Schiit Preamp APx555 Standard Test Suite: Freya +

Audio precision

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

Passive	
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

Buffer	
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

Tube 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

Sequence Result:

Sequence Result: PASSED

APx Instrument

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

Passive : Signal Path Setup

Output Connector:	Analog Balanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Configuration:	Normal (Differential)
Source Impedance:	40 ohm
AG52 Generator Option:	Installed
Output EQ:	None
Input Connector:	Analog Balanced
Channels:	2
Termination:	200 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

Passive : Level and Gain

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

RMS Level (5/22/2019 10:46:32.447 AM)

Ch1	0.995 Vrms
Ch2	0.995 Vrms

Passive : DC Level

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

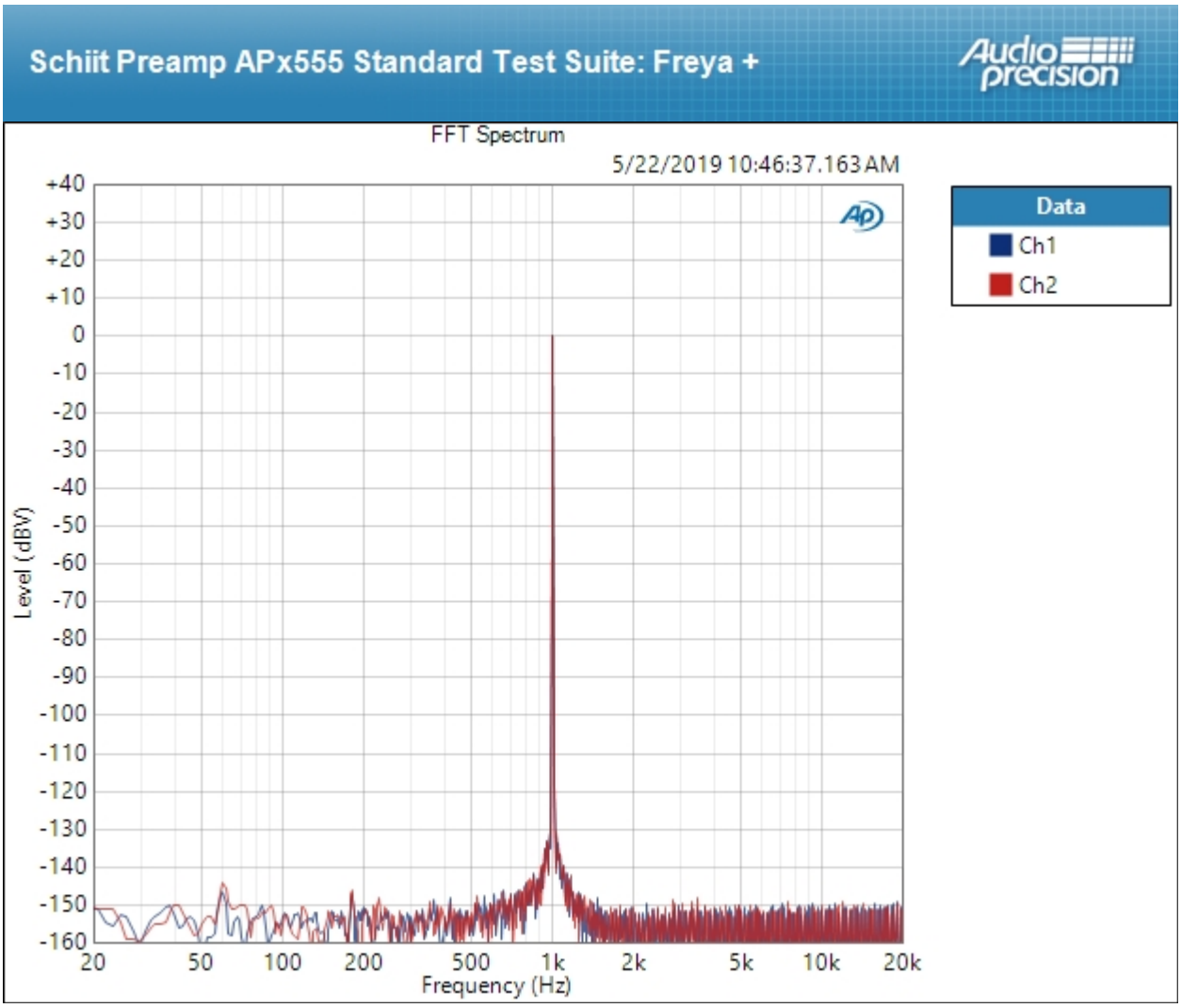
DC Level (5/22/2019 10:46:33.523 AM)

Ch1	-143.2 uV
Ch2	21.36 uV

Passive : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	5/22/2019 10:46:37 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 (5/22/2019 10:46:37.163 AM)

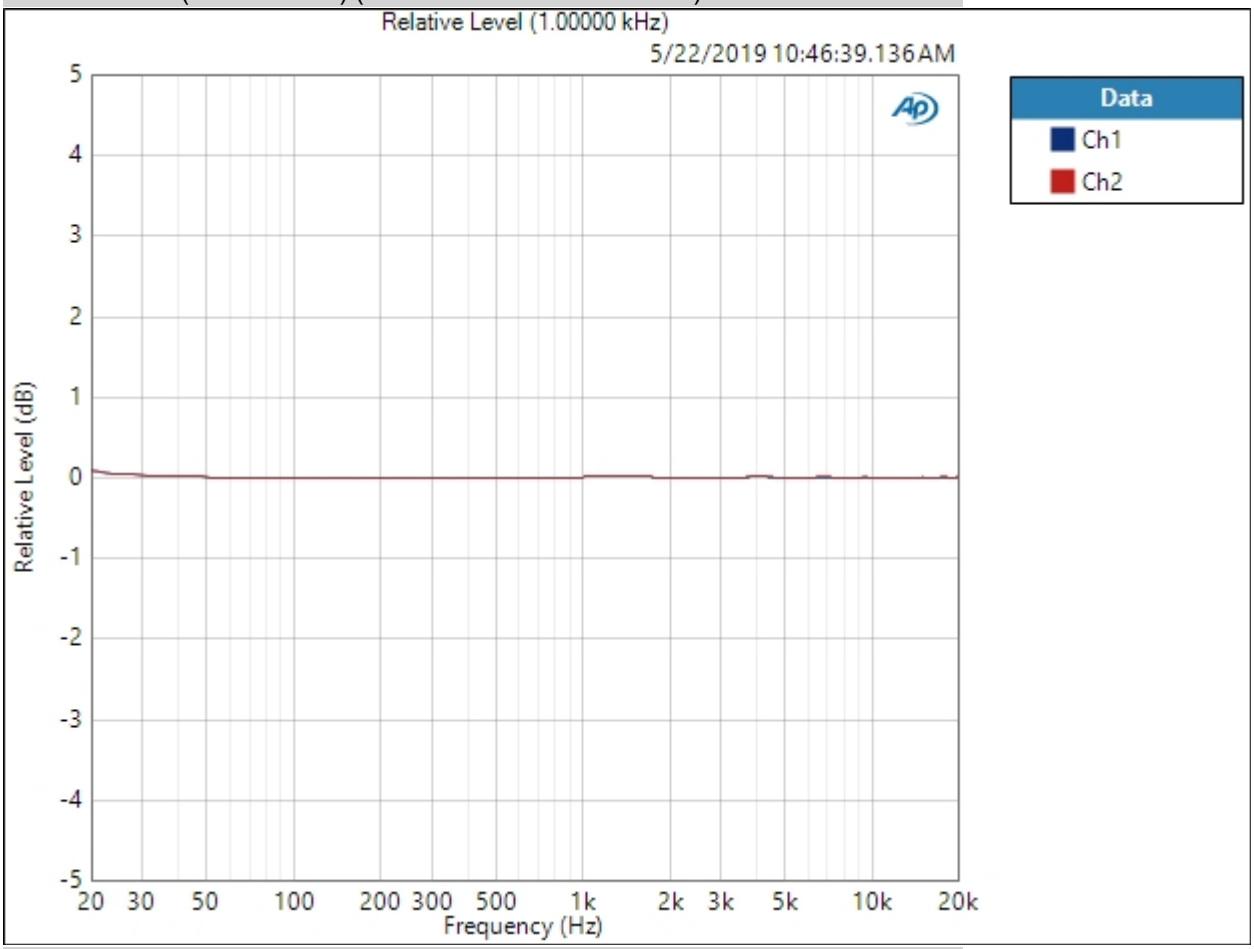


Result: PASSED

Passive : 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	5/22/2019 10:46:39 AM

Relative Level (1.00000 kHz) (5/22/2019 10:46:39.136 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) (5/22/2019 10:46:39.136 AM)

Ch1 ±0.039 dB

Ch2 ±0.038 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Passive : 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 (5/22/2019 10:46:41.074 AM)

Ch1 122.441 dB

Ch2 122.268 dB

Passive : 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 (5/22/2019 10:46:43.364 AM)

Ch1 0.000120 %

Ch2 0.000121 %

THD Ratio (5/22/2019 10:46:43.364 AM)

Ch1 0.000019 %

Ch2 0.000021 %

Noise Ratio (5/22/2019 10:46:43.364 AM)

Ch1 0.000117 %

Ch2 0.000120 %

Distortion Product Ratio (5/22/2019 10:46:43.364 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-144.50	-143.01	-149.02	-147.69	-151.68	-153.24	-145.49	-145.05	-149.97
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-144.56	-146.59	-148.75	-143.27	-144.02	-152.10	-148.07	-148.50	-151.19

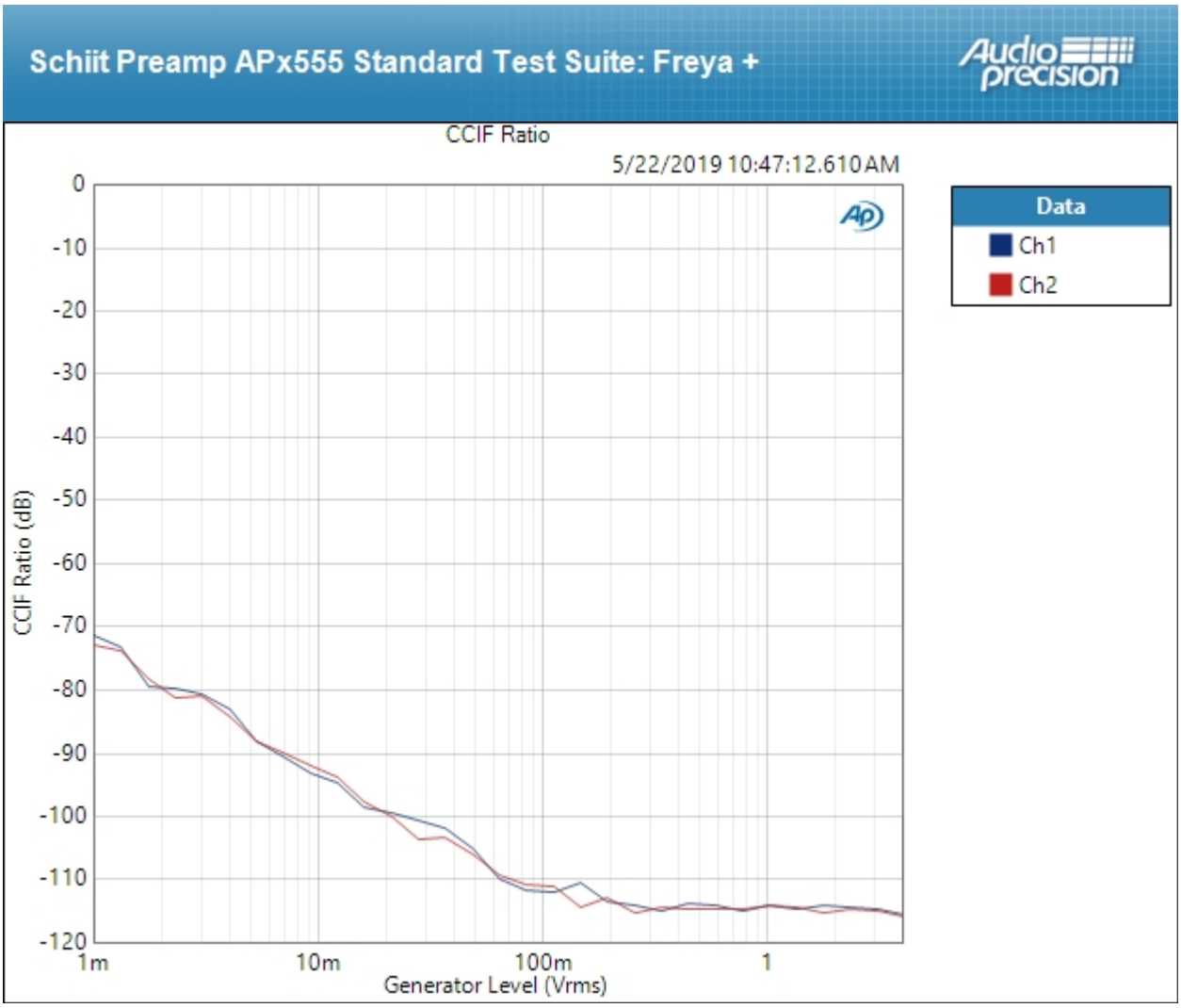
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Passive : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	4.000 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:	4.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/22/2019 10:47:12 AM

CCIF Ratio (5/22/2019 10:47:12.610 AM)

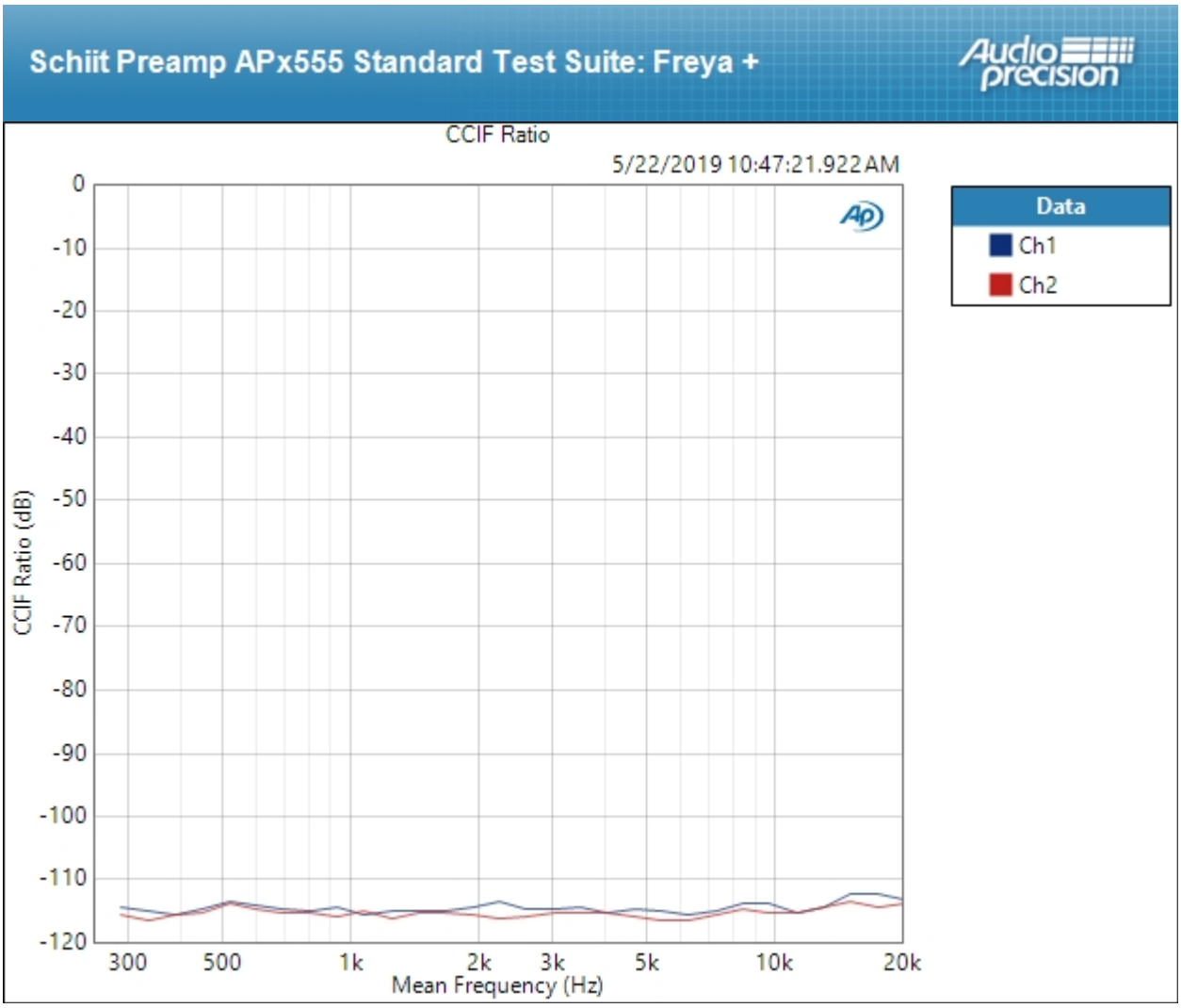


Result: PASSED

Passive : 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	5/22/2019 10:47:21 AM

CCIF Ratio (5/22/2019 10:47:21.922 AM)



Result: PASSED

Passive : Crosstalk, One Channel Undriven

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

Crosstalk (5/22/2019 10:47:24.893 AM)

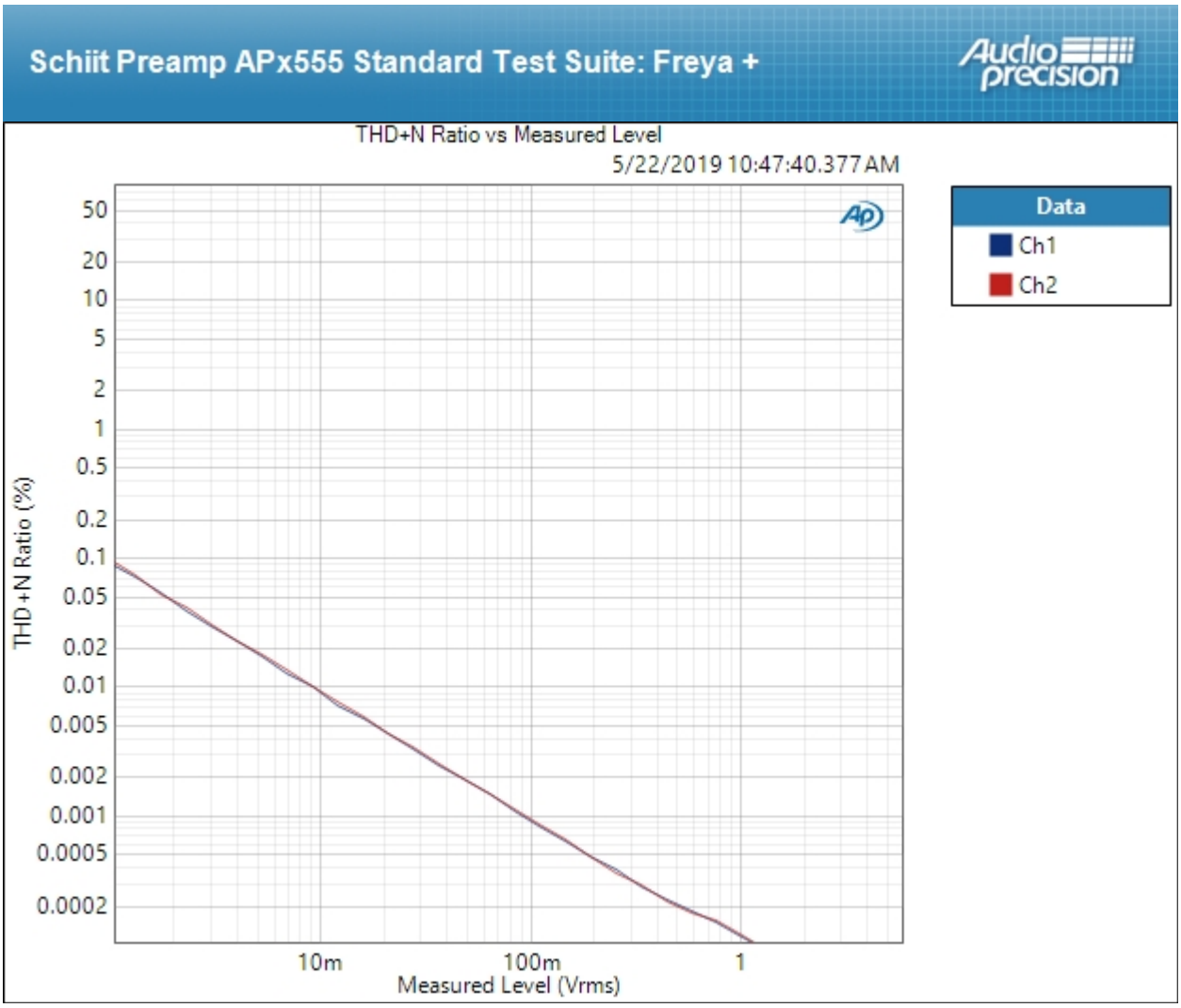
Ch1 -117.141 dB

Ch2 -117.244 dB

Passive : 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	5/22/2019 10:47:40 AM

THD+N Ratio vs Measured Level (5/22/2019 10:47:40.377 AM)



Result: PASSED

Buffer : Signal Path Setup

Output Connector:	Analog Balanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Configuration:	Normal (Differential)
Source Impedance:	40 ohm
AG52 Generator Option:	Installed
Output EQ:	None
Input Connector:	Analog Balanced
Channels:	2
Termination:	200 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

Buffer : Level and Gain

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

RMS Level (5/22/2019 10:48:35.543 AM)

Ch1 0.963 Vrms
Ch2 0.961 Vrms

Buffer : DC Level

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

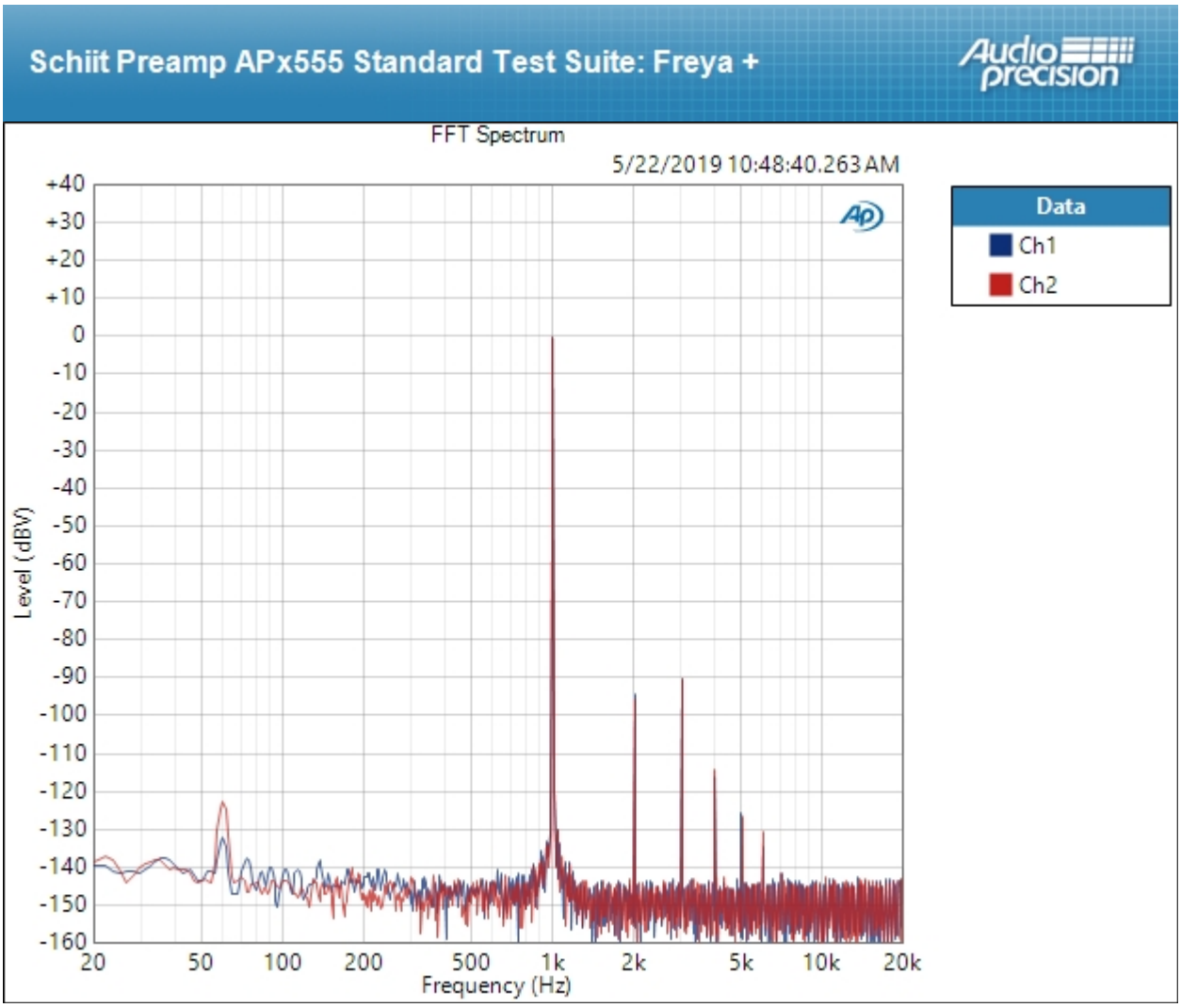
DC Level (5/22/2019 10:48:36.631 AM)

Ch1 -103.2 uV
Ch2 -12.71 uV

Buffer : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	5/22/2019 10:48:40 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 (5/22/2019 10:48:40.263 AM)

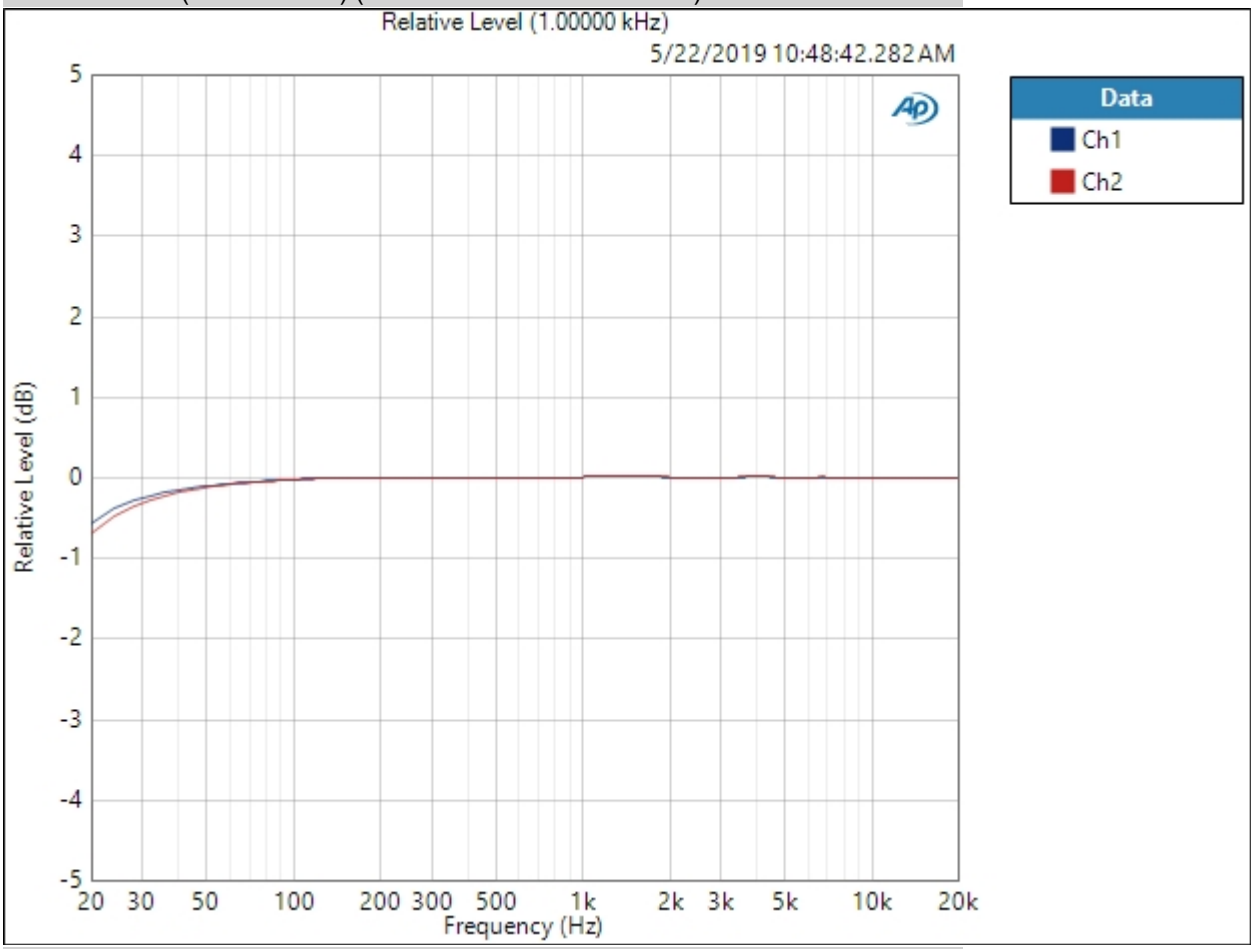


Result: PASSED

Buffer : 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	5/22/2019 10:48:42 AM

Relative Level (1.00000 kHz) (5/22/2019 10:48:42.282 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) (5/22/2019 10:48:42.282 AM)

Ch1 ±0.285 dB

Ch2 ±0.348 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Buffer : 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 (5/22/2019 10:48:44.194 AM)

Ch1 113.552 dB

Ch2 113.839 dB

Buffer : 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 (5/22/2019 10:48:46.262 AM)

Ch1 0.003737 %

Ch2 0.003607 %

THD Ratio (5/22/2019 10:48:46.262 AM)

Ch1 0.003737 %

Ch2 0.003590 %

Noise Ratio (5/22/2019 10:48:46.262 AM)

Ch1 0.000262 %

Ch2 0.000274 %

Distortion Product Ratio (5/22/2019 10:48:46.262 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-94.02	-90.01	-116.03	-125.35	-130.97	-141.07	-139.27	-136.48	-139.11
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-95.07	-90.12	-113.69	-126.22	-131.13	-140.11	-140.08	-143.32	-146.68

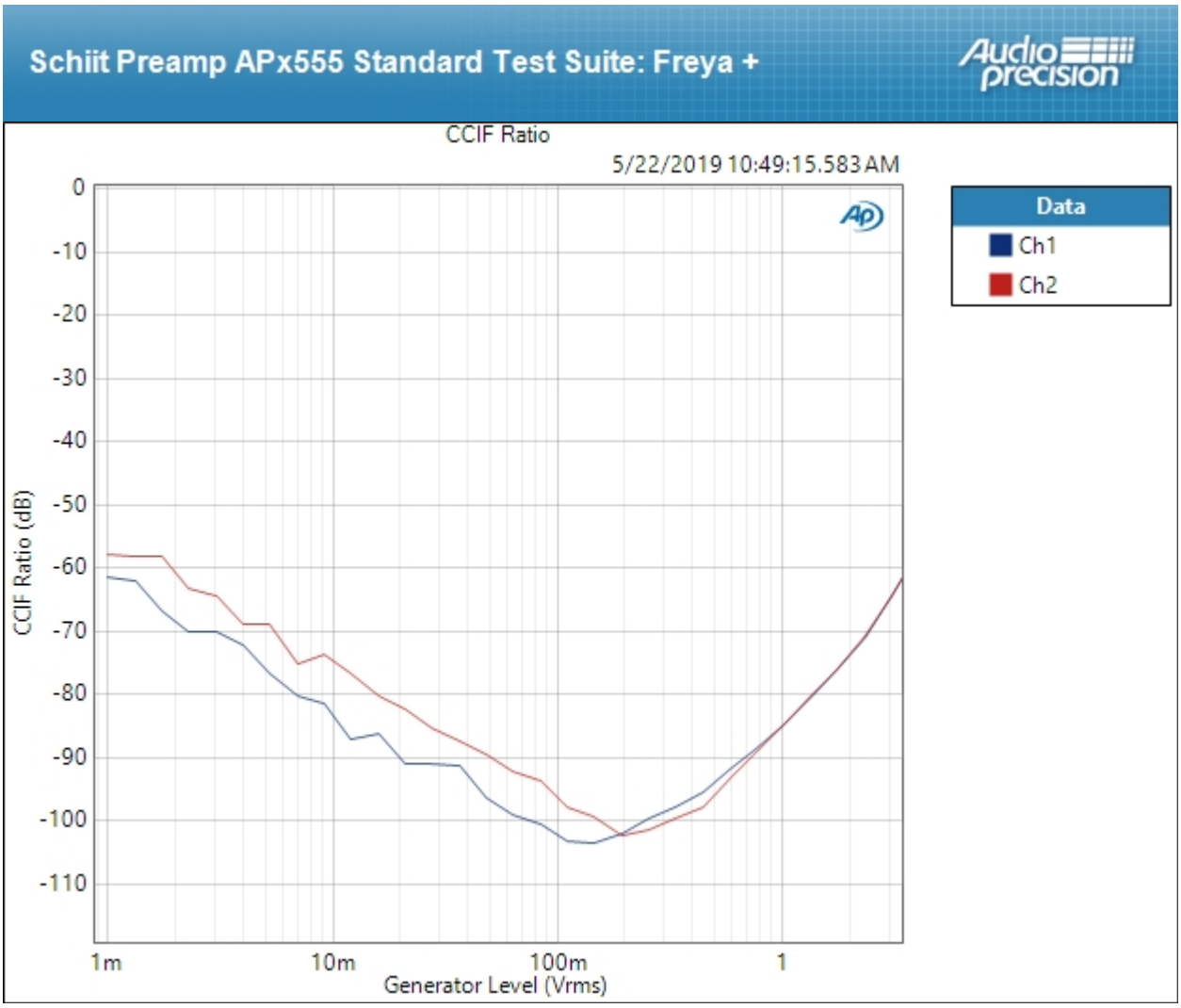
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Buffer : IMD Level Sweep (CCIF)

IMD Type:	CCIF
Waveform:	IMD
Generator Level:	4.000 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:	4.000 Vrms
Step Type:	Logarithmic
Number of Points:	31
Mode:	d2+d3
Measured 1	5/22/2019 10:49:15 AM

CCIF Ratio (5/22/2019 10:49:15.583 AM)

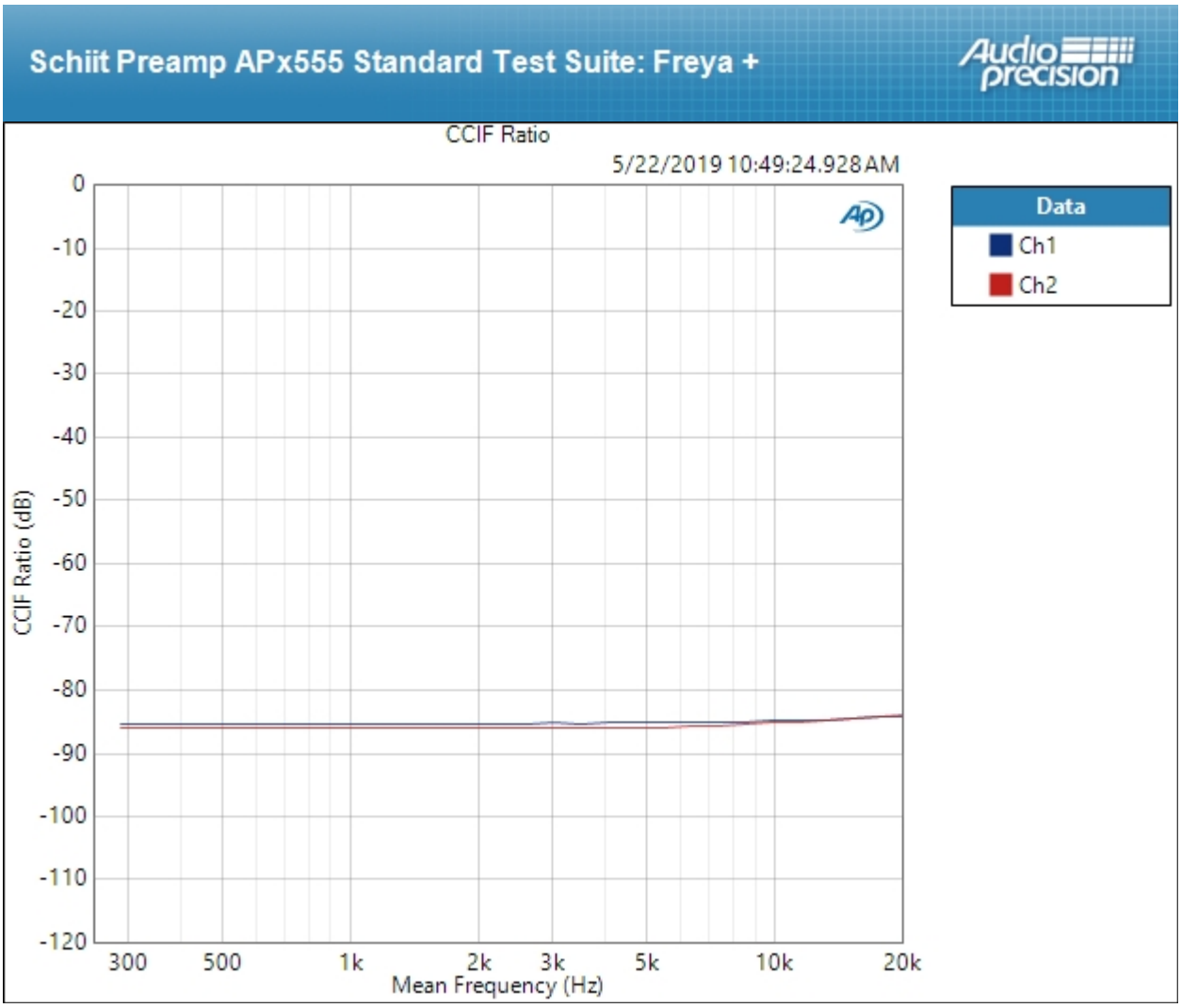


Result: PASSED

Buffer : 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	5/22/2019 10:49:24 AM

CCIF Ratio (5/22/2019 10:49:24.928 AM)



Result: PASSED

Buffer : Crosstalk, One Channel Undriven

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

Crosstalk (5/22/2019 10:49:29.775 AM)

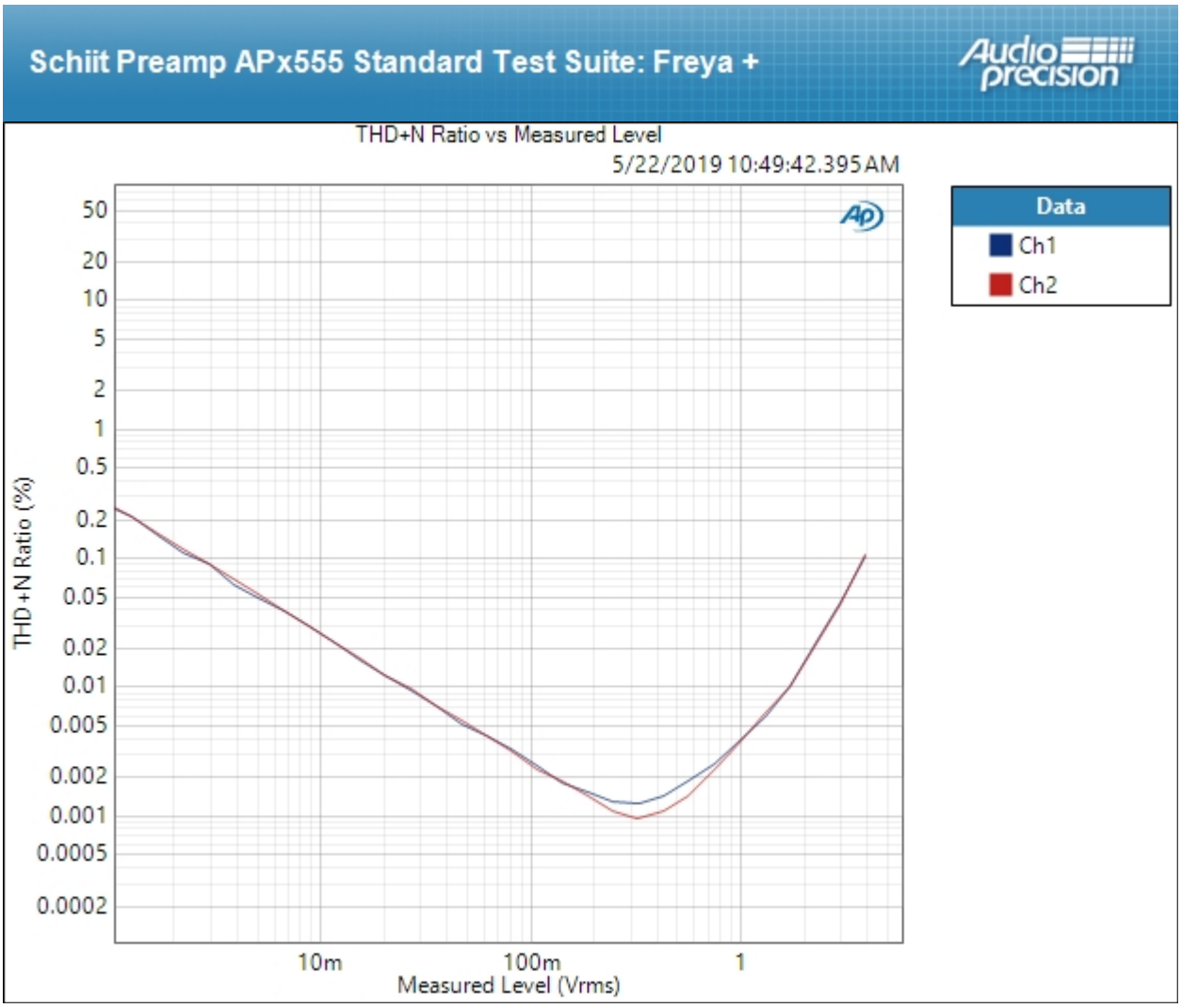
Ch1 -118.378 dB

Ch2 -118.441 dB

Buffer : 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	5/22/2019 10:49:42 AM

THD+N Ratio vs Measured Level (5/22/2019 10:49:42.395 AM)



Result: PASSED

Tube Gain : Signal Path Setup

Output Connector:	Analog Balanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Configuration:	Normal (Differential)
Source Impedance:	40 ohm
AG52 Generator Option:	Installed
Output EQ:	None
Input Connector:	Analog Balanced
Channels:	2
Termination:	200 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

Tube Gain : Level and Gain

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	265.0 mVrms
Frequency:	1.00000 kHz

RMS Level (5/22/2019 10:44:54.191 AM)

Ch1 1.013 Vrms
Ch2 1.006 Vrms

Tube Gain : DC Level

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

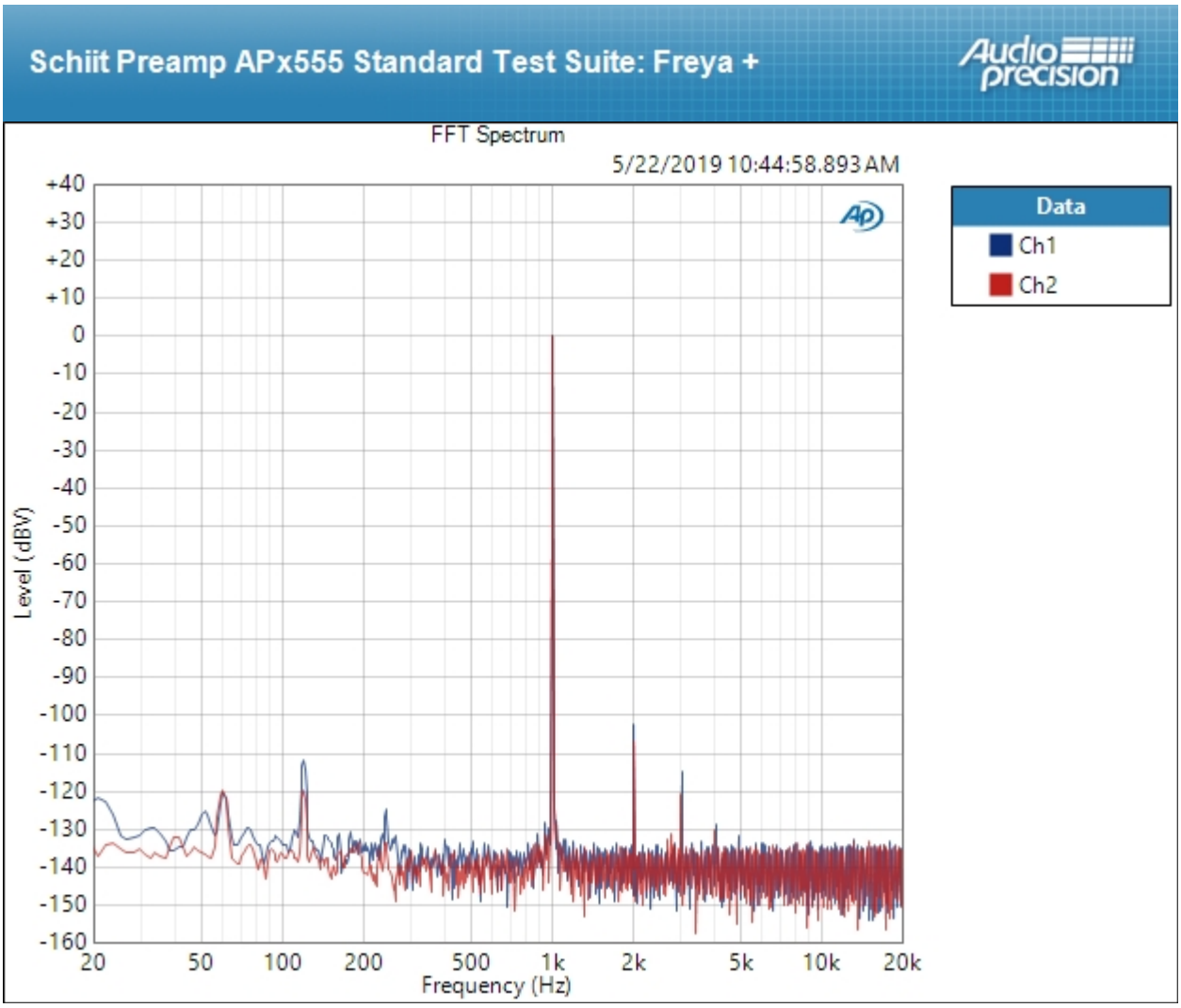
DC Level (5/22/2019 10:44:55.257 AM)

Ch1 -219.3 uV
Ch2 -56.14 uV

Tube Gain : Signal Analyzer

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	265.0 mVrms
Frequency:	1.00000 kHz
Secondary Source:	None
Measured 1	5/22/2019 10:44:58 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 (5/22/2019 10:44:58.893 AM)

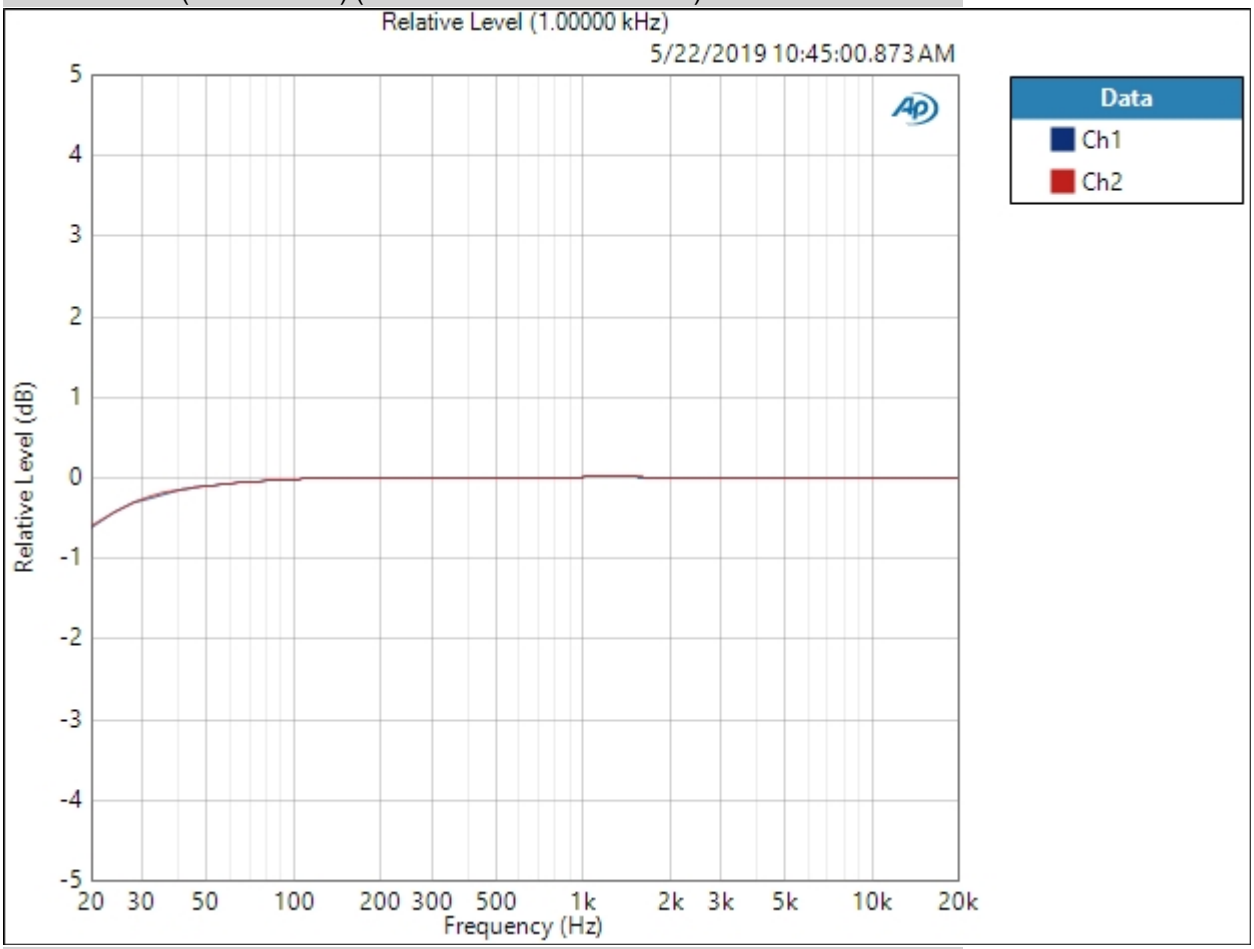


Result: PASSED

Tube Gain : Frequency Response

Start Frequency:	20.0000 Hz
Stop Frequency:	20.0000 kHz
Generator Level:	265.0 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	5/22/2019 10:45:00 AM

Relative Level (1.00000 kHz) (5/22/2019 10:45:00.873 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) (5/22/2019 10:45:00.873 AM)

Ch1 ±0.311 dB

Ch2 ±0.303 dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

Tube Gain : Signal to Noise Ratio

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	265.0 mVrms
Frequency:	1.00000 kHz
Low-pass Filter:	20 kHz
Weighting Filter:	A-wt.
High-pass Filter:	20 Hz

Signal to Noise Ratio (5/22/2019 10:45:02.757 AM)

Ch1 104.028 dB

Ch2 104.605 dB

Tube Gain : THD+N

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	265.0 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 (5/22/2019 10:45:05.024 AM)

Ch1 0.001164 %

Ch2 0.000907 %

THD Ratio (5/22/2019 10:45:05.024 AM)

Ch1 0.000824 %

Ch2 0.000512 %

Noise Ratio (5/22/2019 10:45:05.024 AM)

Ch1 0.000842 %

Ch2 0.000740 %

Distortion Product Ratio (5/22/2019 10:45:05.024 AM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-102.00	-115.17	-126.65	-128.71	-126.19	-128.47	-133.48	-130.34	-133.78
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-106.15	-120.88	-128.86	-128.37	-133.21	-134.99	-133.25	-128.80	-139.43

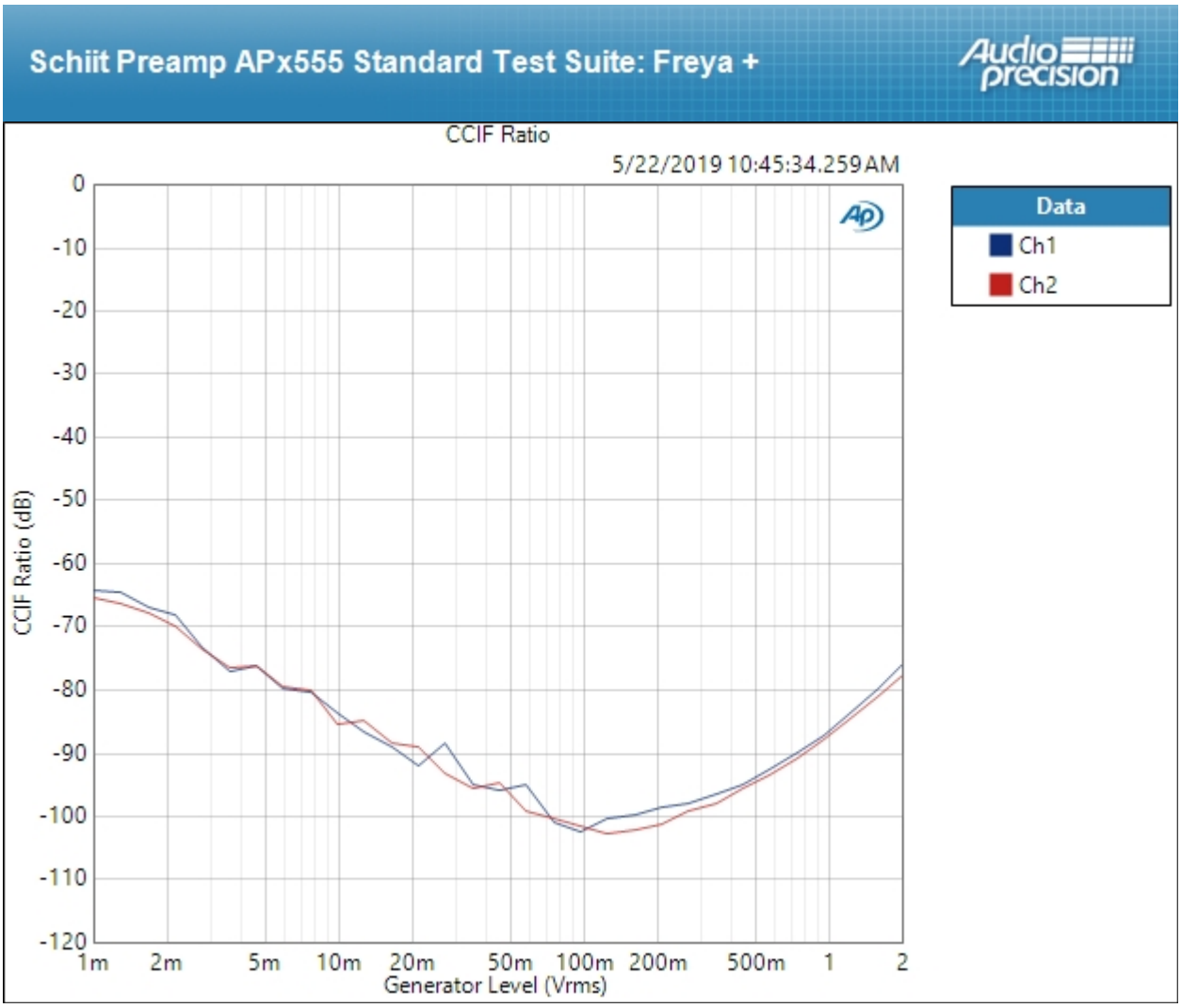
Distortion Product Ratio Parameters

Frequency Unit:	Hz
Ratio Unit:	dB

Tube 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	5/22/2019 10:45:34 AM

CCIF Ratio (5/22/2019 10:45:34.259 AM)

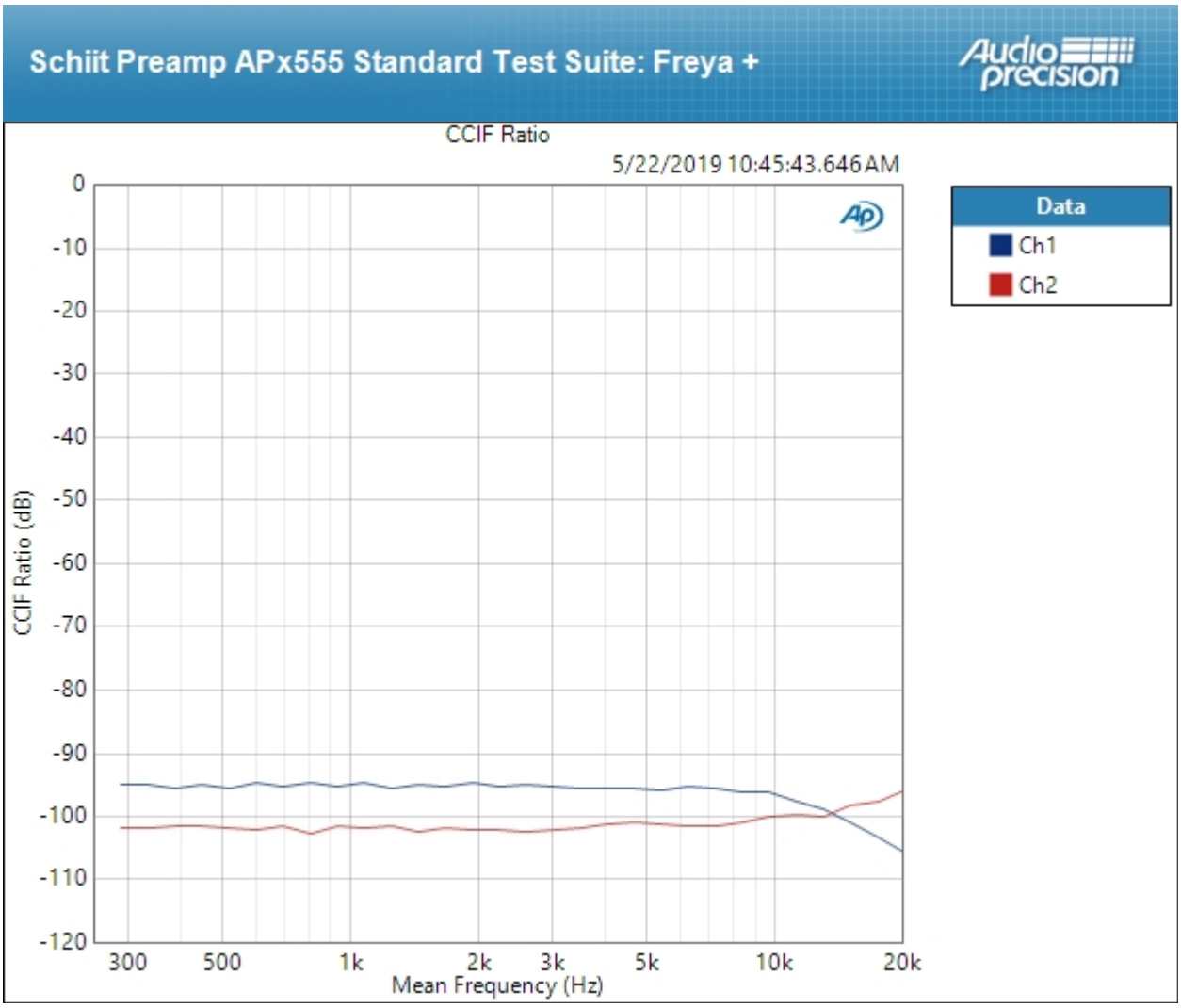


Result: PASSED

Tube Gain : IMD Frequency Sweep (CCIF)

Generator Level:	265.0 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	5/22/2019 10:45:43 AM

CCIF Ratio (5/22/2019 10:45:43.646 AM)



Result: PASSED

Tube Gain : Crosstalk, One Channel Undriven

Waveform:	Sine
Generator Mode:	High Performance Sine Generator
Generator Level:	265.0 mVrms
Frequency:	10.0000 kHz

Crosstalk (5/22/2019 10:45:48.221 AM)

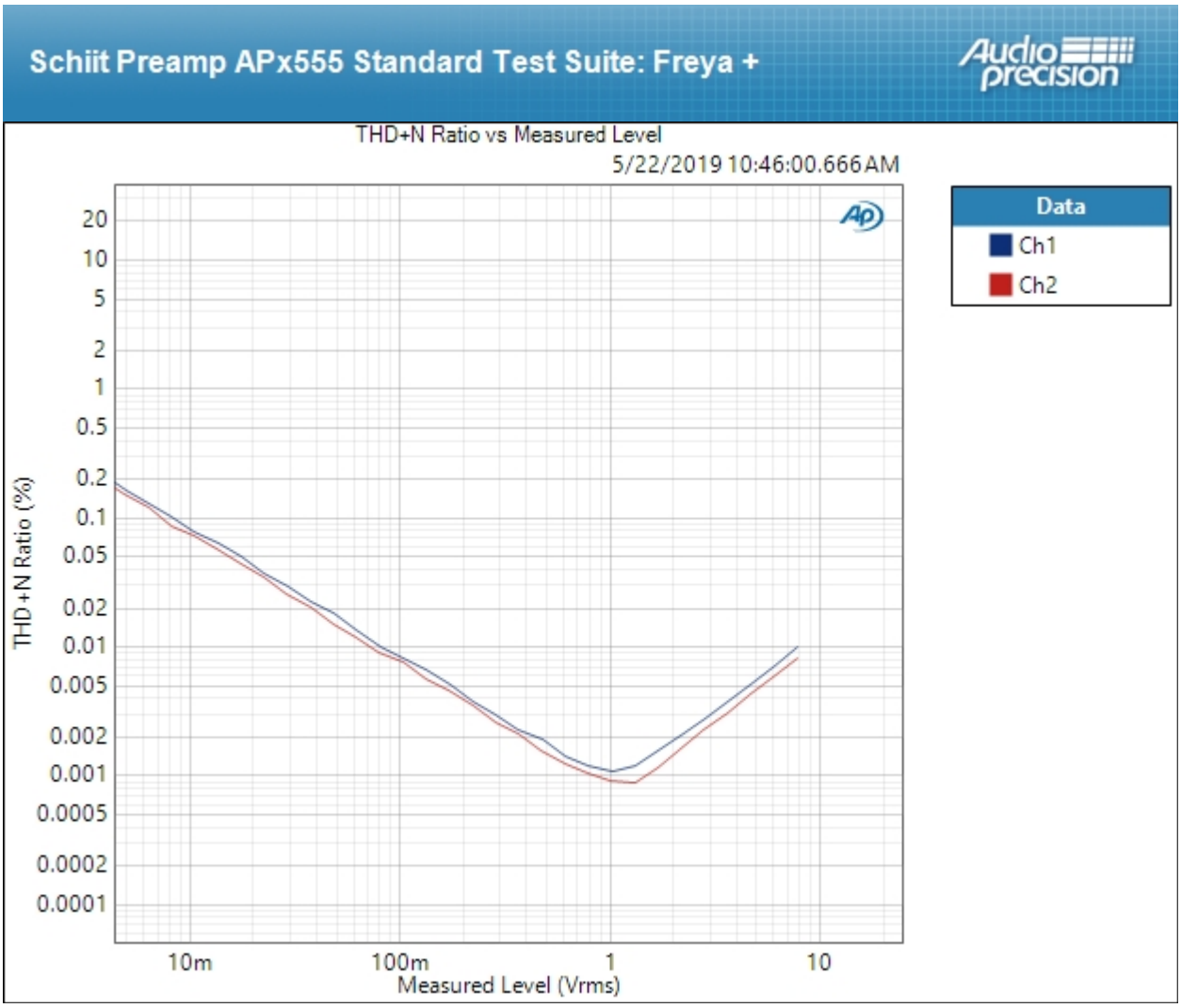
Ch1 -107.587 dB

Ch2 -109.634 dB

Tube 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:	2.000 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	5/22/2019 10:46:00 AM

THD+N Ratio vs Measured Level (5/22/2019 10:46:00.666 AM)



Result: PASSED