

## Schiit Amp APx555 Standard Test Suite: Saga S



### 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@schiiit.com](mailto:info@schiiit.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

#### 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 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
dB SPL1:	10.00 mVrms
dB SPL2:	10.00 mVrms
dB SPL1 Calibrator Level:	94.000 dB SPL
dB SPL2 Calibrator Level:	94.000 dB SPL
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 (5/21/2019 2:28:42.233 PM)

Ch1 0.998 Vrms  
Ch2 0.998 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

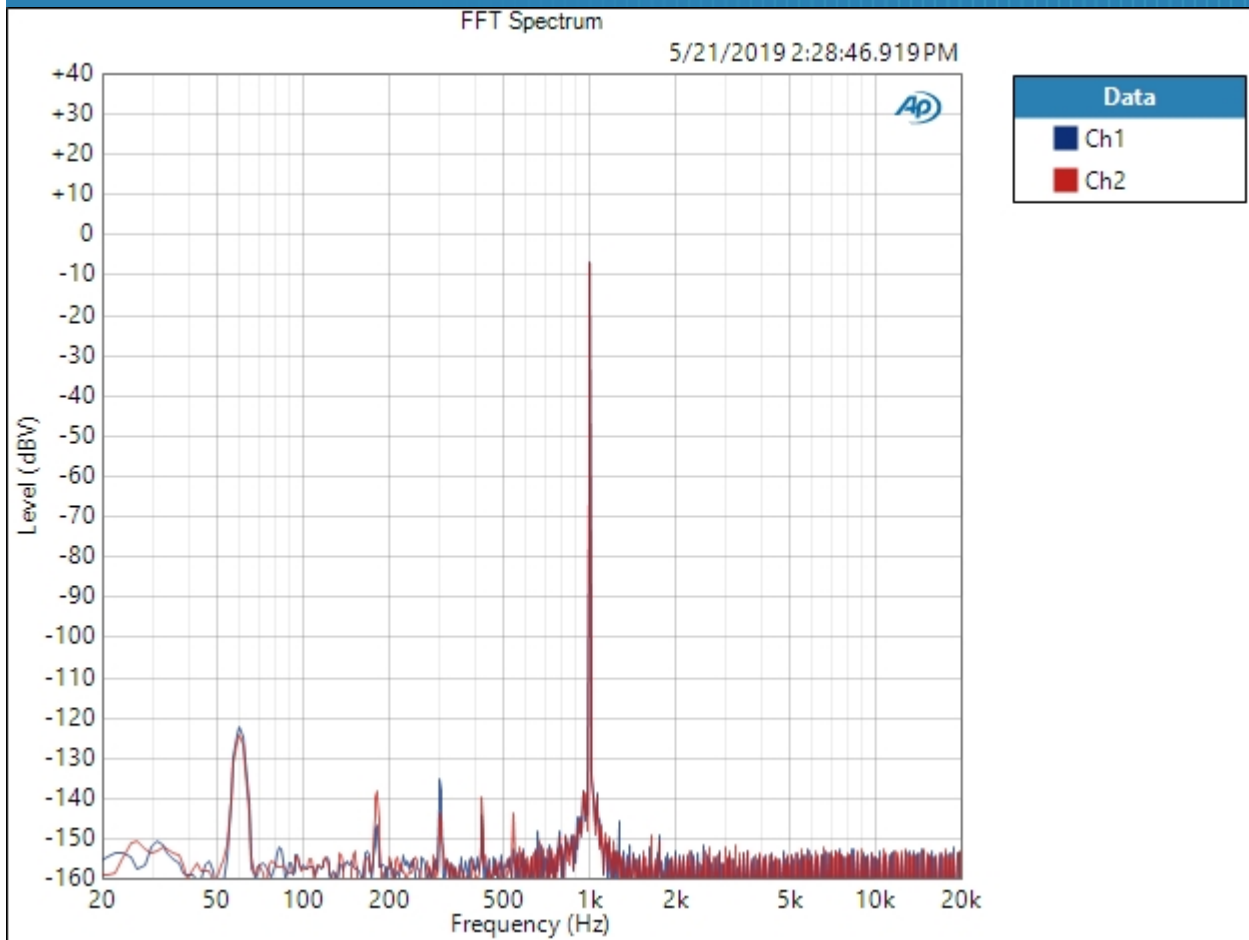
DC Level (5/21/2019 2:28:43.289 PM)

Ch1 -135.7 uV  
Ch2 22.03 uV

Passive : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Generator Level: 450.0 mVrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1: 5/21/2019 2:28:46 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 (5/21/2019 2:28:46.919 PM)

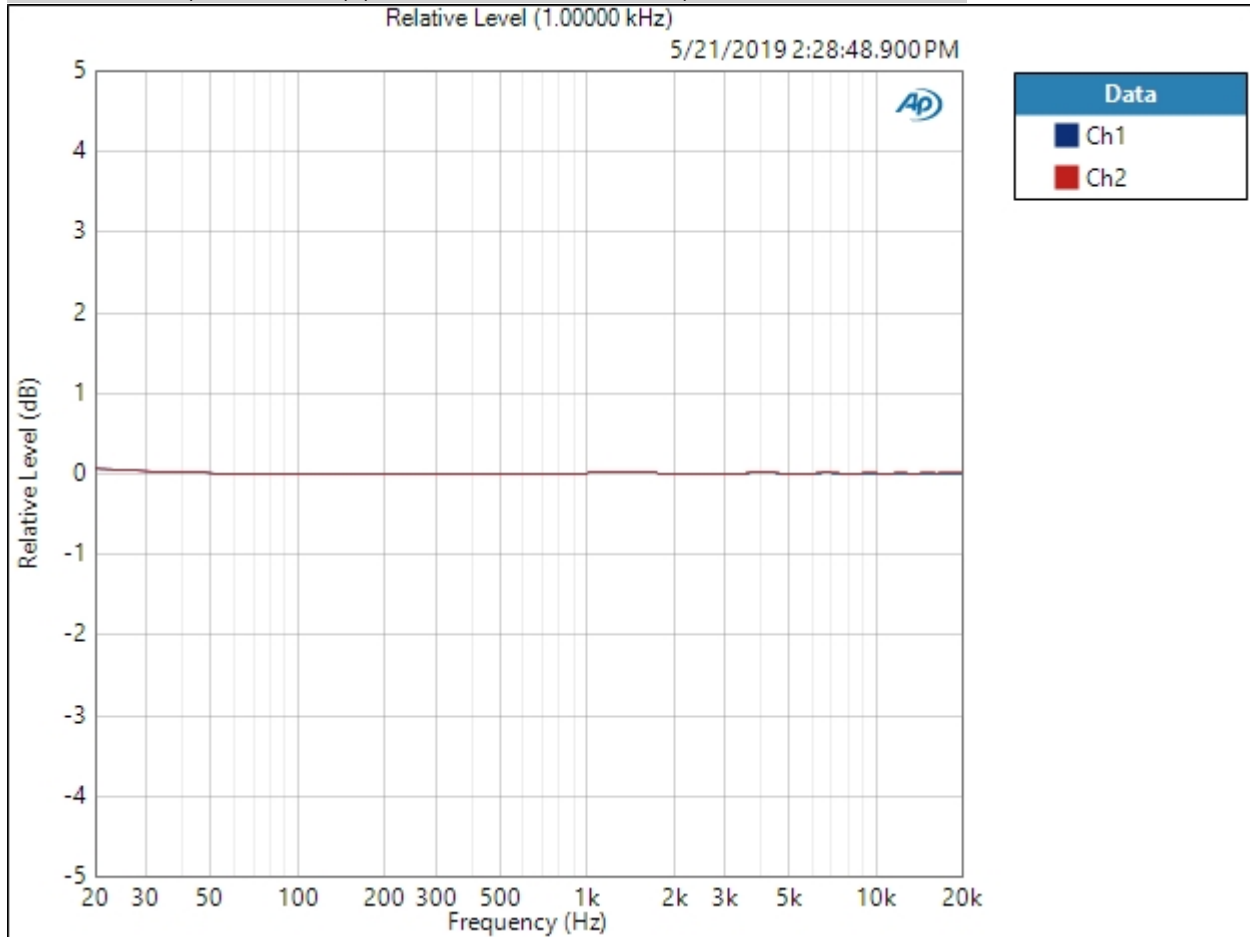


Result: PASSED

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 5/21/2019 2:28:48 PM

Relative Level (1.00000 kHz) (5/21/2019 2:28:48.900 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) (5/21/2019 2:28:48.900 PM)

Ch1  $\pm 0.038$  dB

Ch2  $\pm 0.038$  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 (5/21/2019 2:28:50.825 PM)

Ch1 123.337 dB

Ch2 123.384 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 (5/21/2019 2:28:53.122 PM)

Ch1 0.000135 %  
 Ch2 0.000130 %

THD Ratio (5/21/2019 2:28:53.122 PM)

Ch1 0.000018 %  
 Ch2 0.000018 %

Noise Ratio (5/21/2019 2:28:53.122 PM)

Ch1 0.000135 %  
 Ch2 0.000130 %

Distortion Product Ratio (5/21/2019 2:28:53.122 PM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-142.52	-148.96	-149.97	-147.54	-147.66	-151.45	-147.56	-151.72	-150.10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-141.86	-148.43	-148.17	-152.72	-152.24	-146.24	-146.96	-154.61	-154.29

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

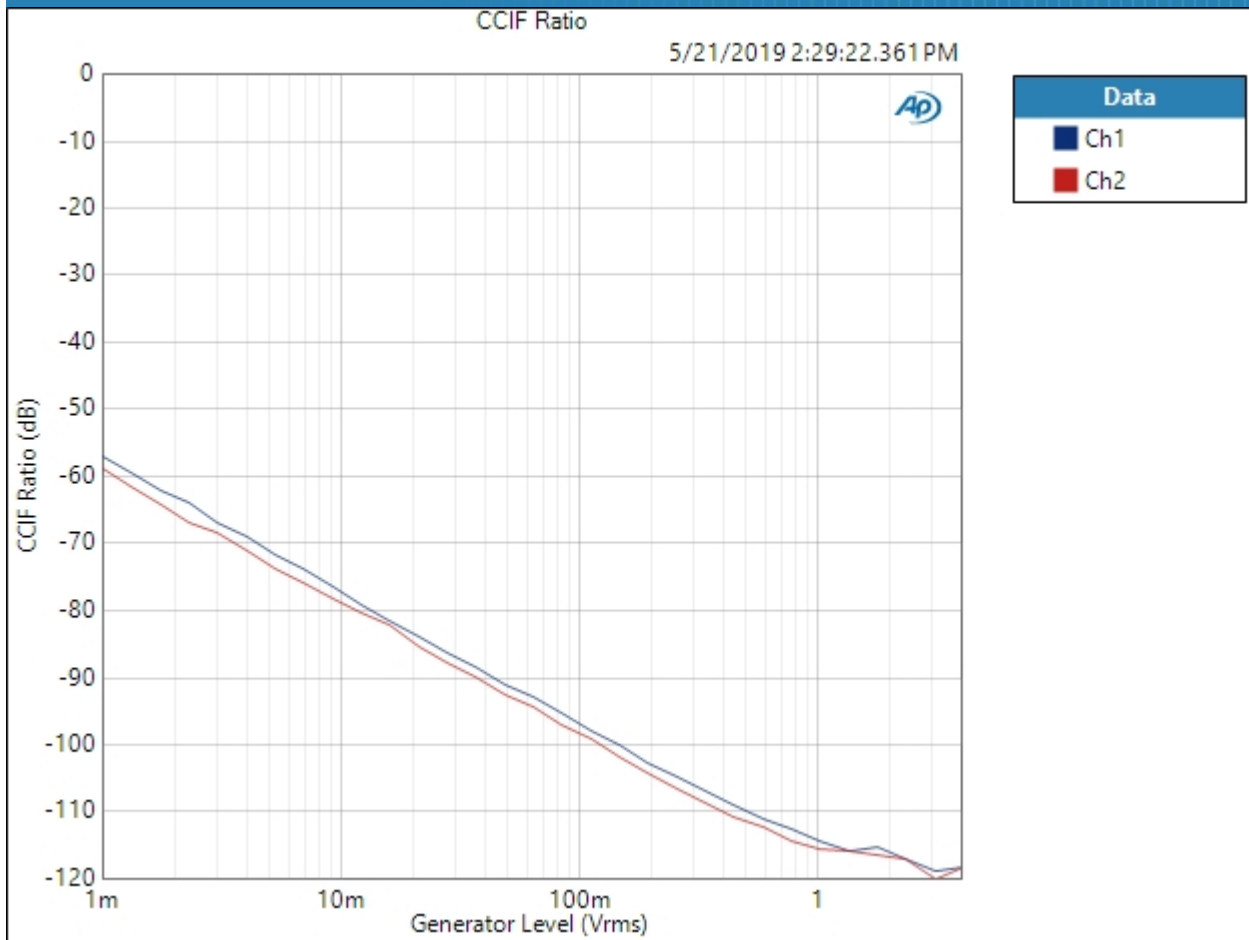
Step Type: Logarithmic

Number of Points: 31

Mode: d2+d3

Measured 1 5/21/2019 2:29:22 PM

CCIF Ratio (5/21/2019 2:29:22.361 PM)

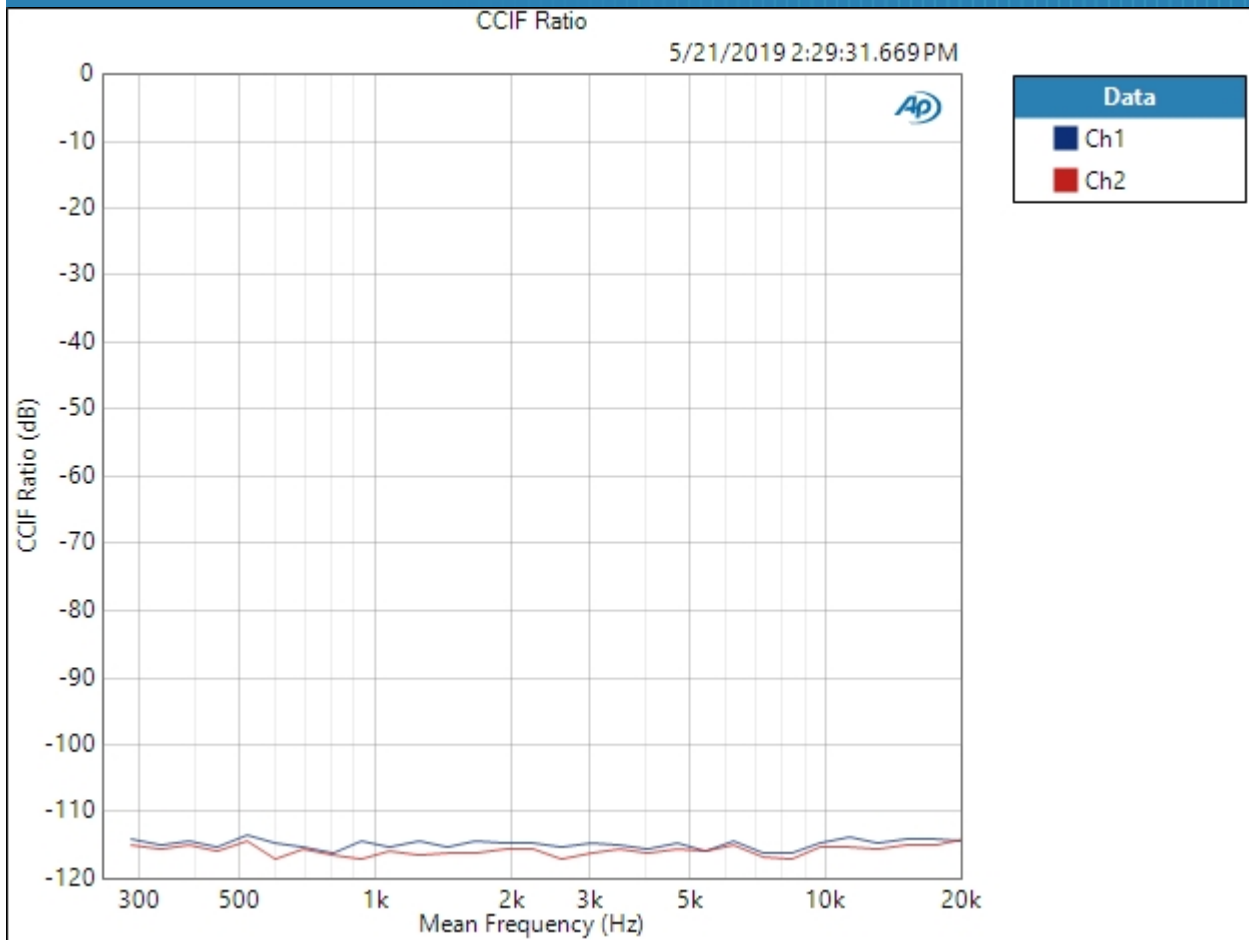


Result: PASSED

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 5/21/2019 2:29:31 PM

CCIF Ratio (5/21/2019 2:29:31.669 PM)



Result: ✔ PASSED

Passive : Crosstalk, One Channel Undriven

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

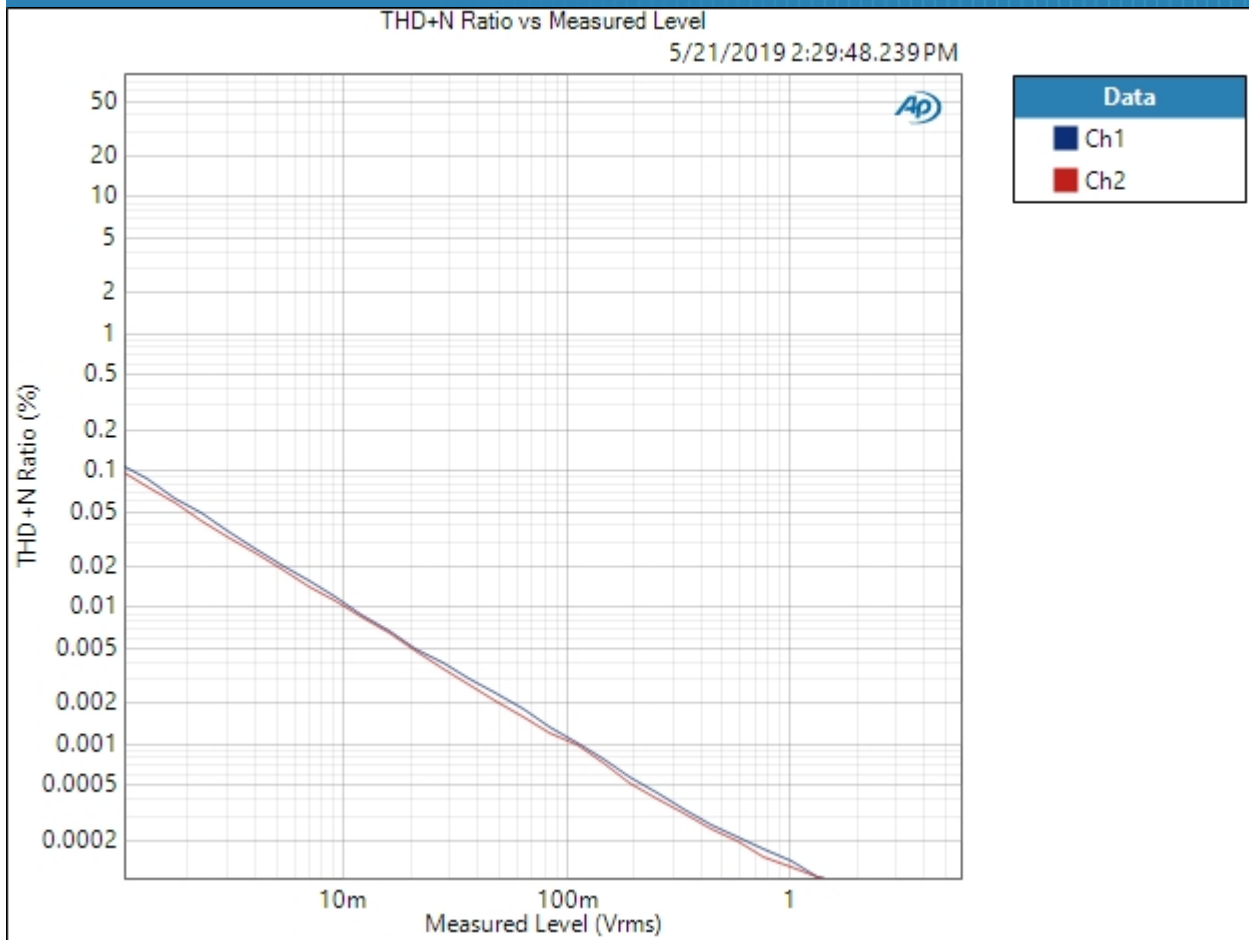
Crosstalk (5/21/2019 2:29:32.904 PM)

Ch1 -102.805 dB  
 Ch2 -103.023 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 5/21/2019 2:29:48 PM

THD+N Ratio vs Measured Level (5/21/2019 2:29:48.239 PM)



Result: PASSED

## Buffer : 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
dB SPL1:	10.00 mVrms
dB SPL2:	10.00 mVrms
dB SPL1 Calibrator Level:	94.000 dB SPL
dB SPL2 Calibrator Level:	94.000 dB SPL
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 (5/21/2019 2:29:55.589 PM)

Ch1 0.996 Vrms  
Ch2 0.996 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 (5/21/2019 2:29:56.681 PM)

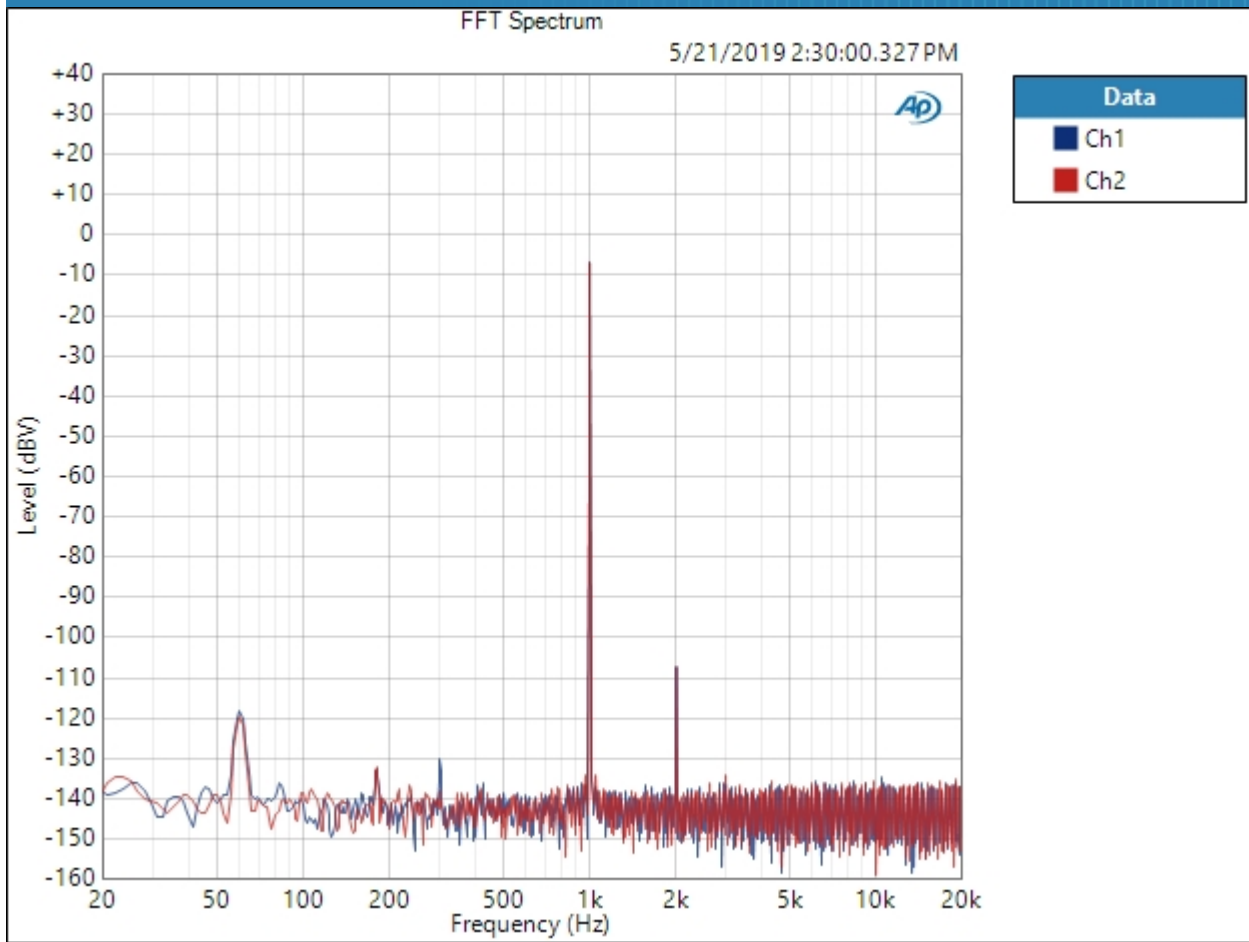
Ch1 -41.57 uV  
Ch2 -401.2 uV



Buffer : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Generator Level: 450.0 mVrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1: 5/21/2019 2:30:00 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 (5/21/2019 2:30:00.327 PM)

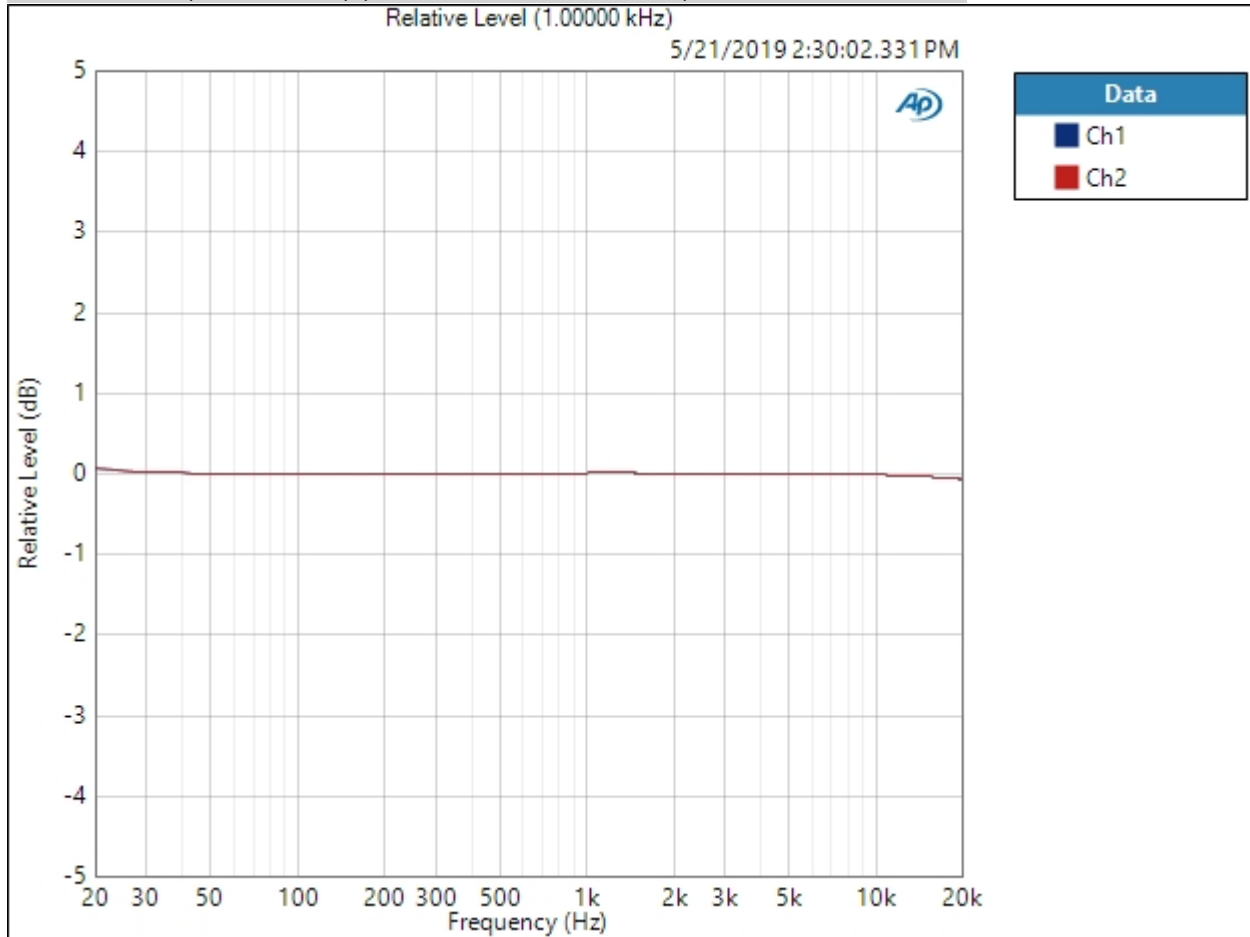


Result:  PASSED

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 5/21/2019 2:30:02 PM

Relative Level (1.00000 kHz) (5/21/2019 2:30:02.331 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) (5/21/2019 2:30:02.331 PM)

Ch1  $\pm 0.071$  dB

Ch2  $\pm 0.069$  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 (5/21/2019 2:30:04.276 PM)

Ch1 106.785 dB

Ch2 106.750 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 (5/21/2019 2:30:06.328 PM)

Ch1 0.002287 %  
 Ch2 0.002305 %

THD Ratio (5/21/2019 2:30:06.328 PM)

Ch1 0.002220 %  
 Ch2 0.002230 %

Noise Ratio (5/21/2019 2:30:06.328 PM)

Ch1 0.000572 %  
 Ch2 0.000579 %

Distortion Product Ratio (5/21/2019 2:30:06.328 PM)

Channel	F	H2	H3	H4	H5	H6	H7	H8	H9	H10
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch1	-0.00	-93.10	-117.74	-132.07	-134.74	-130.81	-130.72	-136.69	-133.84	-134.30
	1.000k	2.000k	3.000k	4.000k	5.000k	6.000k	7.000k	8.000k	9.000k	10.00k
Ch2	-0.00	-93.06	-117.27	-133.56	-136.18	-130.82	-133.68	-137.63	-131.91	-136.97

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

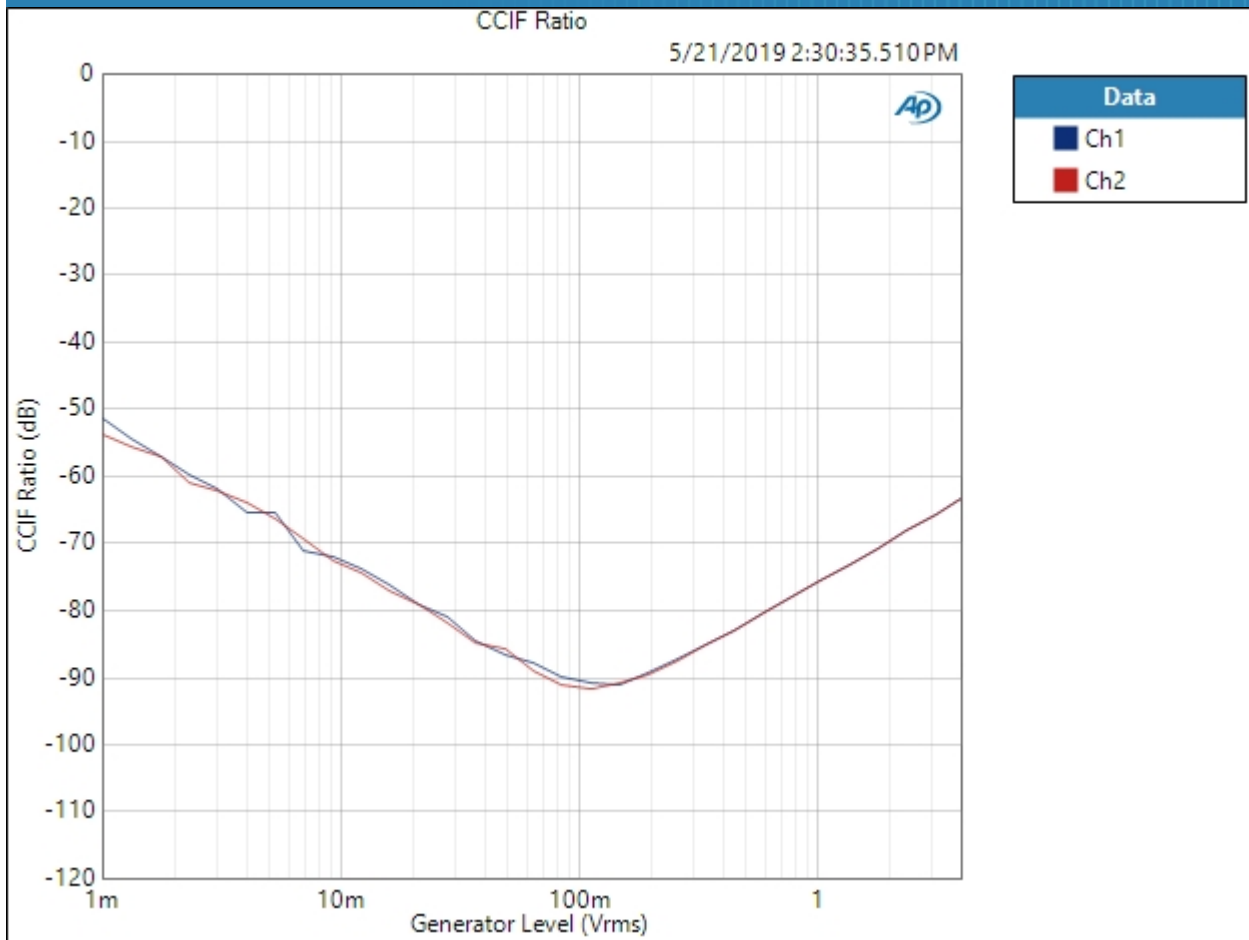
Step Type: Logarithmic

Number of Points: 31

Mode: d2+d3

Measured 1 5/21/2019 2:30:35 PM

CCIF Ratio (5/21/2019 2:30:35.510 PM)



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

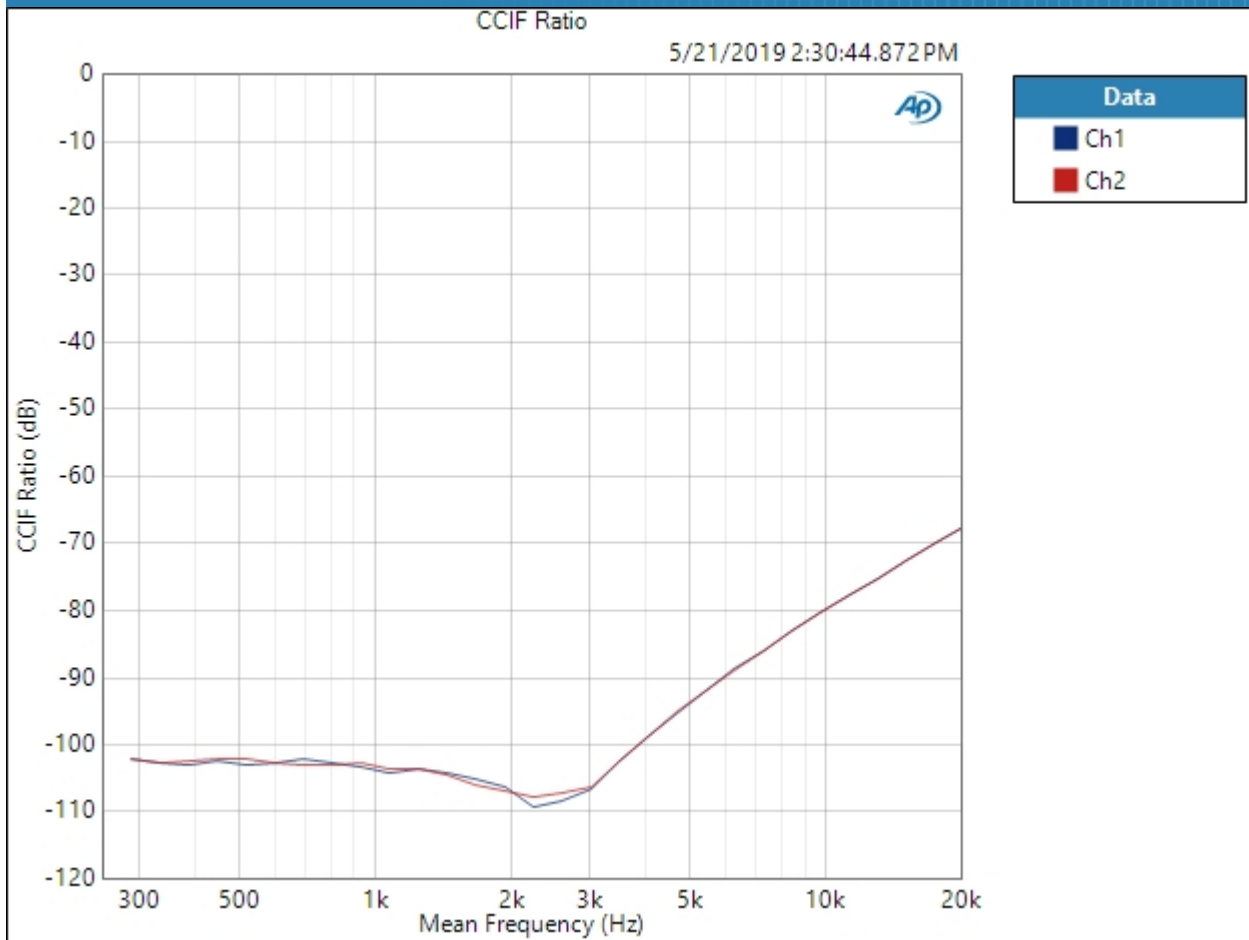
Number of Points: 31

Mode: d2+d3

Measured 1 5/21/2019 2:30:44 PM

CCIF Ratio (5/21/2019 2:30:44.872 PM)





Result: ✔ PASSED

Buffer : Crosstalk, One Channel Undriven

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

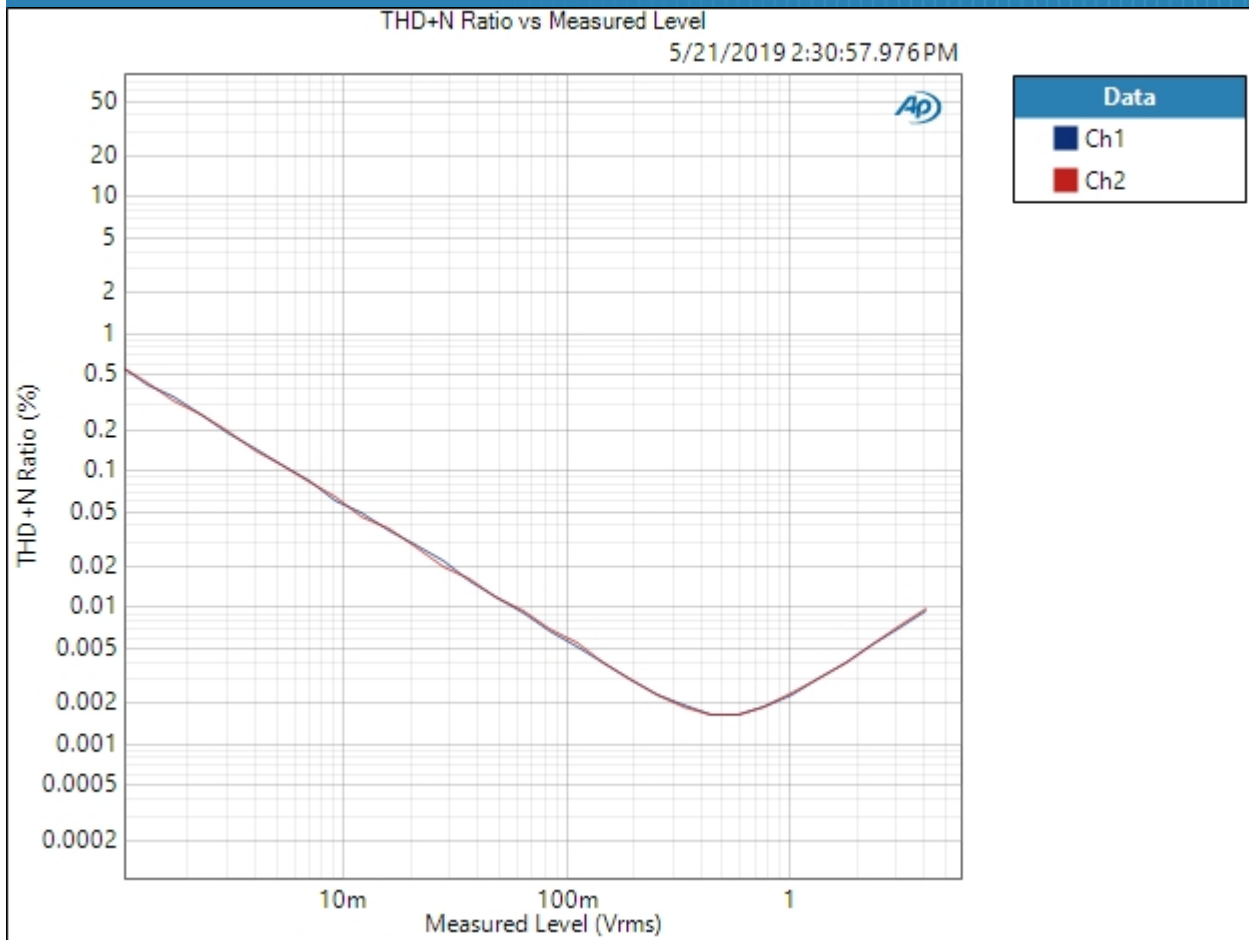
Crosstalk (5/21/2019 2:30:46.132 PM)

Ch1 -73.123 dB  
 Ch2 -72.412 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 5/21/2019 2:30:57 PM

THD+N Ratio vs Measured Level (5/21/2019 2:30:57.976 PM)



Result: ✔ PASSED