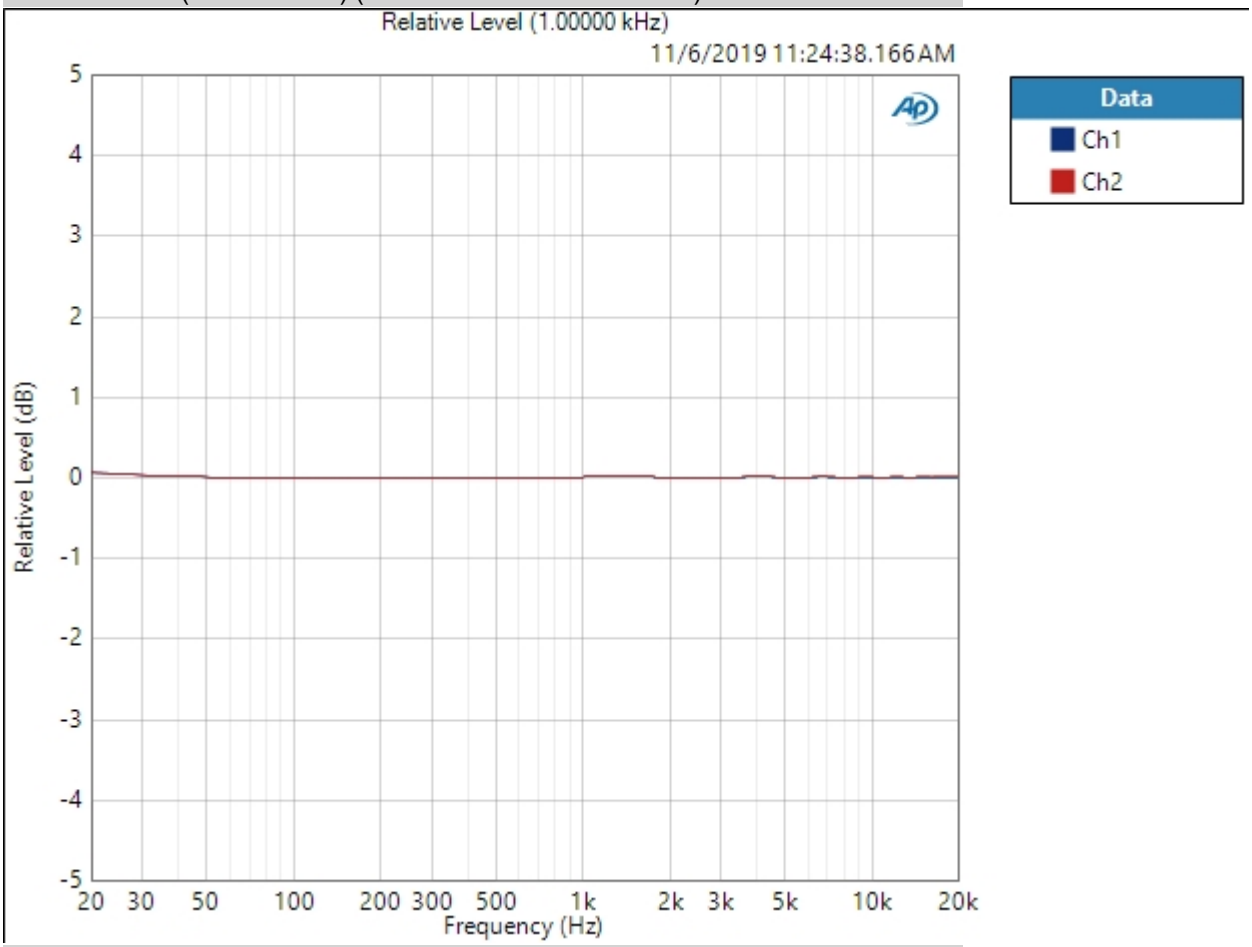


Result: PASSED

Preamp : 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	11/6/2019 11:24:38 AM

Relative Level (1.00000 kHz) (11/6/2019 11:24:38.166 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) (11/6/2019 11:24:38.166 AM)

Ch1 ±0.038 dB

Ch2 ±0.038 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:	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 (11/6/2019 11:24:40.176 AM)

Ch1 118.173 dB

Ch2 117.902 dB

Preamp : 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 (11/6/2019 11:24:42.506 AM)

Ch1 -115.258 dB

Ch2 -115.256 dB

THD Ratio (11/6/2019 11:24:42.506 AM)

Ch1 0.000031 %

Ch2 0.000029 %

Noise Ratio (11/6/2019 11:24:42.506 AM)

Ch1 0.000169 %

Ch2 0.000170 %

Distortion Product Ratio (11/6/2019 11:24:42.506 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch1	-0.00	-138.41	-142.86	-147.61	-139.63	-147.97	-146.14	-141.80	-141.65	-142.35
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.001k	8.001k	9.001k	10.00k
Ch2	-0.00	-137.19	-144.10	-142.71	-143.00	-148.55	-144.92	-146.97	-143.32	-143.83

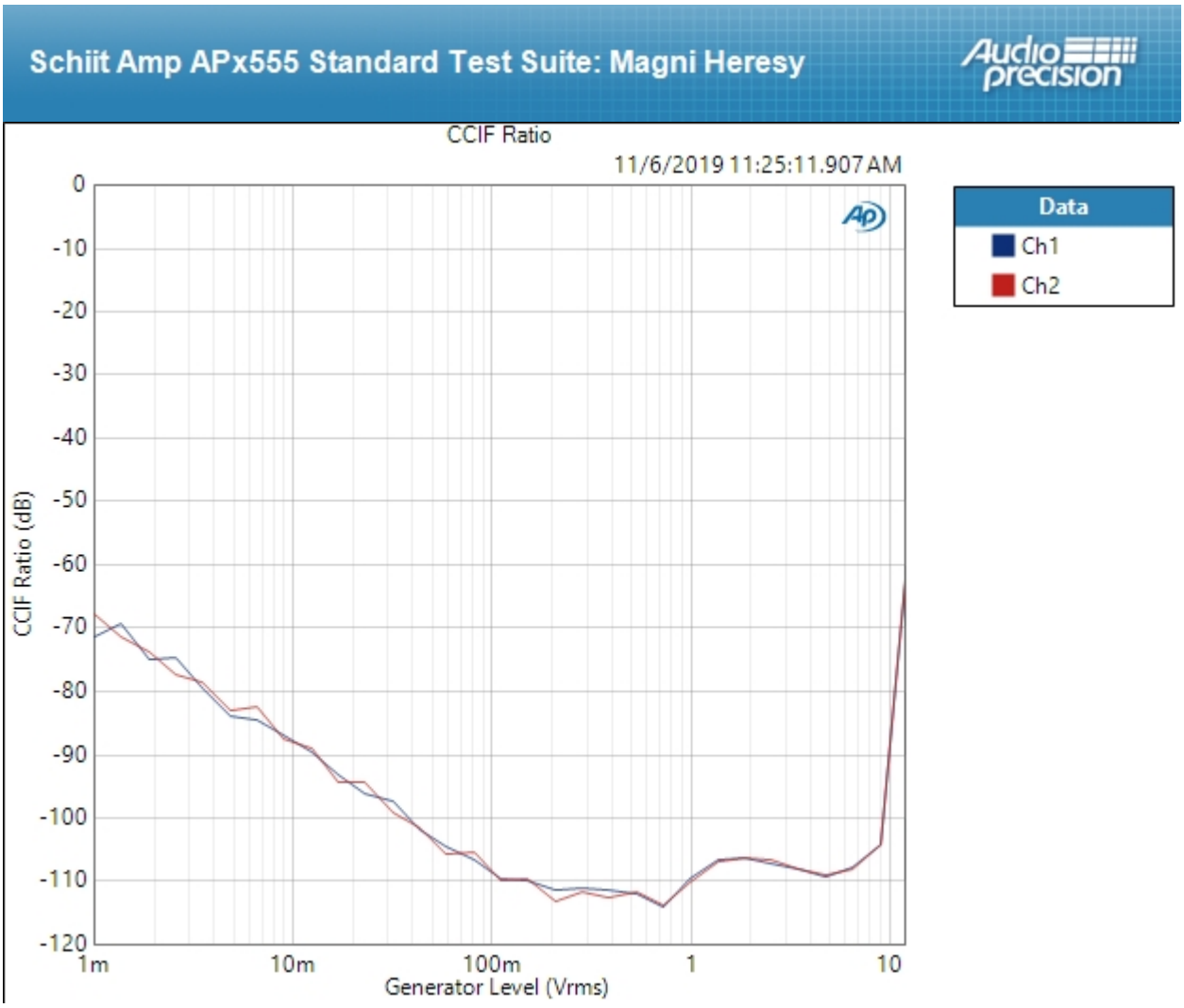
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Preamp : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	12.00 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:	12.00 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	11/6/2019 11:25:11 AM

CCIF Ratio (11/6/2019 11:25:11.907 AM)

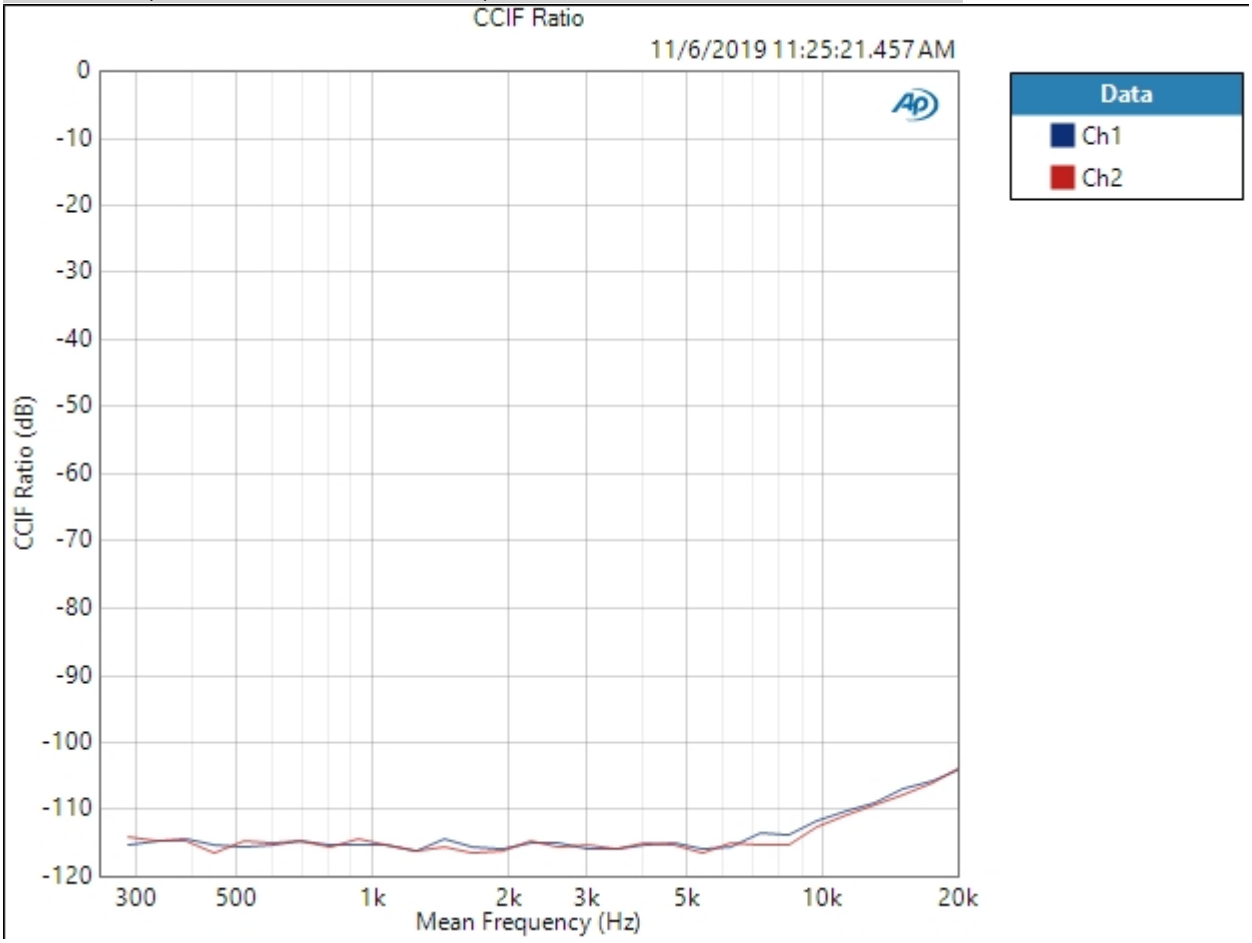


Result: PASSED

Preamp : 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	11/6/2019 11:25:21 AM

CCIF Ratio (11/6/2019 11:25:21.457 AM)



Result: PASSED

Preamp : Crosstalk, One Channel Undriven

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

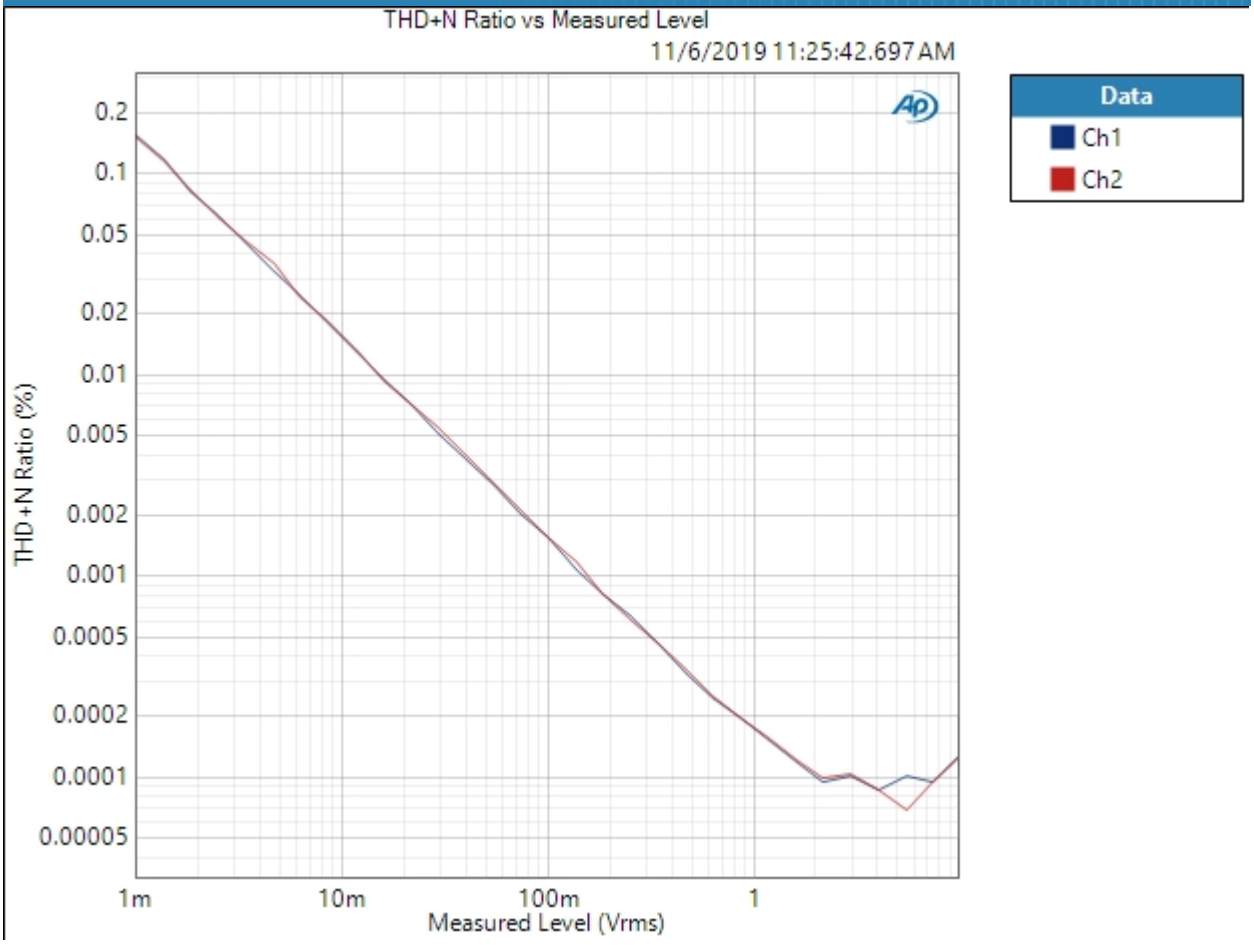
Crosstalk (11/6/2019 11:25:26.387 AM)

Ch1 -83.417 dB
Ch2 -84.304 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:	10.00 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	11/6/2019 11:25:42 AM

THD+N Ratio vs Measured Level (11/6/2019 11:25:42.697 AM)



Result: PASSED