

## 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

## 300 Ohm Negative 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 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 Negative 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: 3/23/2021  
APx Version: 6.0.2.600.149330

## 300 Ohm Negative Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

300 Ohm Negative Gain : Level and Gain

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 12:57:34.089 PM)

Ch1 321.1 mVrms  
 Ch2 321.3 mVrms

300 Ohm Negative 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

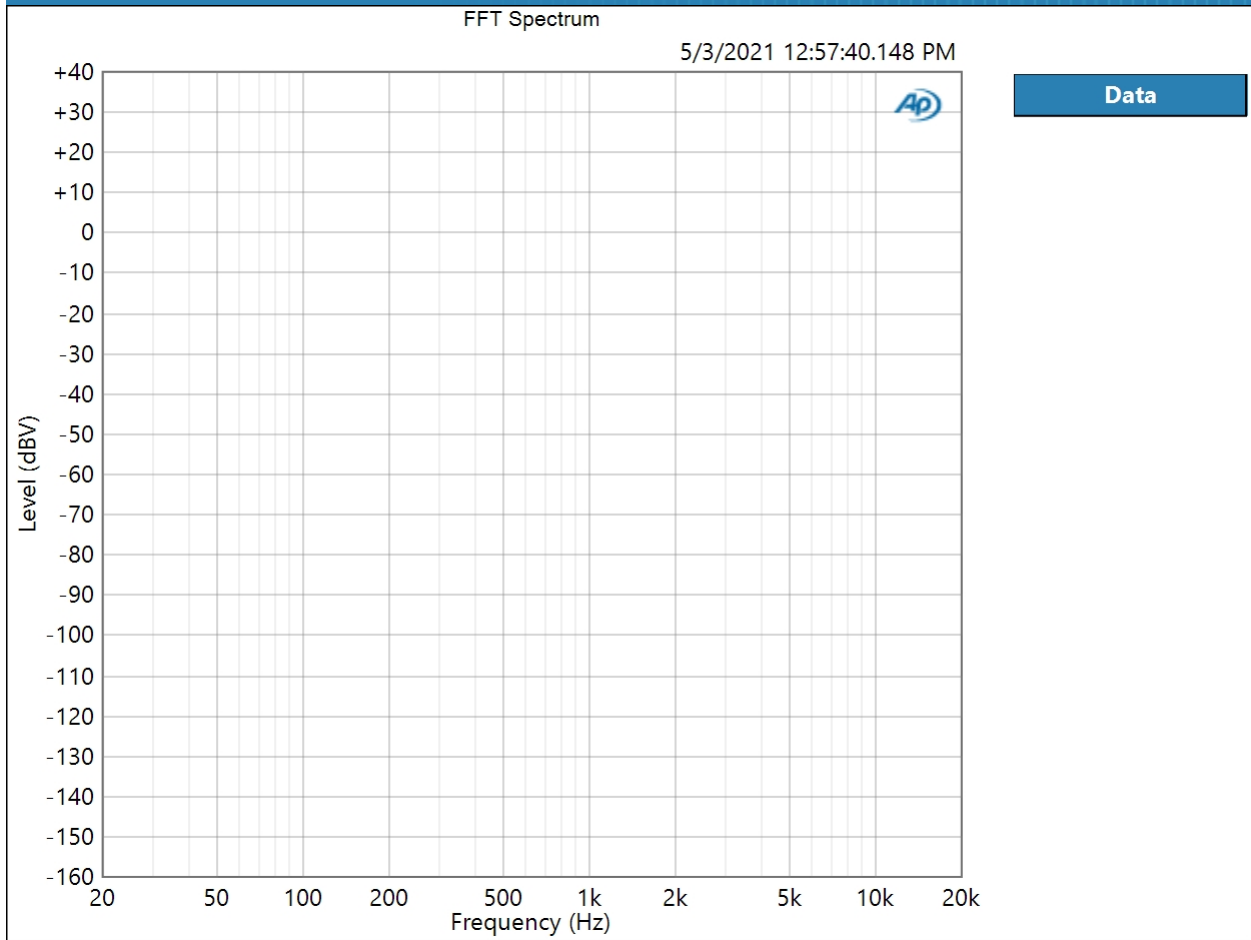
DC Level (5/3/2021 12:57:35.800 PM)

Ch1 13.67 uV  
 Ch2 63.72 uV

300 Ohm Negative Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 1.000 Vrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1 5/3/2021 12:57:40 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 (5/3/2021 12:57:40.148 PM)

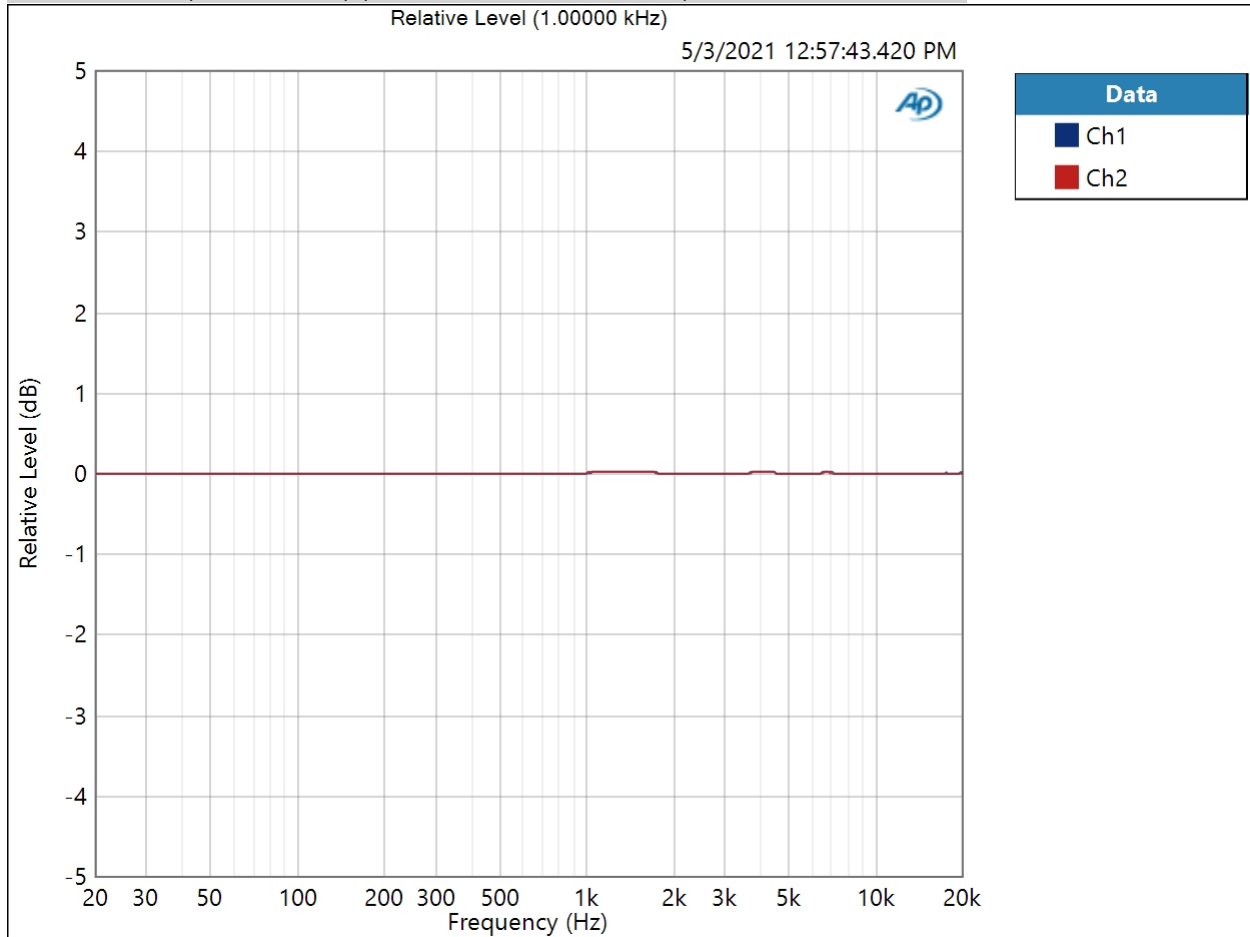


Result:  PASSED

300 Ohm Negative 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: 1.000 s  
Secondary Source: None  
Measured 1 5/3/2021 12:57:43 PM

Relative Level (1.00000 kHz) (5/3/2021 12:57:43.420 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) (5/3/2021 12:57:43.420 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

300 Ohm Negative Gain : Signal to Noise Ratio

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 3.000 Vrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 12:57:46.262 PM)

Ch1 122.392 dB

Ch2 122.258 dB

300 Ohm Negative Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 3.000 Vrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 12:57:49.293 PM)

Ch1 -116.173 dB  
 Ch2 -116.350 dB

THD Ratio (5/3/2021 12:57:49.293 PM)

Ch1 0.000093 %  
 Ch2 0.000082 %

Noise Ratio (5/3/2021 12:57:49.293 PM)

Ch1 0.000127 %  
 Ch2 0.000129 %

Distortion Product Ratio (5/3/2021 12:57:49.293 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	-134.73	-121.14	-149.30	-138.33	-143.33	-144.89	-146.92	-145.05	-142.47
Ch2	-0.00	-132.18	-122.48	-142.50	-143.73	-144.71	-144.86	-147.59	-144.48	-147.50

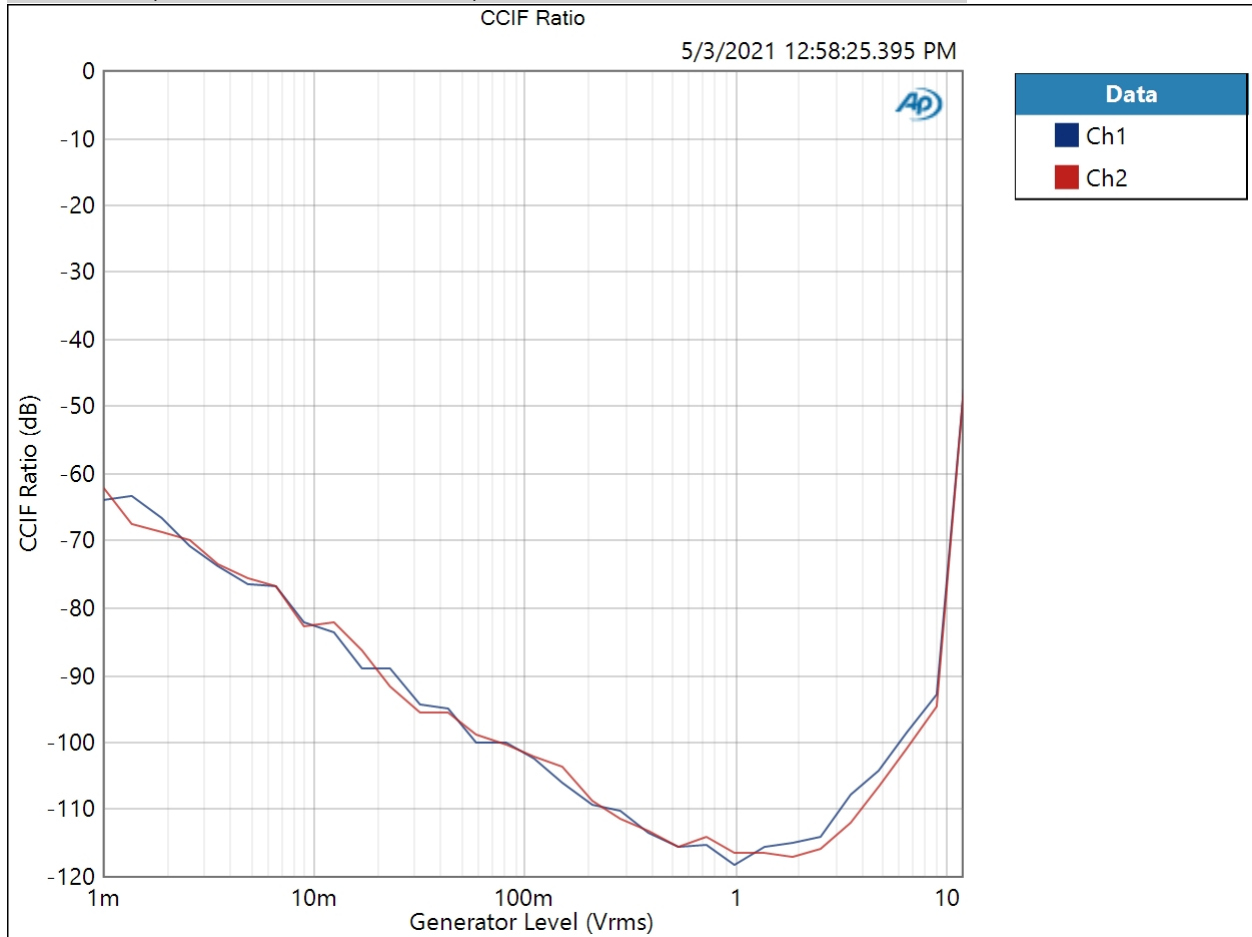
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

300 Ohm Negative Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
 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 5/3/2021 12:58:25 PM

CCIF Ratio (5/3/2021 12:58:25.395 PM)



Result: PASSED

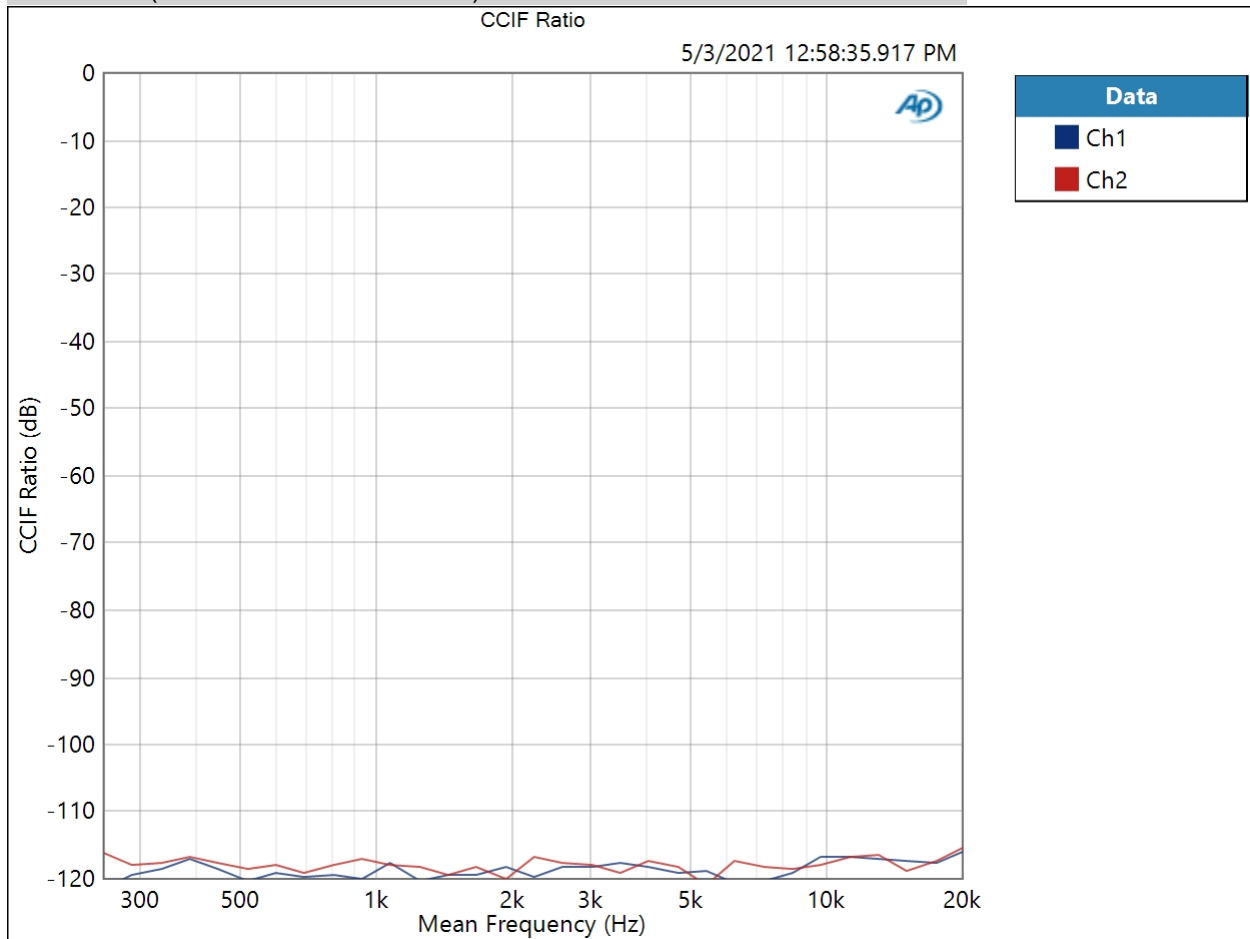
5/3/2021 1:14 PM



300 Ohm Negative Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 1.000 Vrms  
DC Offset: 0.000 V  
Sweep Frequency: Mean Frequency  
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 5/3/2021 12:58:35 PM

CCIF Ratio (5/3/2021 12:58:35.917 PM)



Result:  PASSED

300 Ohm Negative Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 12:58:38.199 PM)

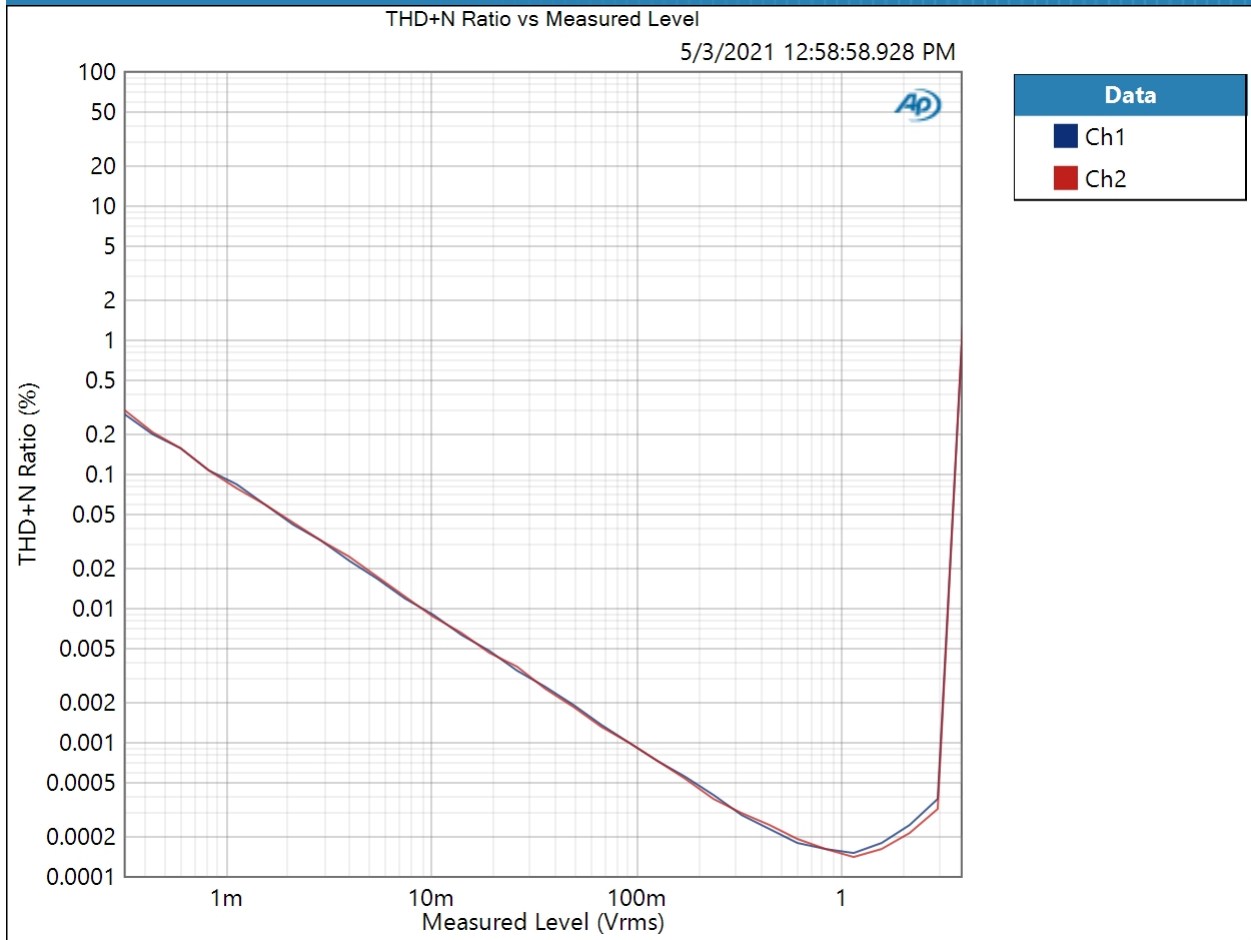
Ch1 -92.081 dB

Ch2 -92.528 dB

300 Ohm Negative Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 12.00 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 12:58:58 PM

THD+N Ratio vs Measured Level (5/3/2021 12:58:58.928 PM)



Result: PASSED



## 300 Ohm Low Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM

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  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 12:59:28.685 PM)

Ch1 0.996 Vrms  
 Ch2 0.996 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

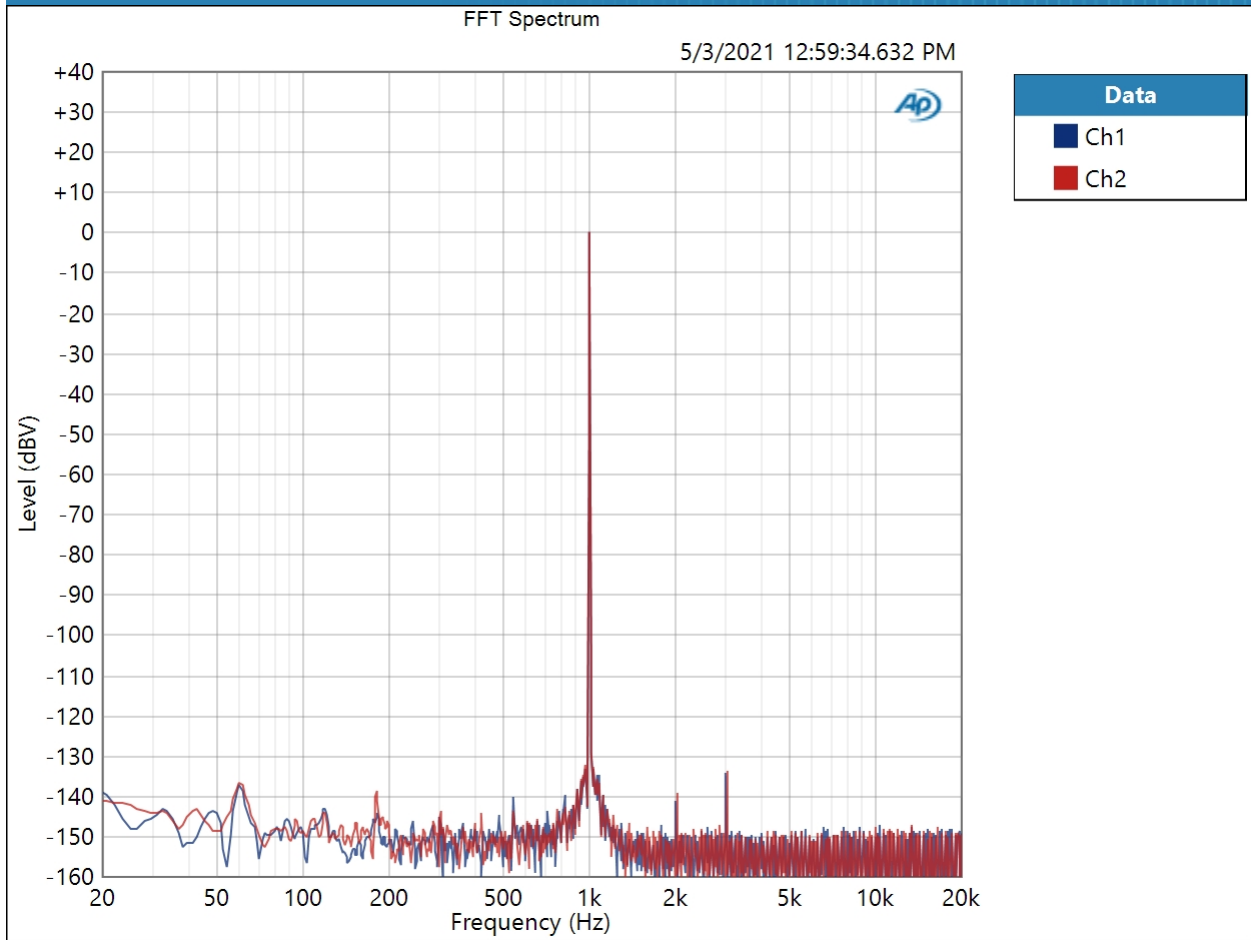
DC Level (5/3/2021 12:59:30.364 PM)

Ch1 115.8 uV  
 Ch2 226.3 uV

300 Ohm Low Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 1.000 Vrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1: 5/3/2021 12:59:34 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 (5/3/2021 12:59:34.632 PM)

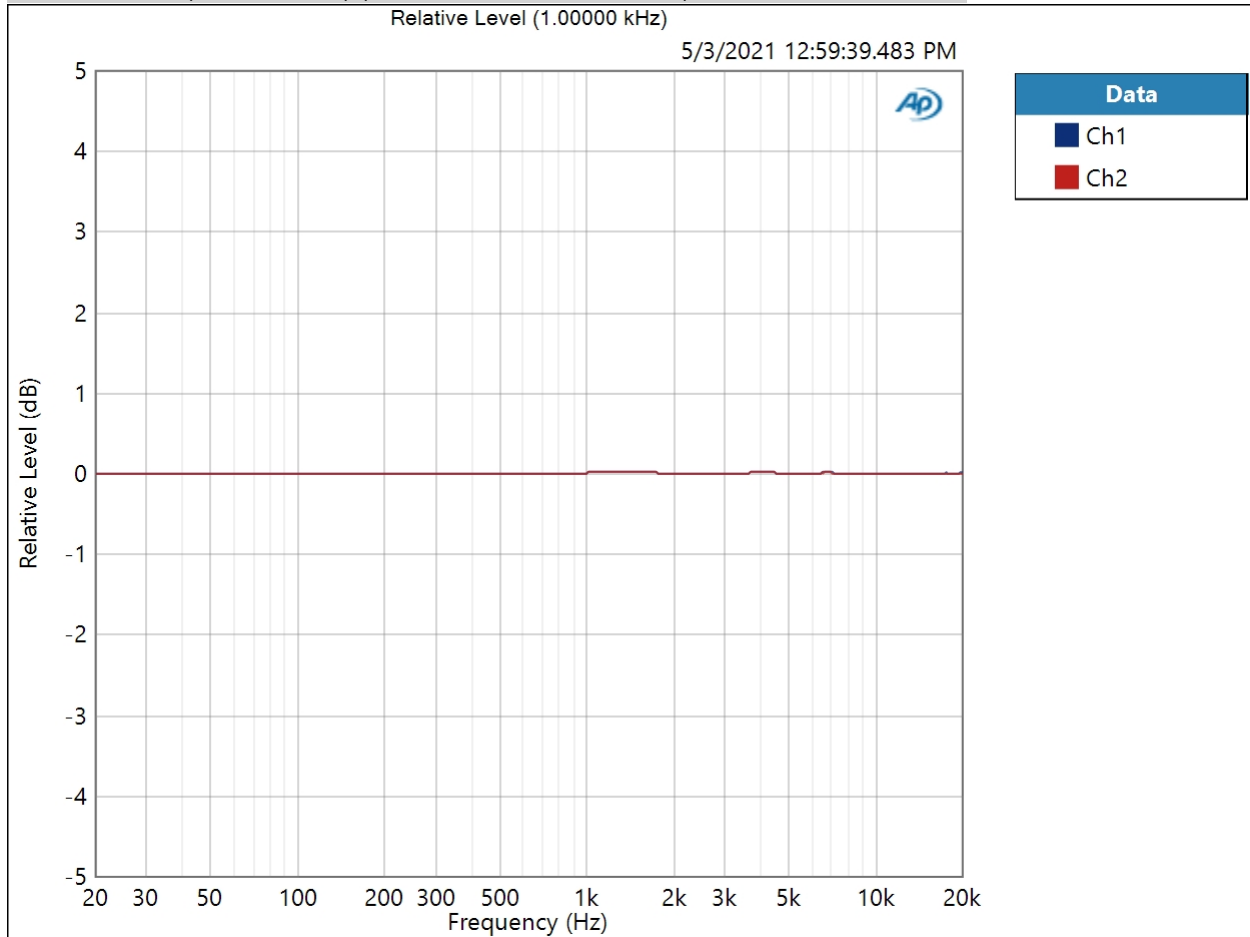


Result:  PASSED

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: 1.000 s  
 Secondary Source: None  
 Measured 1 5/3/2021 12:59:39 PM

Relative Level (1.00000 kHz) (5/3/2021 12:59:39.483 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) (5/3/2021 12:59:39.483 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  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

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 12:59:42.279 PM)

Ch1 119.937 dB

Ch2 120.000 dB

300 Ohm Low Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 12:59:45.423 PM)

Ch1 -116.388 dB  
 Ch2 -116.257 dB

THD Ratio (5/3/2021 12:59:45.423 PM)

Ch1 0.000037 %  
 Ch2 0.000032 %

Noise Ratio (5/3/2021 12:59:45.423 PM)

Ch1 0.000151 %  
 Ch2 0.000151 %

Distortion Product Ratio (5/3/2021 12:59:45.423 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	-136.67	-132.23	-142.88	-144.52	-149.13	-147.05	-146.97	-147.18	-143.16
Ch2	-0.00	-138.89	-134.98	-145.40	-143.84	-142.06	-147.08	-146.94	-145.27	-147.94

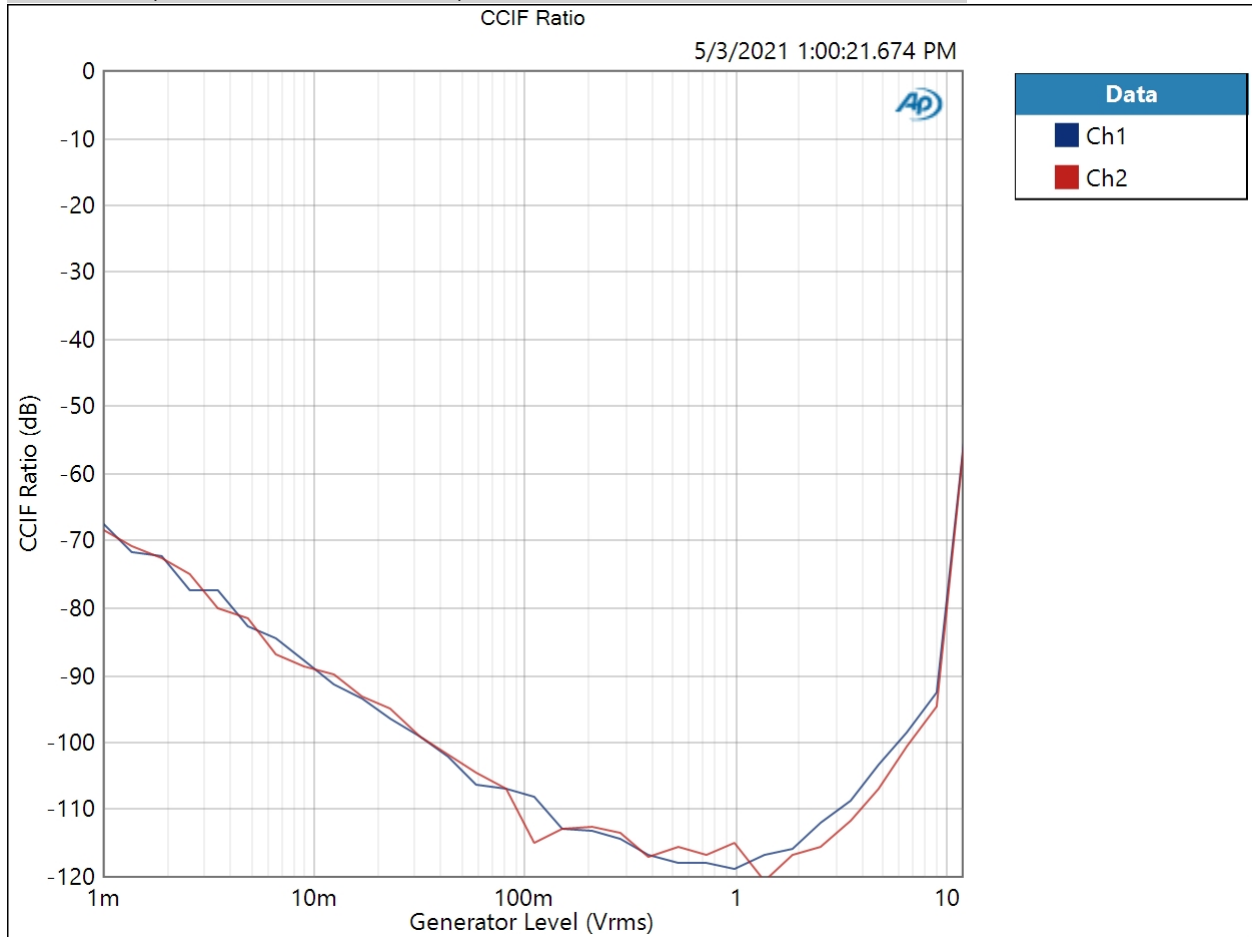
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

300 Ohm Low Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
 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 5/3/2021 1:00:21 PM

CCIF Ratio (5/3/2021 1:00:21.674 PM)



Result: PASSED

5/3/2021 1:14 PM

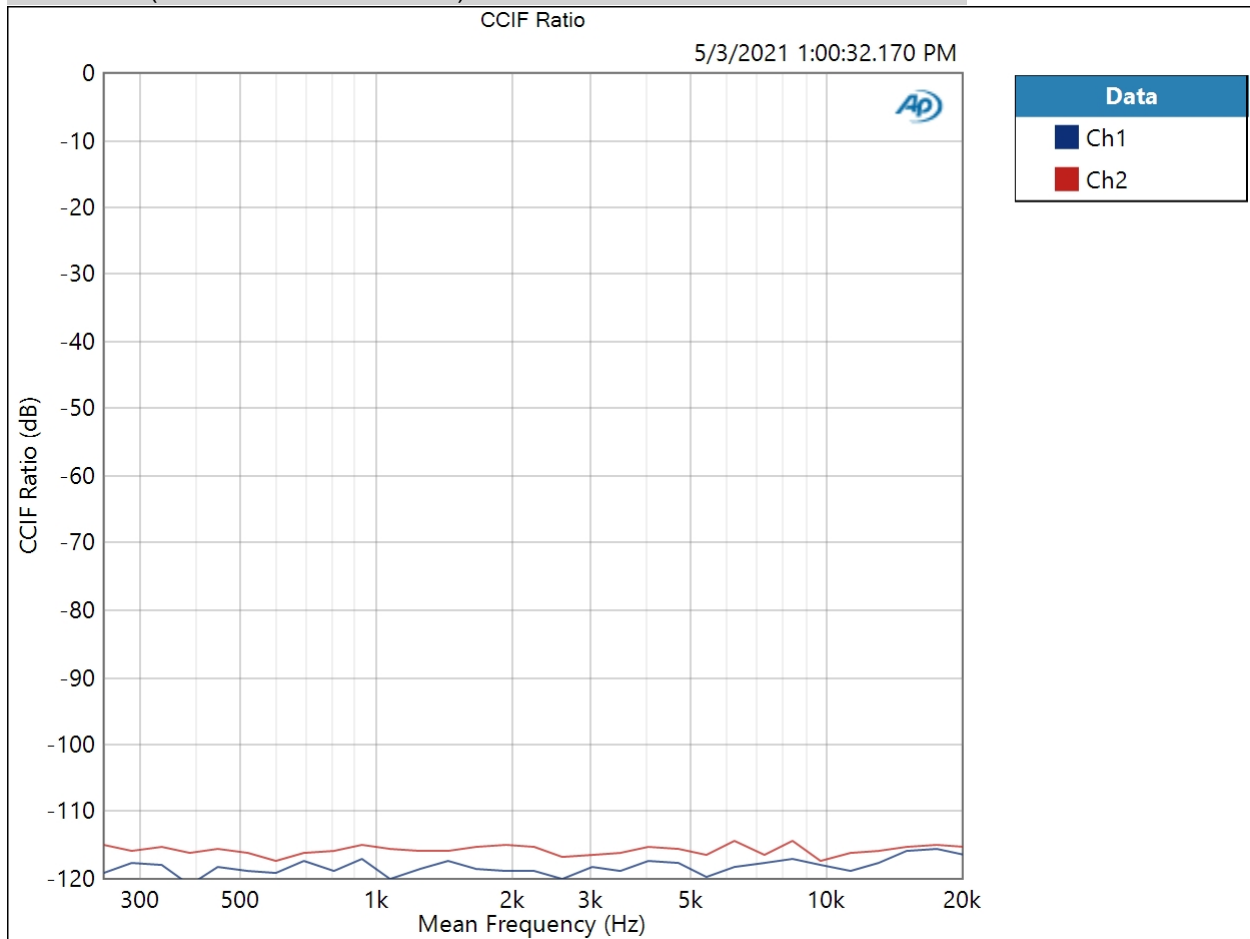




300 Ohm Low Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 1.000 Vrms  
DC Offset: 0.000 V  
Sweep Frequency: Mean Frequency  
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 5/3/2021 1:00:32 PM

CCIF Ratio (5/3/2021 1:00:32.170 PM)



Result:  PASSED

300 Ohm Low Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:00:34.508 PM)

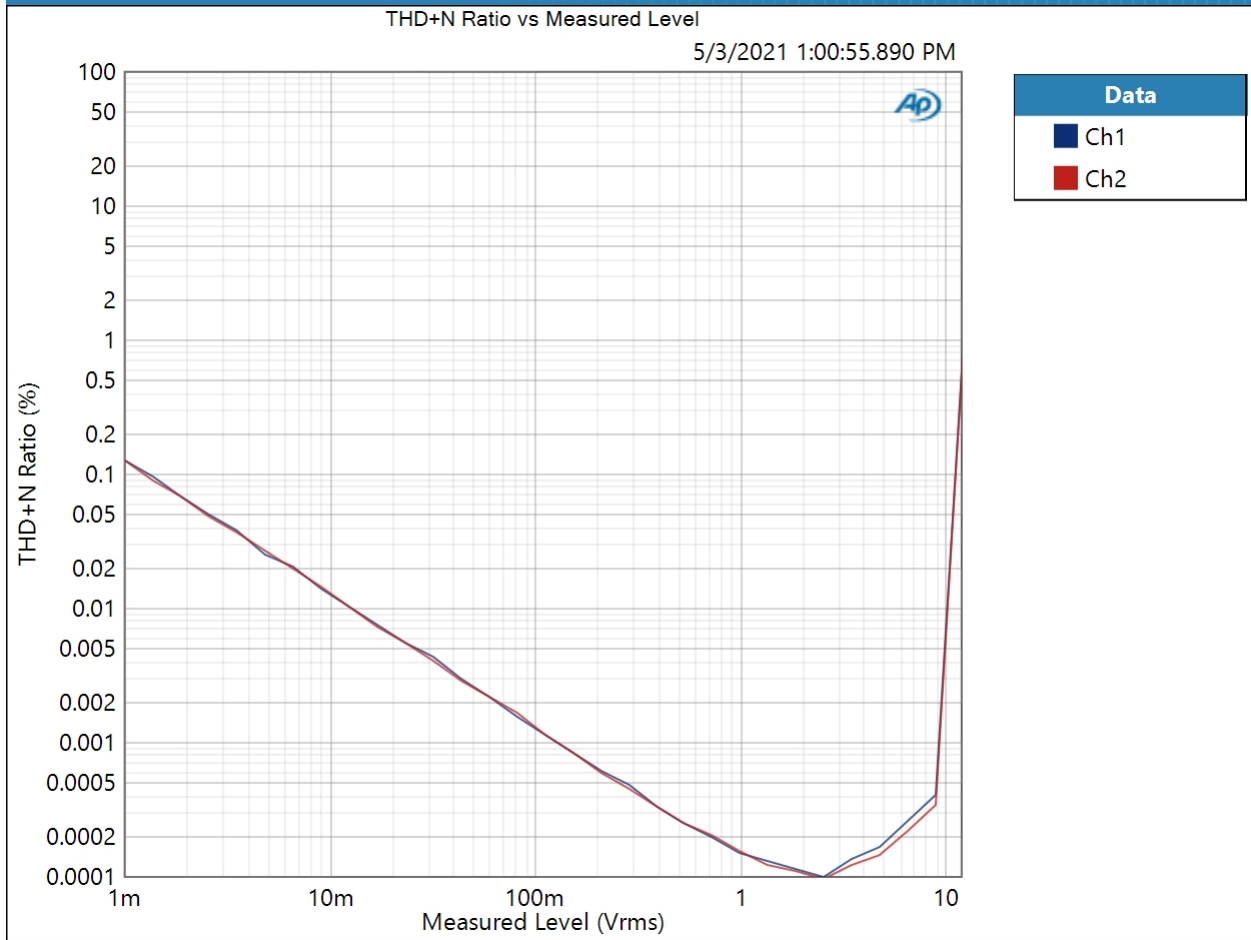
Ch1 -91.117 dB

Ch2 -91.607 dB

300 Ohm Low Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 12.00 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:00:55 PM

THD+N Ratio vs Measured Level (5/3/2021 1:00:55.890 PM)



Result: PASSED

## 300 Ohm High Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM

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  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 1:01:30.175 PM)

Ch1 5.840 Vrms  
 Ch2 5.841 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 (5/3/2021 1:01:31.836 PM)

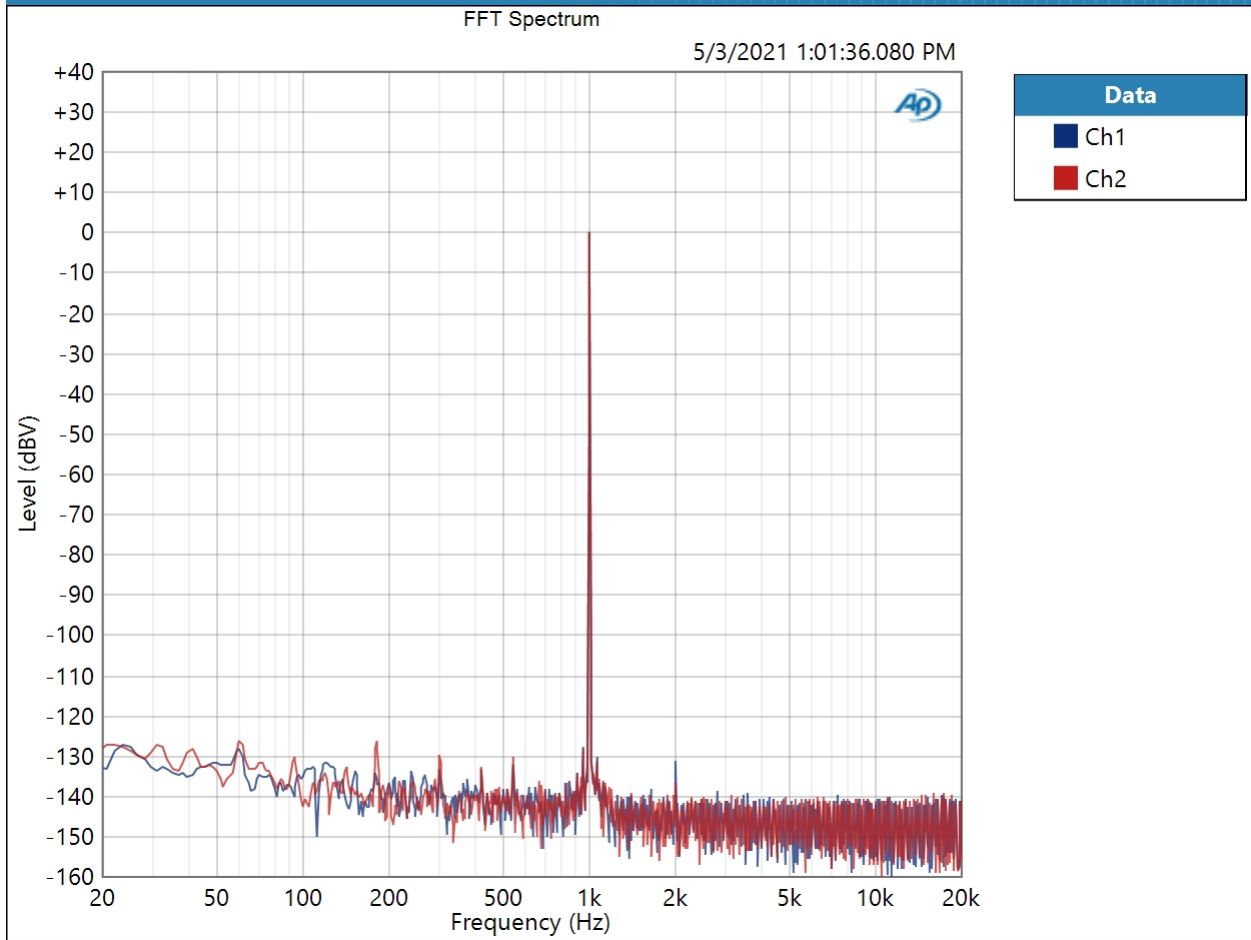
Ch1 0.902 mV  
 Ch2 1.402 mV

300 Ohm High Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 175.0 mVrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1: 5/3/2021 1:01:36 PM  
Acquisition Type: Auto  
Trigger: Free Run  
Delay Time: 250.0 ms  
Input Bandwidth: Use Signal Path  
FFT Length: 32K  
Averaging: Power  
Averages: 3  
Window: AP-Equiripple  
Record Acquisition: False  
Recording Type: Multiple Mono PCM (.wav)

FFT Spectrum (5/3/2021 1:01:36.080 PM)



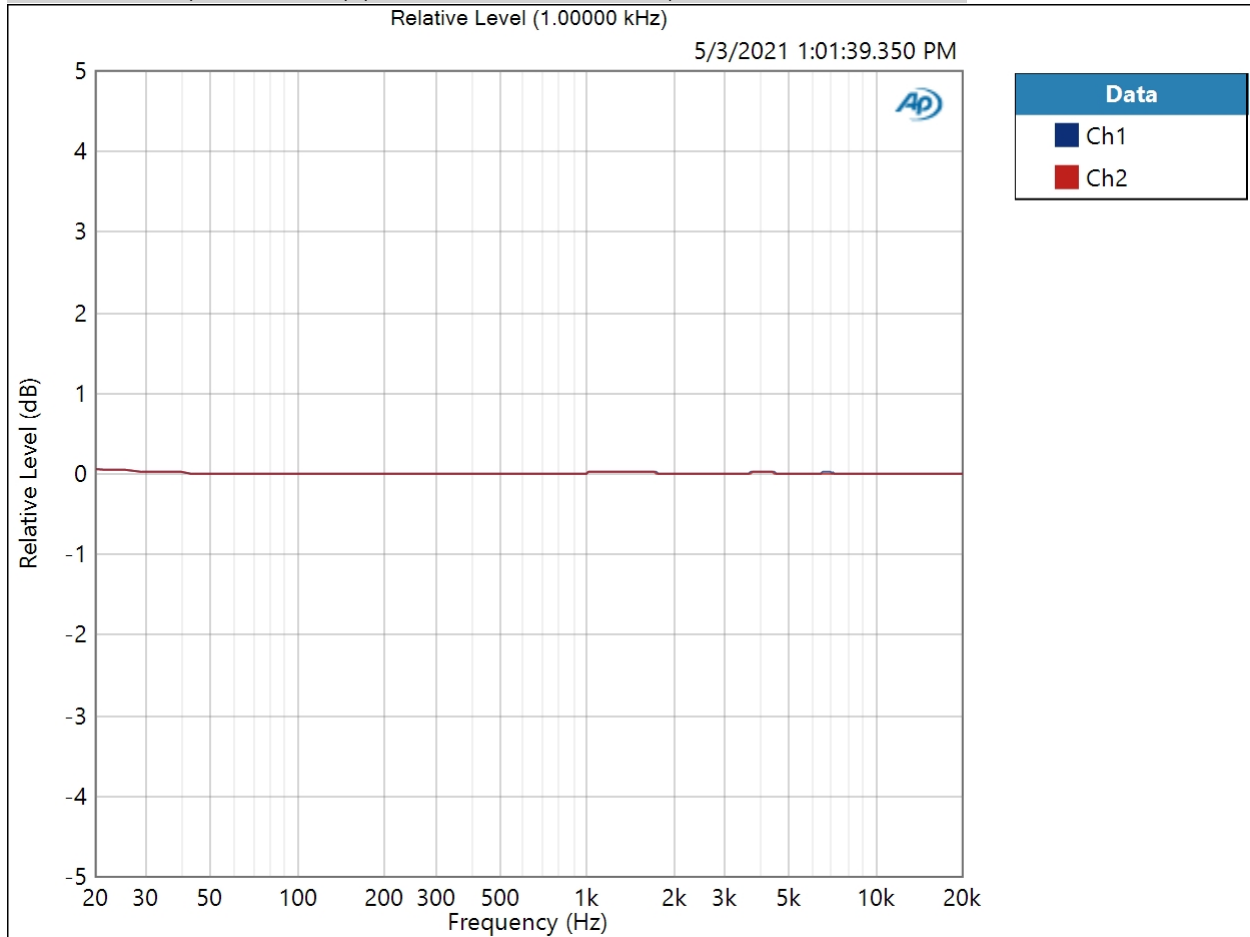


Result:  PASSED

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: 100.0 ms  
 Secondary Source: None  
 Measured 1 5/3/2021 1:01:39 PM

Relative Level (1.00000 kHz) (5/3/2021 1:01:39.350 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) (5/3/2021 1:01:39.350 PM)

Ch1  $\pm 0.030$  dB

Ch2  $\pm 0.031$  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

Precision Tune: Disabled

Generator Level: 175.0 mVrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 1:01:42.225 PM)

Ch1 110.315 dB

Ch2 110.563 dB

300 Ohm High Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 175.0 mVrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 1:01:45.477 PM)

Ch1 -107.896 dB  
 Ch2 -107.982 dB

THD Ratio (5/3/2021 1:01:45.477 PM)

Ch1 0.000065 %  
 Ch2 0.000065 %

Noise Ratio (5/3/2021 1:01:45.477 PM)

Ch1 0.000406 %  
 Ch2 0.000397 %

Distortion Product Ratio (5/3/2021 1:01:45.477 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	-130.67	-136.76	-138.76	-141.09	-139.84	-134.69	-138.58	-136.41	-138.57
Ch2	-0.00	-130.85	-136.34	-141.53	-142.52	-137.20	-139.42	-137.49	-137.79	-136.87

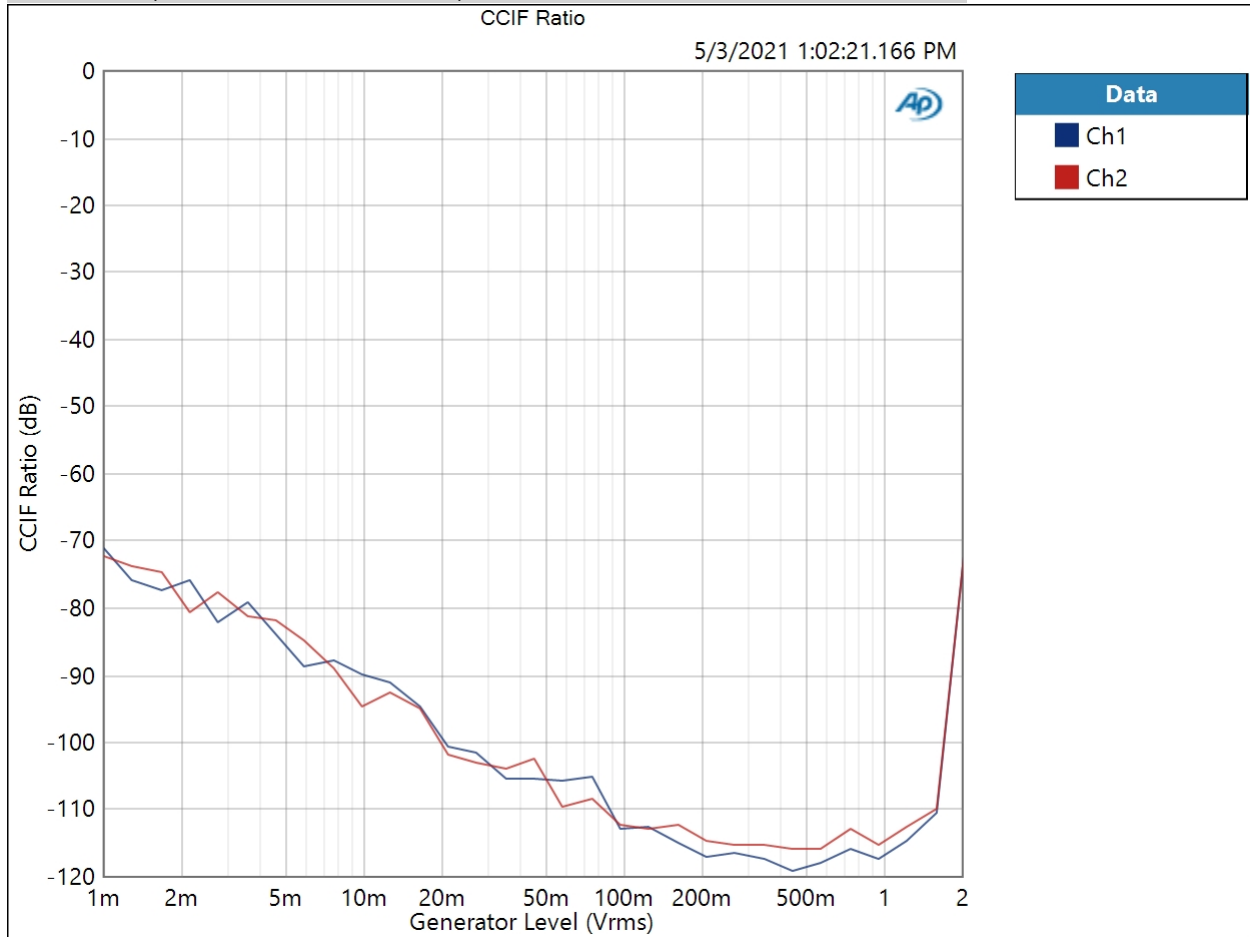
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

300 Ohm High Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
 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 5/3/2021 1:02:21 PM

CCIF Ratio (5/3/2021 1:02:21.166 PM)



Result: PASSED

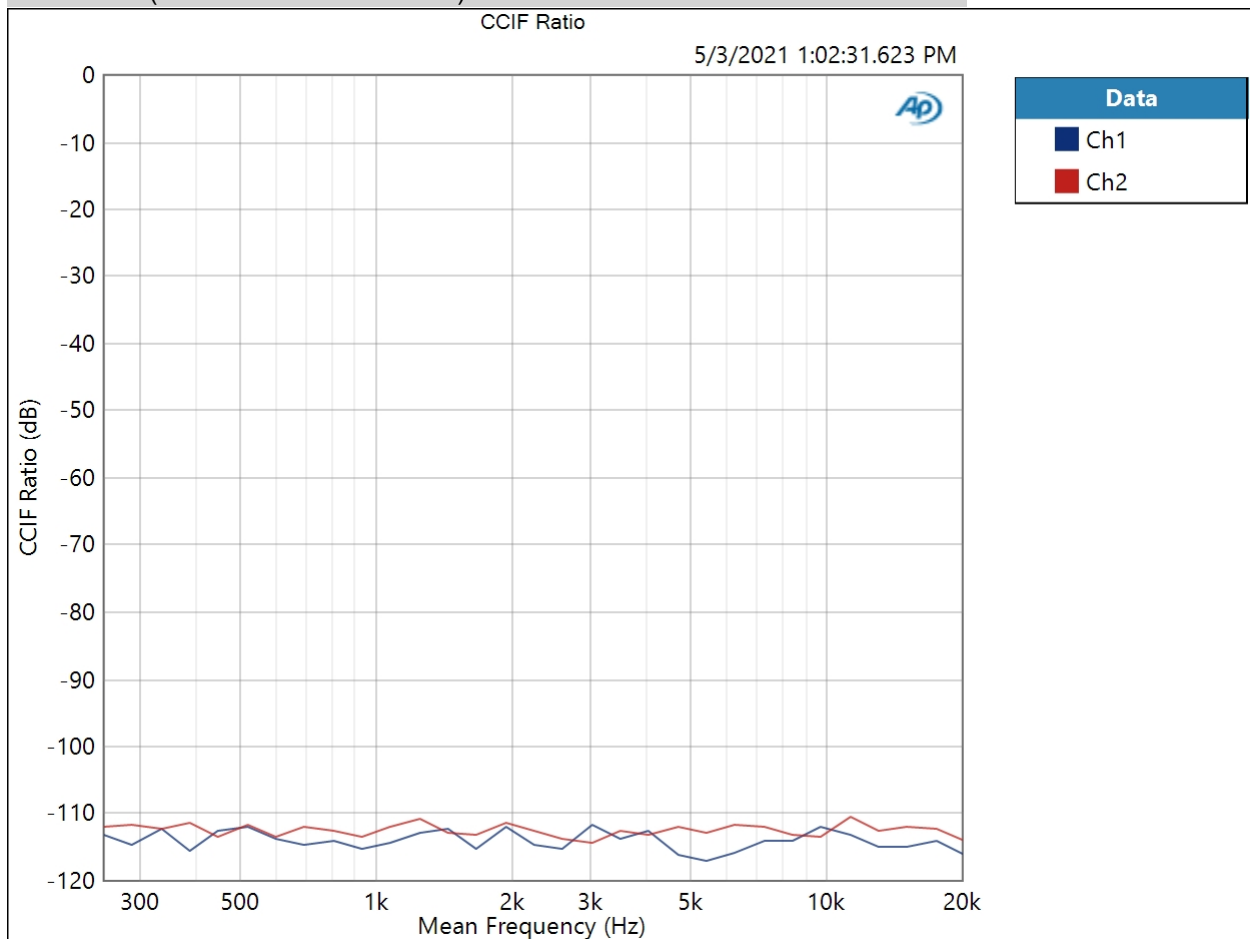
5/3/2021 1:14 PM



300 Ohm High Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 175.0 mVrms  
 DC Offset: 0.000 V  
 Sweep Frequency: Mean Frequency  
 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 5/3/2021 1:02:31 PM

CCIF Ratio (5/3/2021 1:02:31.623 PM)



Result:  PASSED

300 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 175.0 mVrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:02:34.164 PM)

Ch1 -89.787 dB

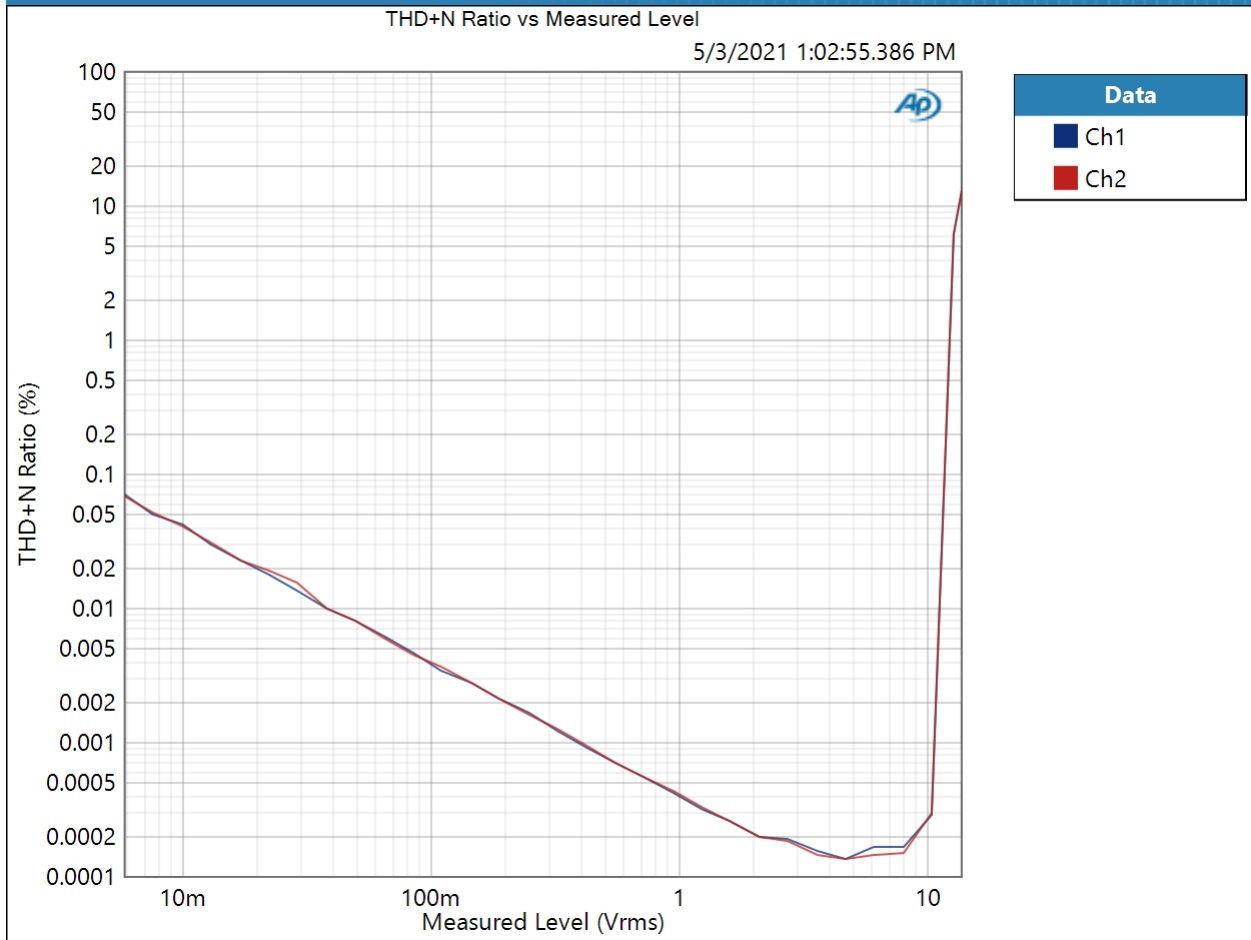
Ch2 -88.259 dB



300 Ohm High Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 3.000 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:02:55 PM

THD+N Ratio vs Measured Level (5/3/2021 1:02:55.386 PM)



Result: PASSED

## 32 Ohm Negative Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM

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 Negative Gain : Level and Gain

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 1:03:22.593 PM)

Ch1 318.5 mVrms  
 Ch2 318.7 mVrms

32 Ohm Negative 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

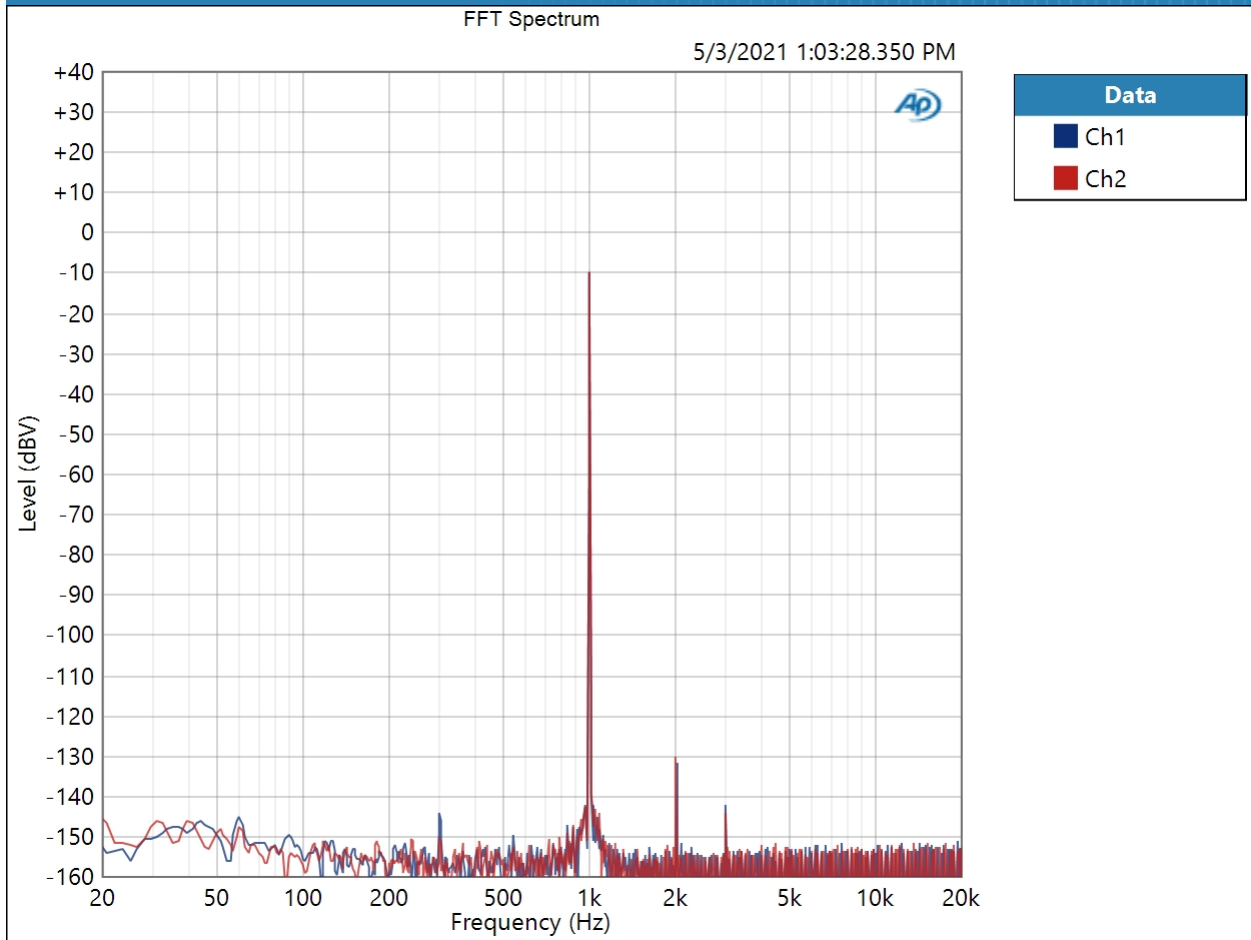
DC Level (5/3/2021 1:03:24.141 PM)

Ch1 9.365 uV  
 Ch2 60.65 uV

32 Ohm Negative Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 1.000 Vrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1 5/3/2021 1:03:28 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 (5/3/2021 1:03:28.350 PM)

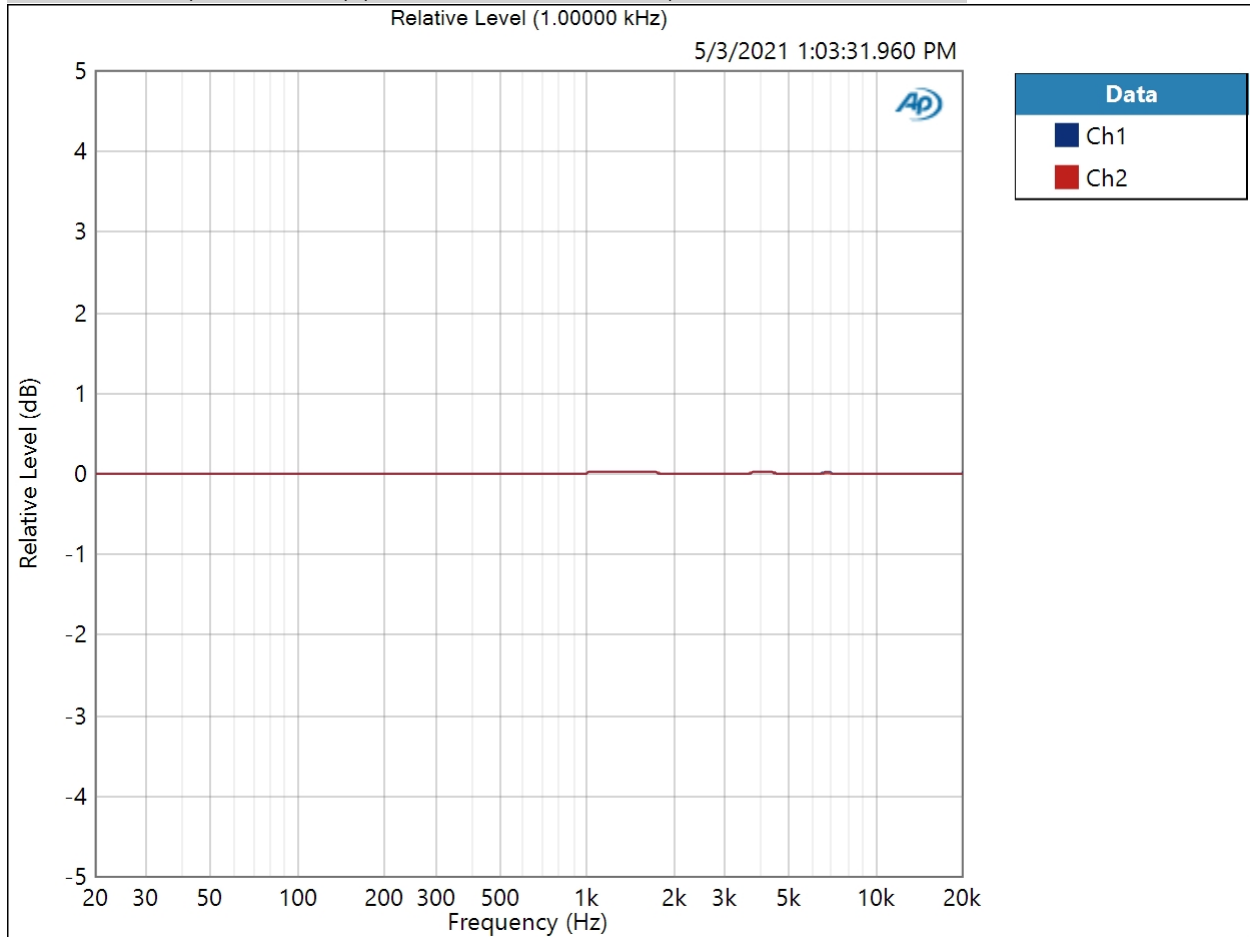


Result:  PASSED

32 Ohm Negative 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: 1.000 s  
 Secondary Source: None  
 Measured 1 5/3/2021 1:03:31 PM

Relative Level (1.00000 kHz) (5/3/2021 1:03:31.960 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) (5/3/2021 1:03:31.960 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  dB

Deviation (20.0000 Hz - 20.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 20.0000 kHz

32 Ohm Negative Gain : Signal to Noise Ratio

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 3.000 Vrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 1:03:34.776 PM)

Ch1 122.105 dB

Ch2 122.142 dB



32 Ohm Negative Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 3.000 Vrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 1:03:37.758 PM)

Ch1 -113.263 dB  
 Ch2 -112.941 dB

THD Ratio (5/3/2021 1:03:37.758 PM)

Ch1 0.000176 %  
 Ch2 0.000186 %

Noise Ratio (5/3/2021 1:03:37.758 PM)

Ch1 0.000126 %  
 Ch2 0.000130 %

Distortion Product Ratio (5/3/2021 1:03:37.758 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	-116.39	-121.72	-130.47	-138.17	-142.63	-144.02	-146.01	-146.83	-145.19
Ch2	-0.00	-115.50	-122.64	-131.32	-142.95	-141.16	-146.85	-153.79	-148.48	-150.65

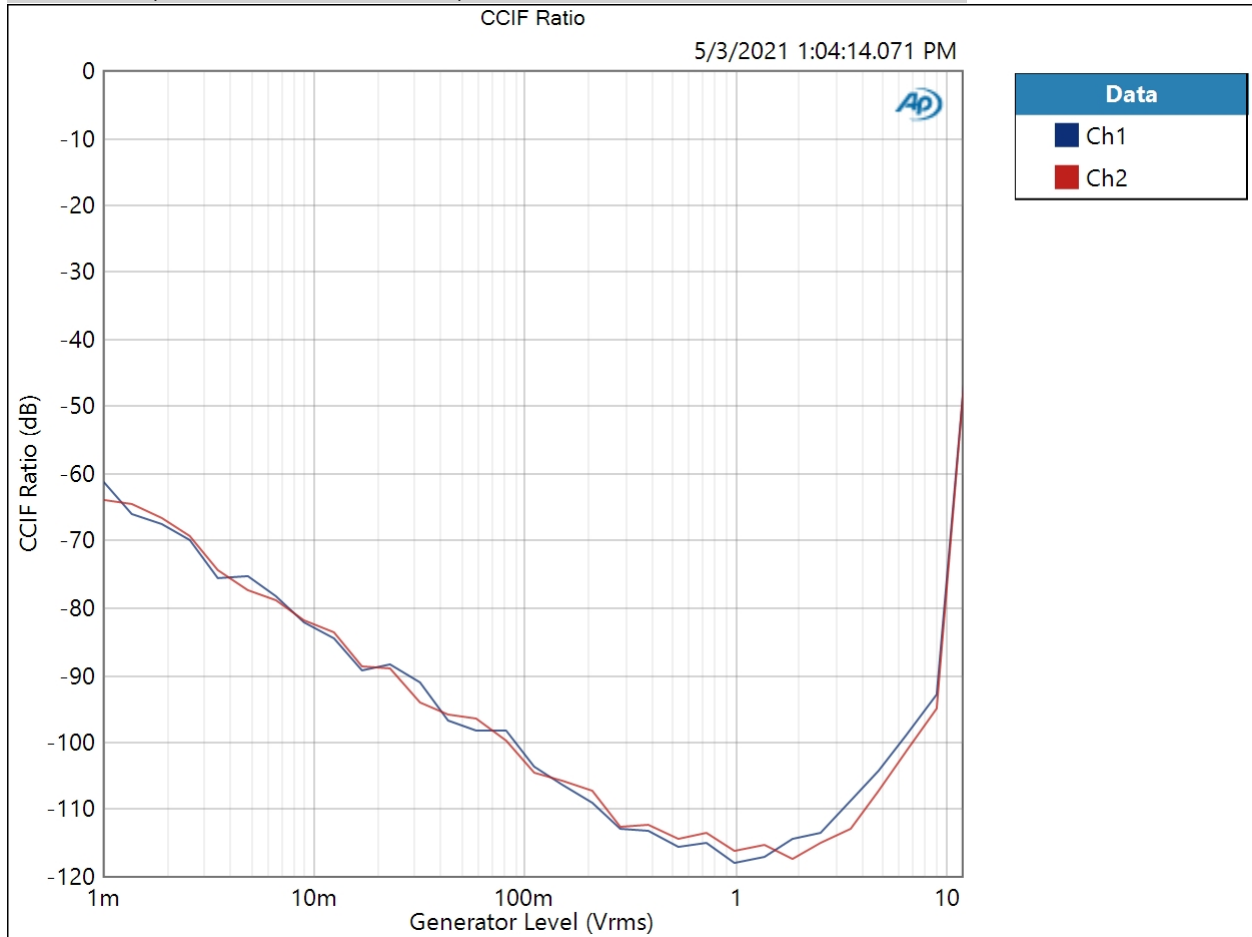
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

32 Ohm Negative Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
 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 5/3/2021 1:04:14 PM

CCIF Ratio (5/3/2021 1:04:14.071 PM)



Result: PASSED

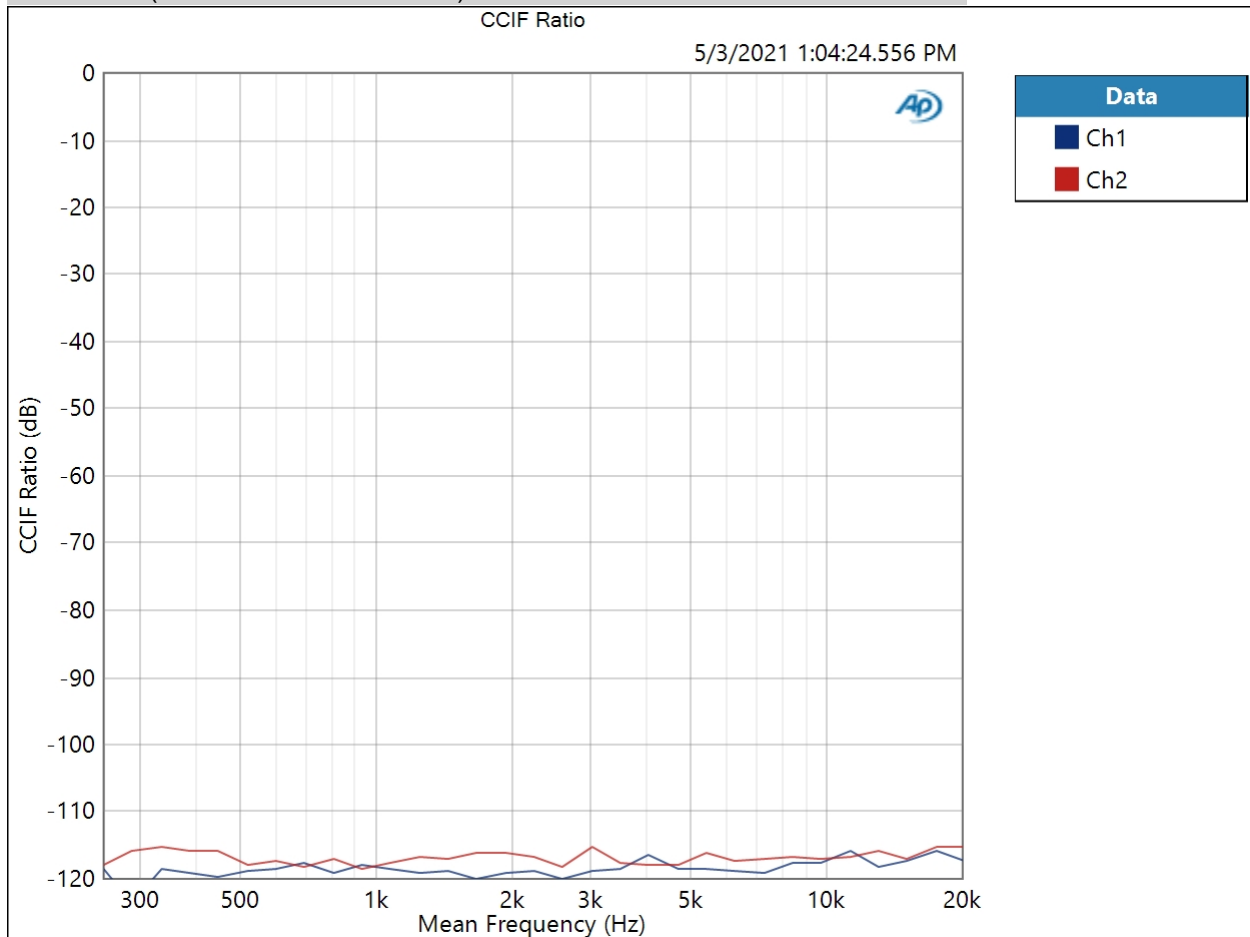
5/3/2021 1:14 PM



32 Ohm Negative Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 1.000 Vrms  
 DC Offset: 0.000 V  
 Sweep Frequency: Mean Frequency  
 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 5/3/2021 1:04:24 PM

CCIF Ratio (5/3/2021 1:04:24.556 PM)



Result:  PASSED

32 Ohm Negative Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:04:26.898 PM)

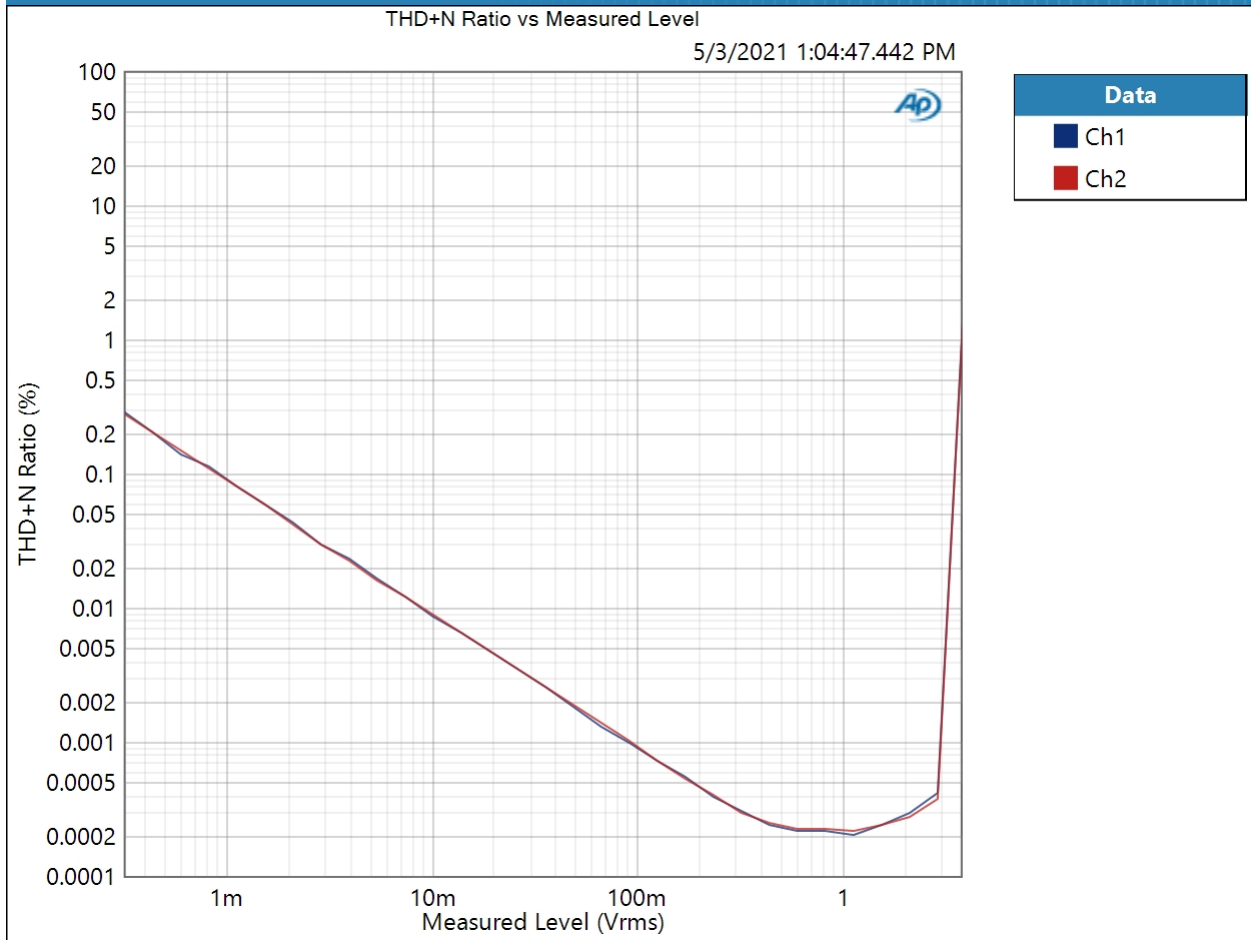
Ch1 -73.334 dB

Ch2 -72.950 dB

32 Ohm Negative Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 12.00 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:04:47 PM

THD+N Ratio vs Measured Level (5/3/2021 1:04:47.442 PM)



Result: PASSED

## 32 Ohm Low Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM



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  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 1:05:08.523 PM)

Ch1 0.988 Vrms  
 Ch2 0.988 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

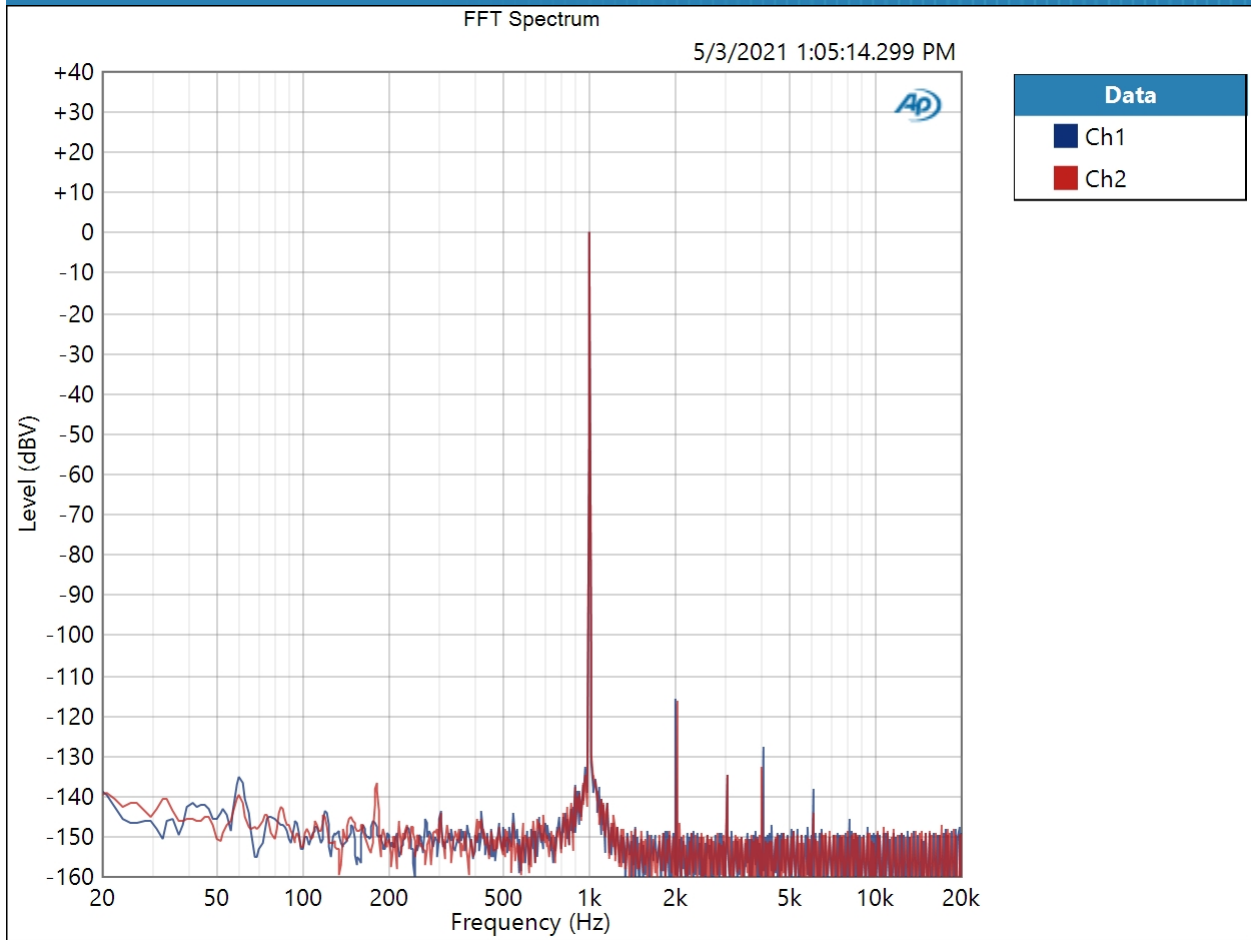
DC Level (5/3/2021 1:05:10.102 PM)

Ch1 110.5 uV  
 Ch2 222.3 uV

32 Ohm Low Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 1.000 Vrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1 5/3/2021 1:05:14 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 (5/3/2021 1:05:14.299 PM)

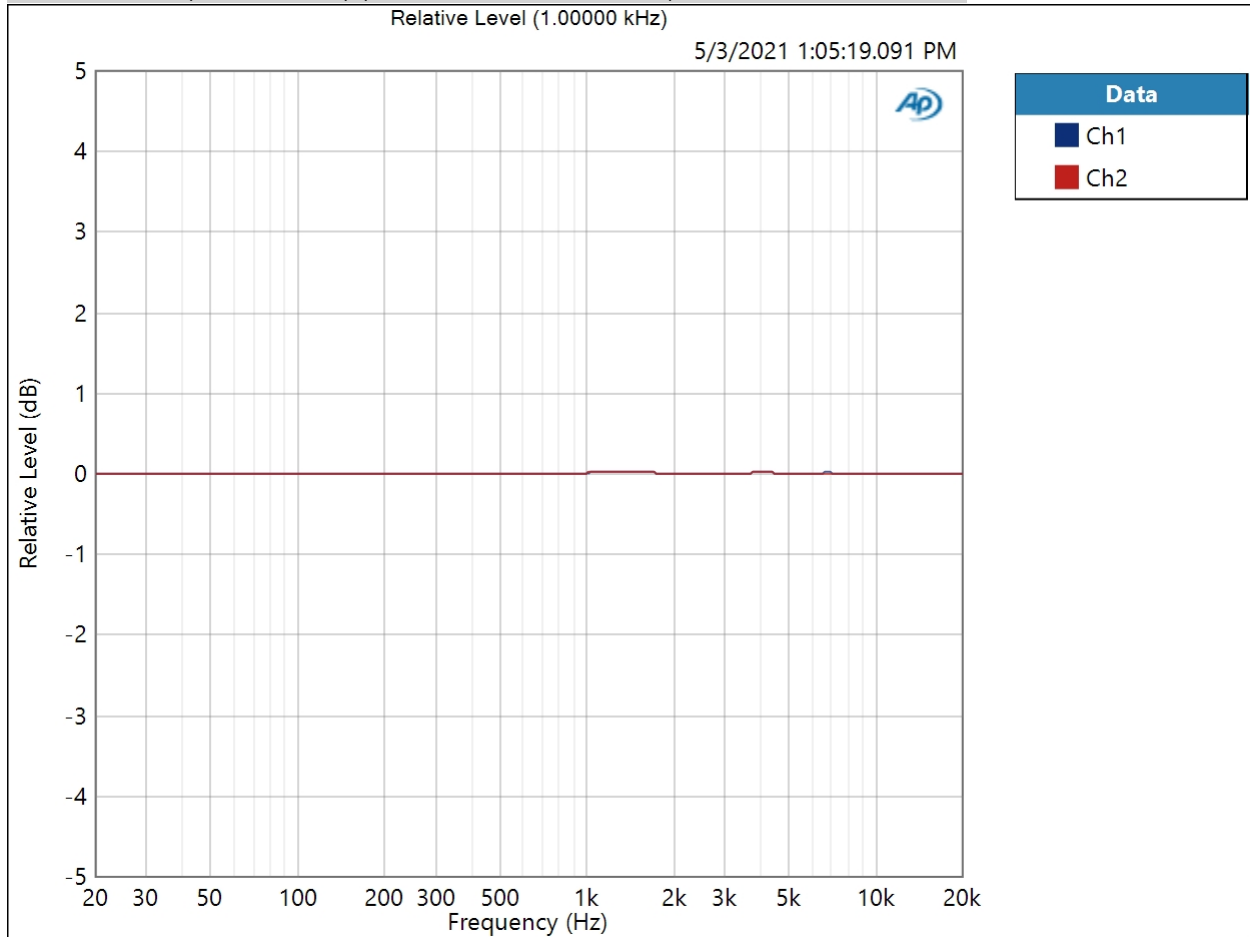


Result: PASSED

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: 1.000 s  
Secondary Source: None  
Measured 1 5/3/2021 1:05:19 PM

Relative Level (1.00000 kHz) (5/3/2021 1:05:19.091 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) (5/3/2021 1:05:19.091 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  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

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 1:05:21.911 PM)

Ch1 119.886 dB

Ch2 119.741 dB

32 Ohm Low Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 1:05:24.898 PM)

Ch1 -112.599 dB  
 Ch2 -113.124 dB

THD Ratio (5/3/2021 1:05:24.898 PM)

Ch1 0.000181 %  
 Ch2 0.000162 %

Noise Ratio (5/3/2021 1:05:24.898 PM)

Ch1 0.000149 %  
 Ch2 0.000146 %

Distortion Product Ratio (5/3/2021 1:05:24.898 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	-115.19	-135.63	-128.44	-149.64	-137.59	-140.34	-142.95	-143.02	-139.90
Ch2	-0.00	-116.06	-133.15	-131.66	-147.55	-144.86	-145.45	-142.99	-144.73	-149.15

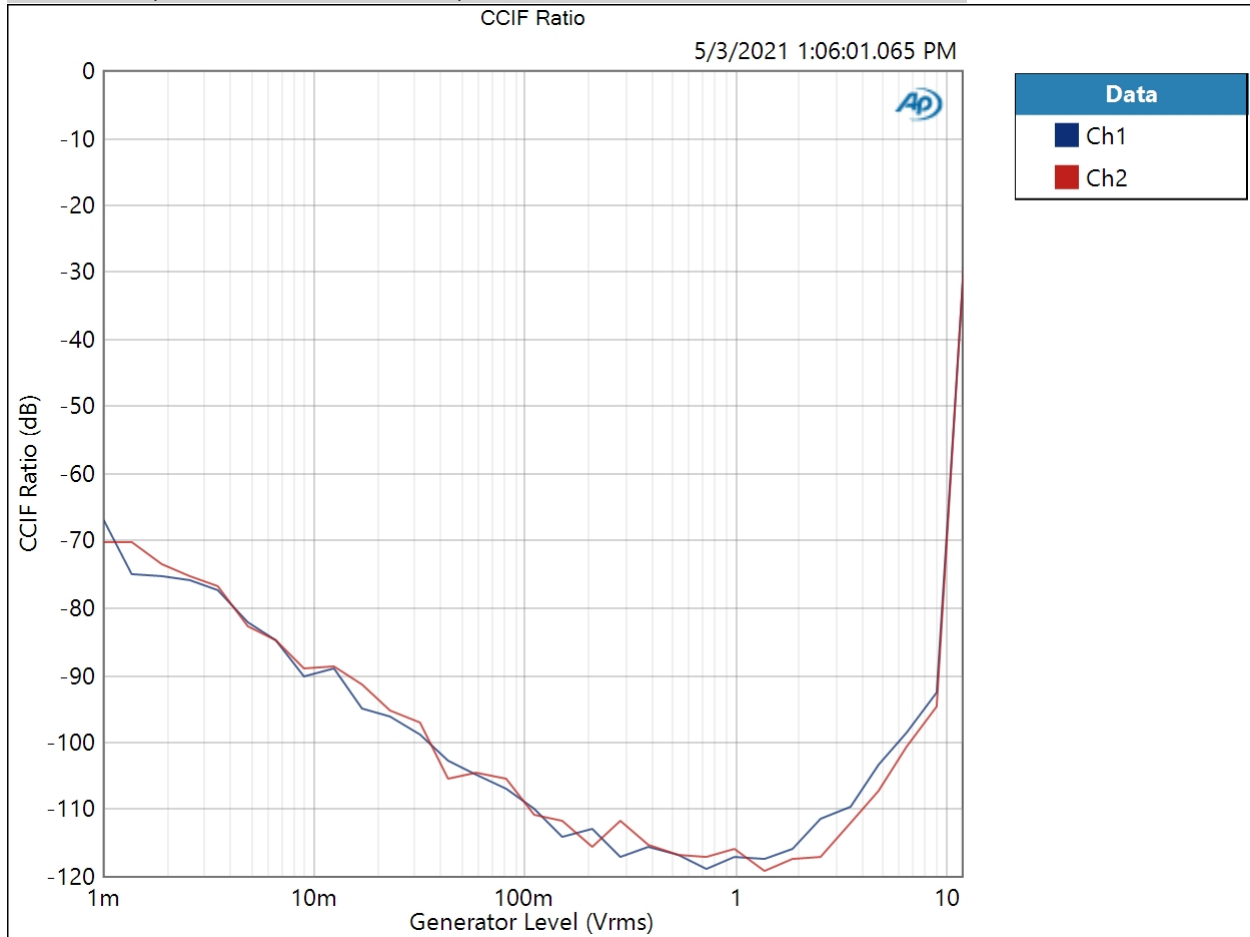
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

32 Ohm Low Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
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 5/3/2021 1:06:01 PM

CCIF Ratio (5/3/2021 1:06:01.065 PM)



Result: PASSED

5/3/2021 1:14 PM

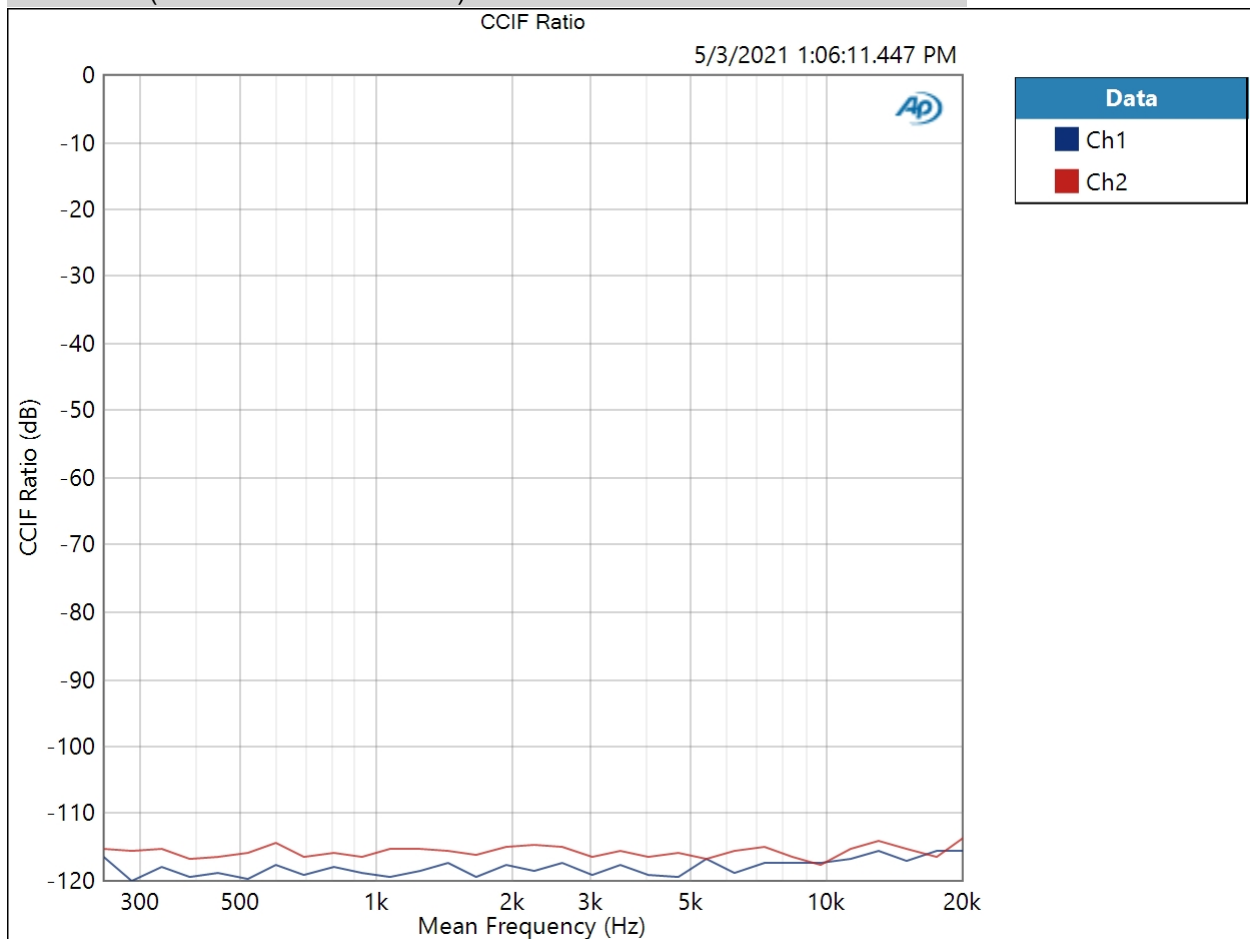




32 Ohm Low Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 1.000 Vrms  
 DC Offset: 0.000 V  
 Sweep Frequency: Mean Frequency  
 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 5/3/2021 1:06:11 PM

CCIF Ratio (5/3/2021 1:06:11.447 PM)



Result:  PASSED

32 Ohm Low Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:06:13.718 PM)

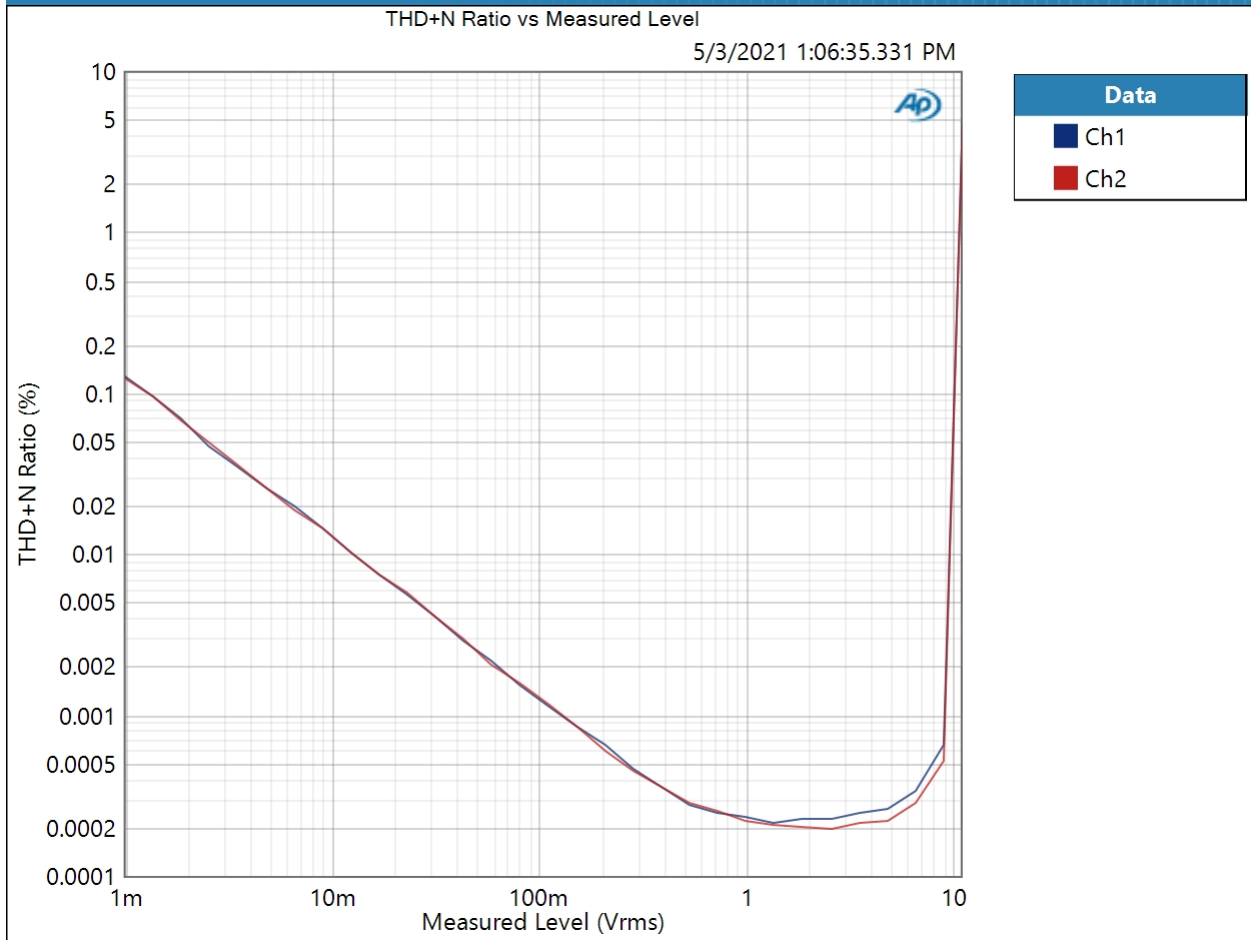
Ch1 -73.286 dB

Ch2 -72.596 dB

32 Ohm Low Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 12.00 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:06:35 PM

THD+N Ratio vs Measured Level (5/3/2021 1:06:35.331 PM)



Result: PASSED

## 32 Ohm High Gain : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM

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  
 Precision Tune: Disabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 Low-pass Filter: Signal Path

RMS Level (5/3/2021 1:09:55.205 PM)

Ch1 5.794 Vrms  
 Ch2 5.794 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

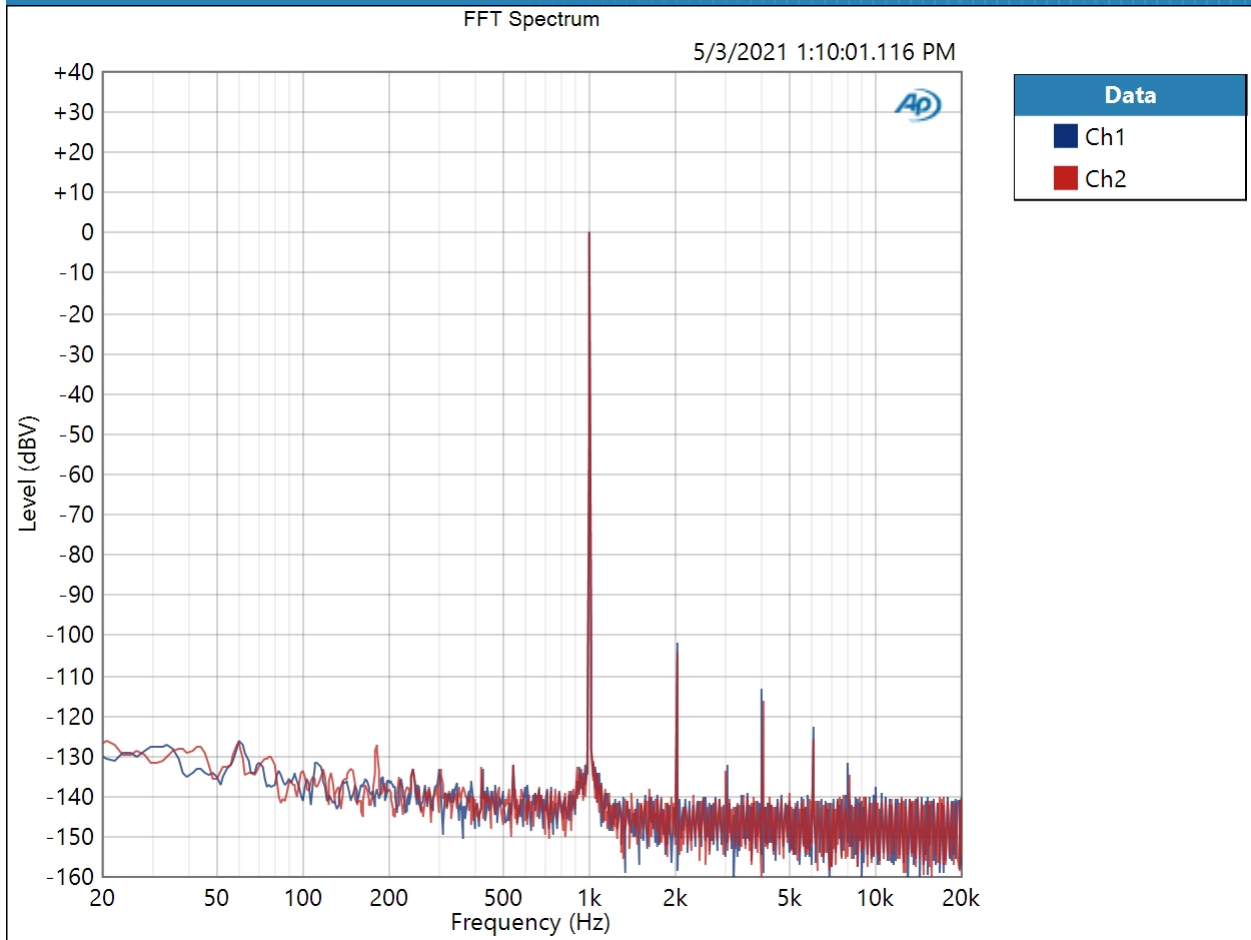
DC Level (5/3/2021 1:09:56.891 PM)

Ch1 873.5 uV  
 Ch2 1.379 mV

32 Ohm High Gain : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 175.0 mVrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1: 5/3/2021 1:10:01 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 (5/3/2021 1:10:01.116 PM)



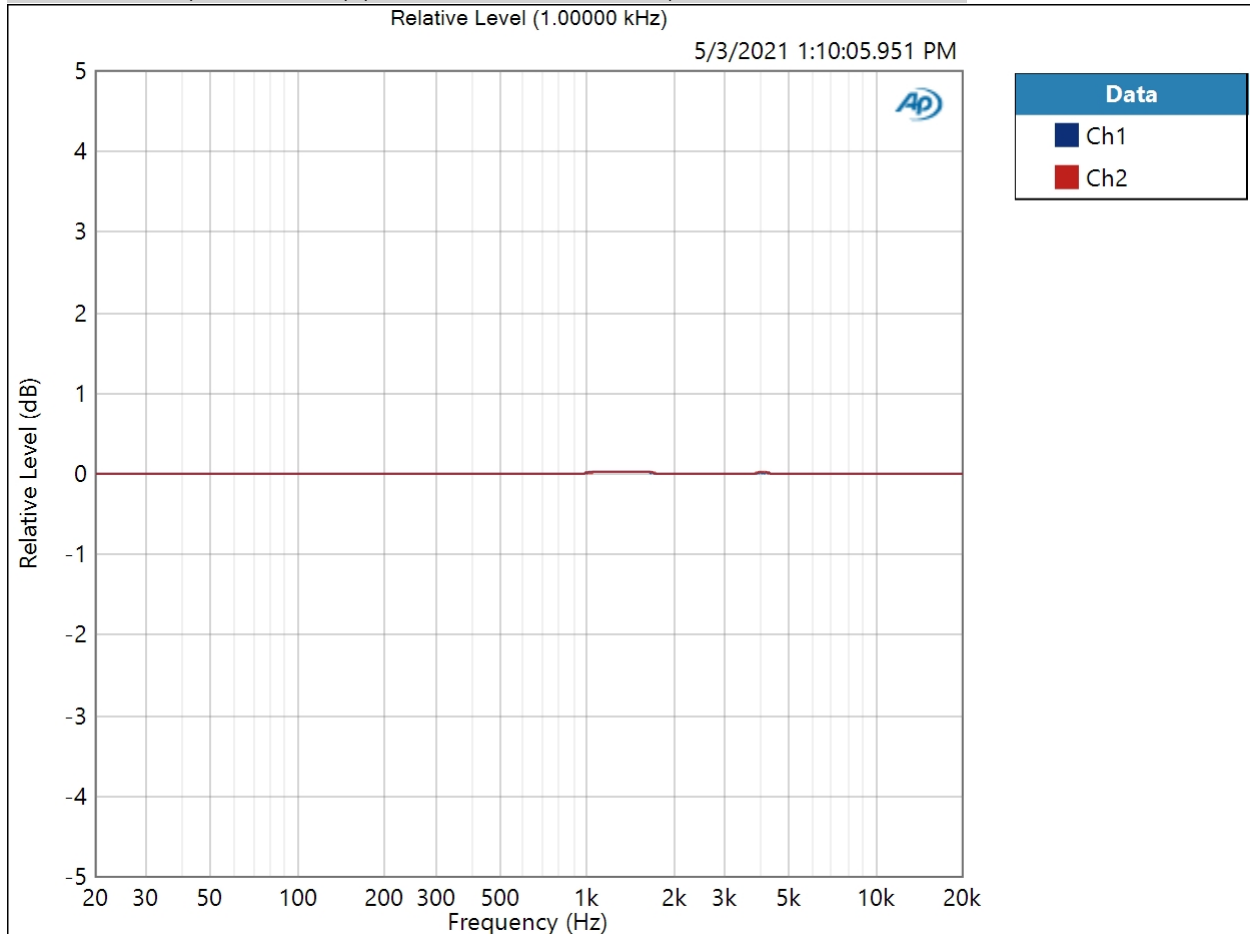
Result:  PASSED



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: 1.000 s  
 Secondary Source: None  
 Measured 1 5/3/2021 1:10:05 PM

Relative Level (1.00000 kHz) (5/3/2021 1:10:05.951 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) (5/3/2021 1:10:05.951 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  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

Precision Tune: Disabled

Generator Level: 175.0 mVrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 1:10:08.788 PM)

Ch1 110.187 dB

Ch2 110.484 dB

32 Ohm High Gain : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Disabled  
 Generator Level: 175.0 mVrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 1:10:11.812 PM)

Ch1 -100.733 dB  
 Ch2 -102.496 dB

THD Ratio (5/3/2021 1:10:11.812 PM)

Ch1 0.000823 %  
 Ch2 0.000641 %

Noise Ratio (5/3/2021 1:10:11.812 PM)

Ch1 0.000395 %  
 Ch2 0.000399 %

Distortion Product Ratio (5/3/2021 1:10:11.812 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	-102.04	-132.86	-113.58	-137.33	-123.38	-136.11	-129.17	-137.21	-136.71
Ch2	-0.00	-104.21	-133.18	-115.92	-135.25	-126.07	-141.01	-138.22	-136.34	-136.79

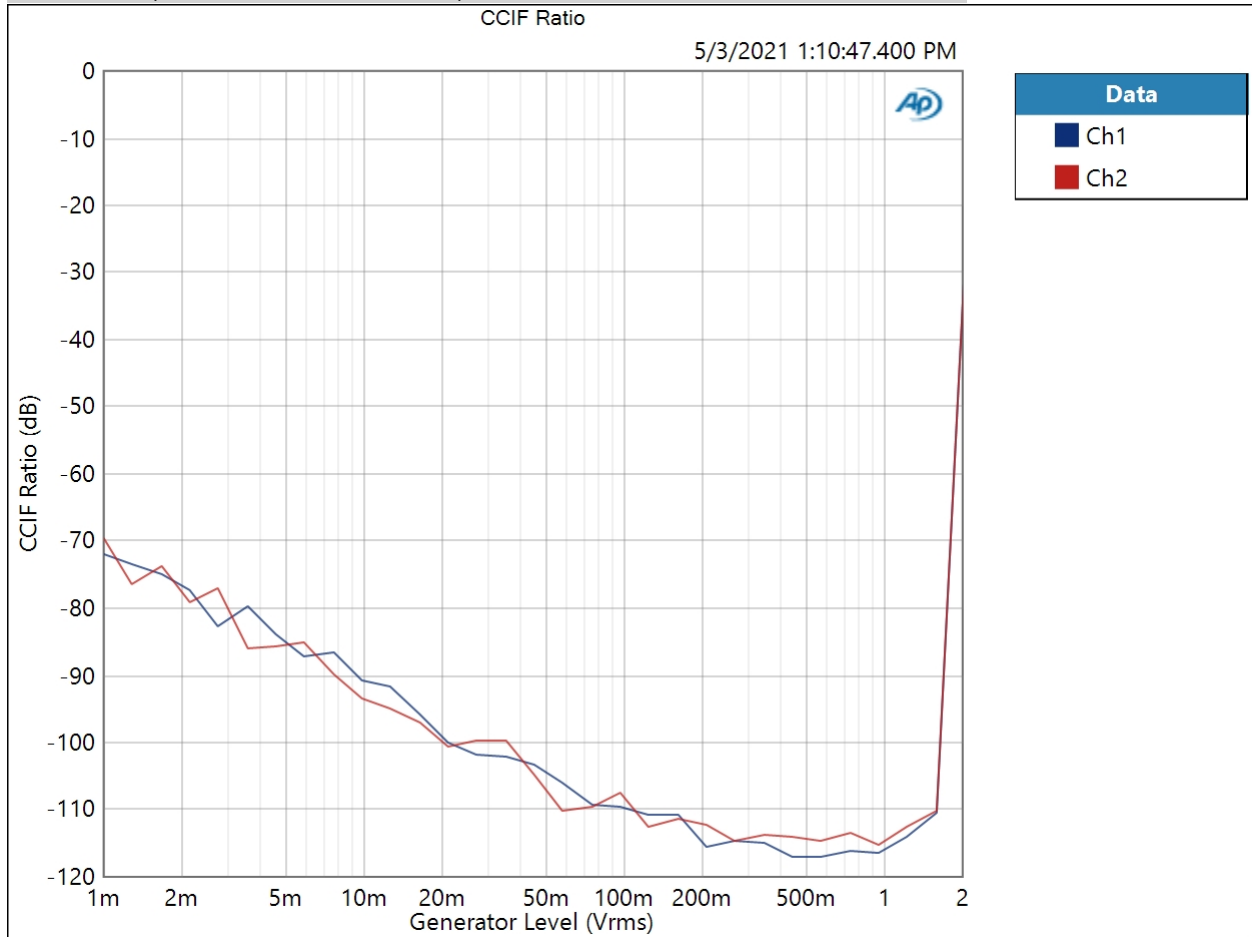
Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1

32 Ohm High Gain : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
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 5/3/2021 1:10:47 PM

CCIF Ratio (5/3/2021 1:10:47.400 PM)



Result: PASSED

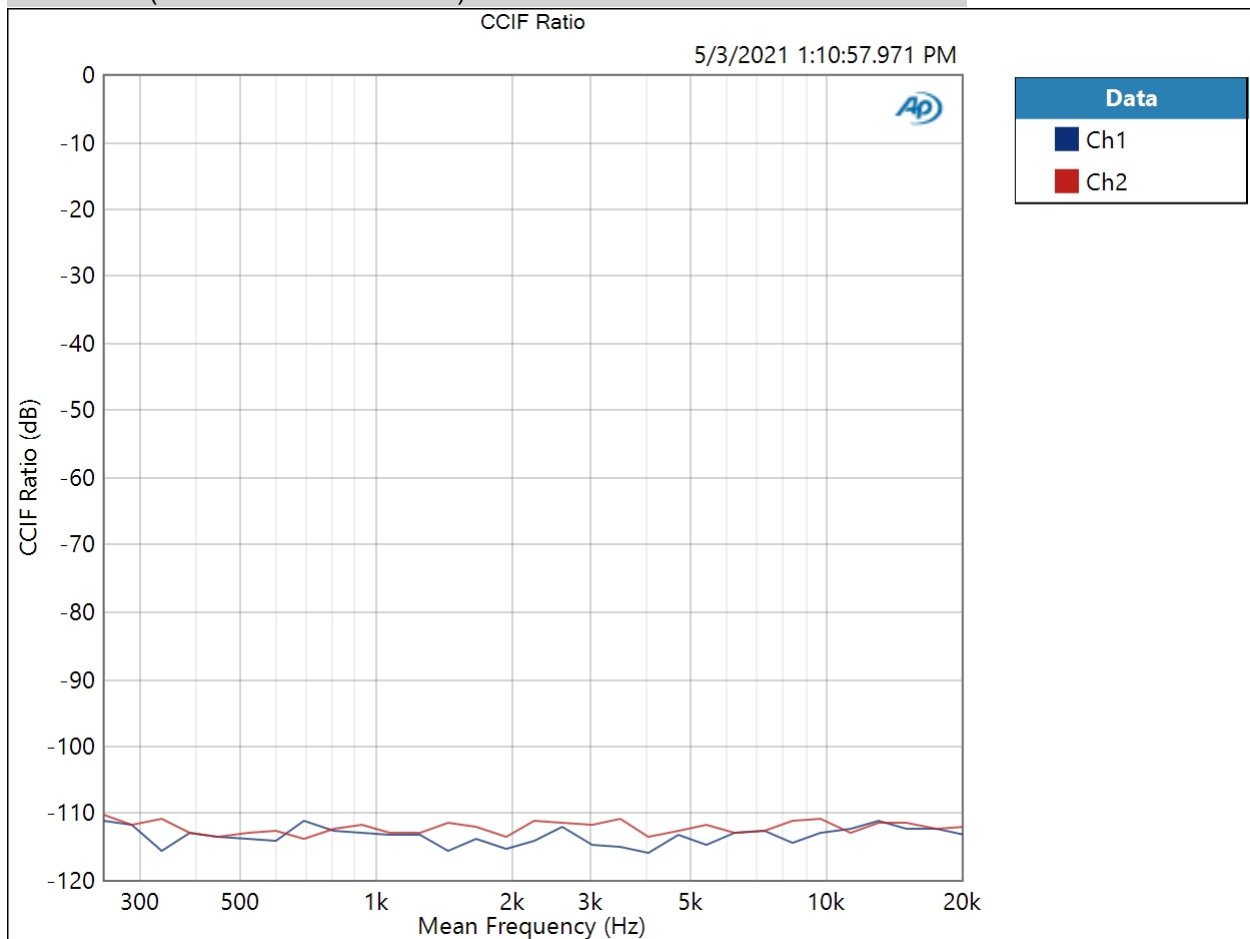
5/3/2021 1:14 PM



32 Ohm High Gain : IMD Frequency Sweep ( CCIF )

Generator Level: 175.0 mVrms  
 DC Offset: 0.000 V  
 Sweep Frequency: Mean Frequency  
 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 5/3/2021 1:10:57 PM

CCIF Ratio (5/3/2021 1:10:57.971 PM)



Result:  PASSED

32 Ohm High Gain : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 175.0 mVrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:11:00.263 PM)

Ch1 -73.347 dB

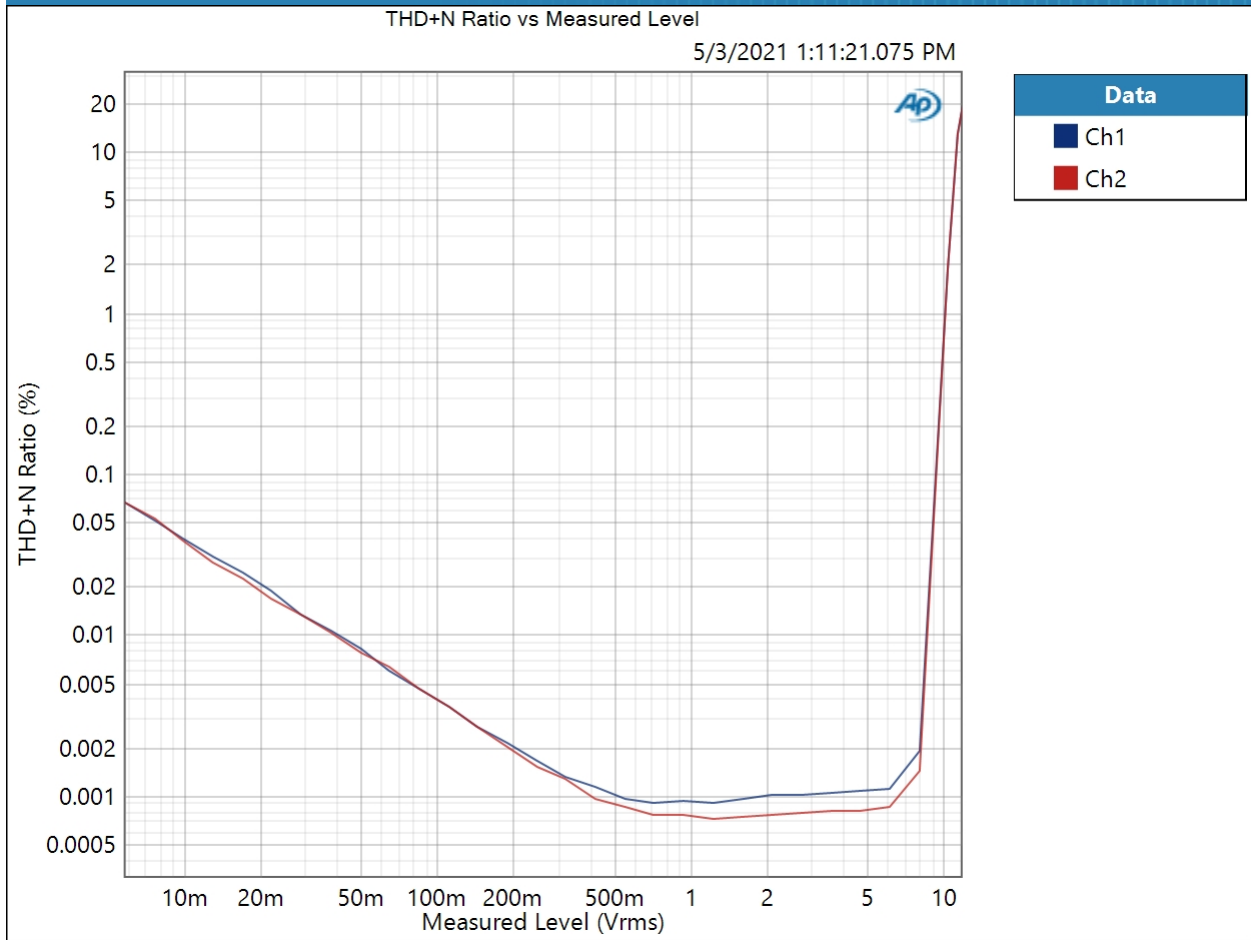
Ch2 -70.888 dB

32 Ohm High Gain : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 3.000 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:11:21 PM

THD+N Ratio vs Measured Level (5/3/2021 1:11:21.075 PM)





Result: PASSED

Preamp : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	2
Generator Mode:	High Performance Sine Generator
Precision Tune:	Disabled
Source Impedance:	20 ohm, 20 ohm
AG52 Generator Option:	Installed
Auto Range:	Enabled
Output EQ:	None
Input 1:	Analog Unbalanced
Input Bandwidth:	AC (<10 Hz) - 22.4k (48 kHz SR)
Input EQ:	None
Channels:	2
Termination:	100 kohm
High Performance Sine Analyzer:	Enabled
Input 2:	None
Device Delay:	0.000 s
• 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
Analog Input	
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

5/3/2021 1:14 PM

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
Precision Tune:	Disabled
Generator Level:	1.000 Vrms
Frequency:	1.00000 kHz
Low-pass Filter:	Signal Path

RMS Level (5/3/2021 1:12:39.625 PM)

Ch1 0.997 Vrms  
Ch2 0.997 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

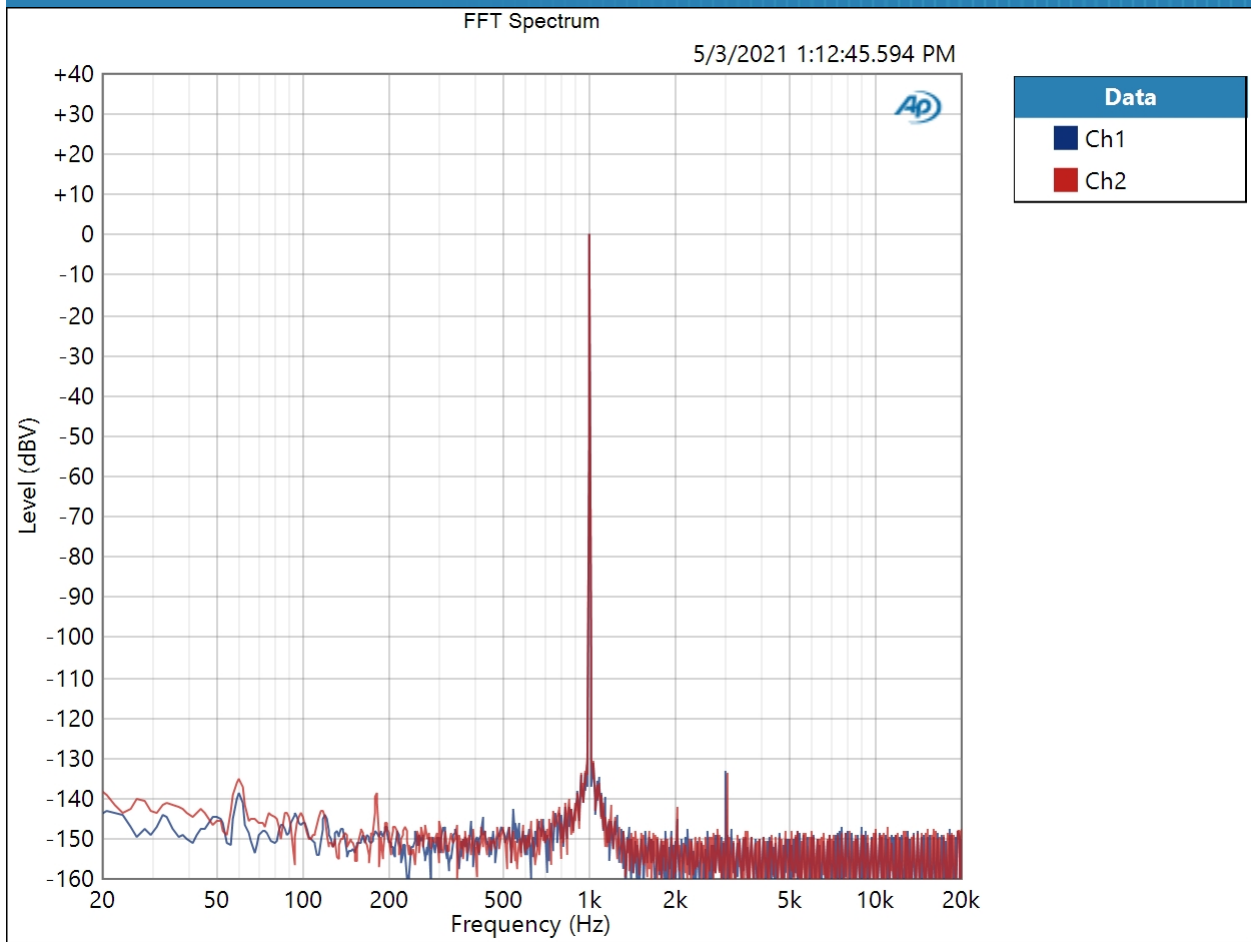
DC Level (5/3/2021 1:12:41.272 PM)

Ch1 113.4 uV  
Ch2 224.1 uV

Preamp : Signal Analyzer

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Generator Level: 1.000 Vrms  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1 5/3/2021 1:12:45 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 (5/3/2021 1:12:45.594 PM)

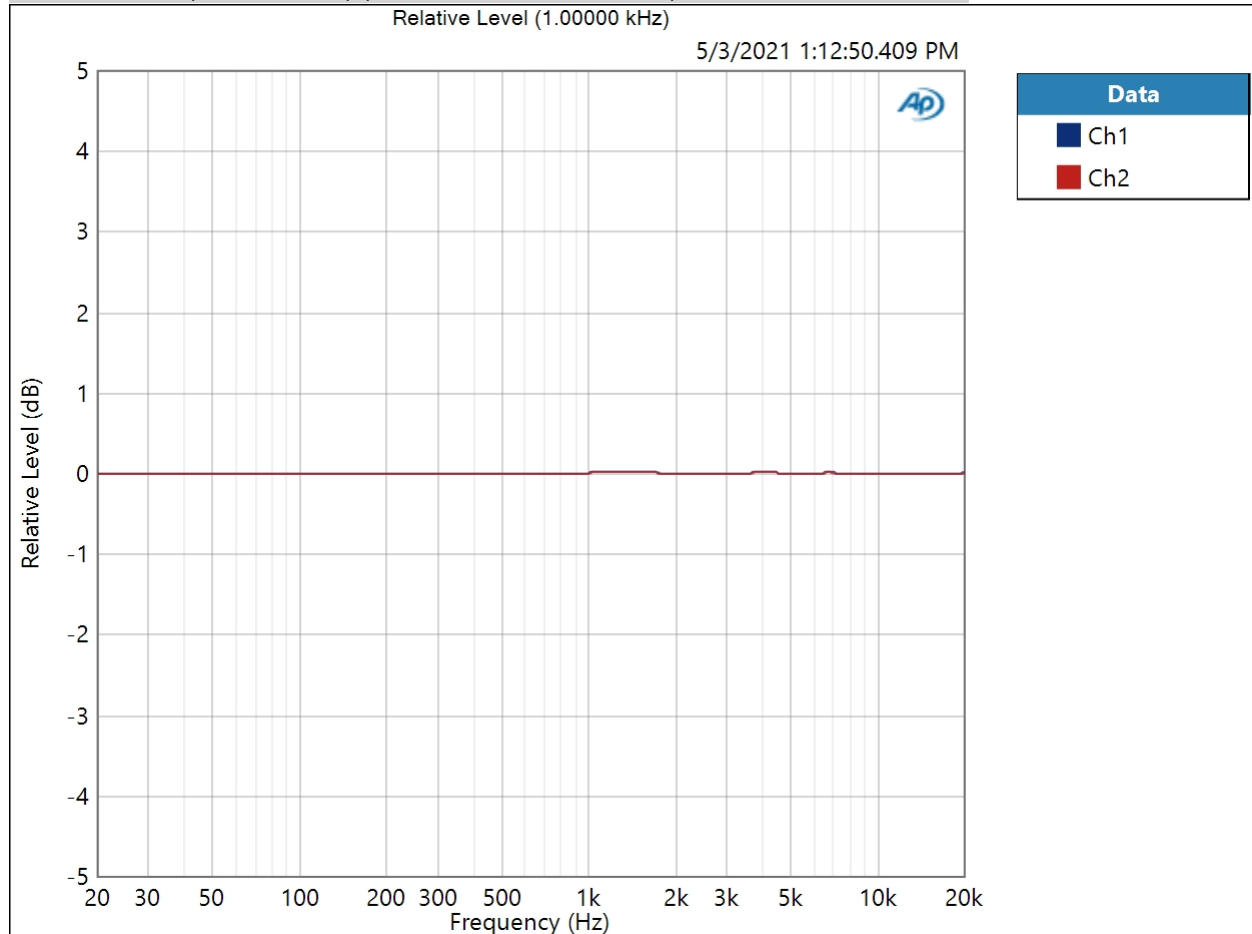


Result: PASSED

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: 1.000 s  
 Secondary Source: None  
 Measured 1 5/3/2021 1:12:50 PM

Relative Level (1.00000 kHz) (5/3/2021 1:12:50.409 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) (5/3/2021 1:12:50.409 PM)

Ch1  $\pm 0.003$  dB

Ch2  $\pm 0.003$  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

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 1.00000 kHz

High-pass Filter: Elliptic

High-pass Frequency: 20 Hz

Low-pass Filter: Elliptic

Low-pass Frequency: 20 kHz

Weighting Filter: A-wt.

Signal to Noise Ratio (5/3/2021 1:12:53.244 PM)

Ch1 119.855 dB

Ch2 119.894 dB

Preamp : THD+N

Waveform: Sine  
 Generator Mode: High Performance Sine Generator  
 Precision Tune: Enabled  
 Generator Level: 1.000 Vrms  
 Frequency: 1.00000 kHz  
 High-pass Filter: Elliptic  
 High-pass Frequency: 20 Hz  
 Low-pass Filter: Elliptic  
 Low-pass Frequency: 20 kHz  
 Weighting Filter: Signal Path  
 Notch Tuning Mode: Measured Frequency

THD+N Ratio (5/3/2021 1:12:56.421 PM)

Ch1 -116.356 dB  
 Ch2 -116.279 dB

THD Ratio (5/3/2021 1:12:56.421 PM)

Ch1 0.000036 %  
 Ch2 0.000032 %

Noise Ratio (5/3/2021 1:12:56.421 PM)

Ch1 0.000148 %  
 Ch2 0.000151 %

Distortion Product Ratio (5/3/2021 1:12:56.421 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	-138.99	-131.41	-146.75	-147.58	-145.90	-148.69	-143.80	-143.81	-146.91
Ch2	-0.00	-142.99	-132.79	-143.90	-146.05	-144.04	-143.46	-151.11	-150.78	-155.29

Distortion Product Ratio Parameters

Frequency Unit: Hz  
 Ratio Unit: dB  
 Channel: Ch1



Preamp : IMD Level Sweep ( CCIF )

IMD Type: CCIF

Mean Frequency: 12.5000 kHz

Diff Frequency: 80.0000 Hz

IMD Split: False

Start Level: 1.000 mVrms

Stop Level: 12.00 Vrms

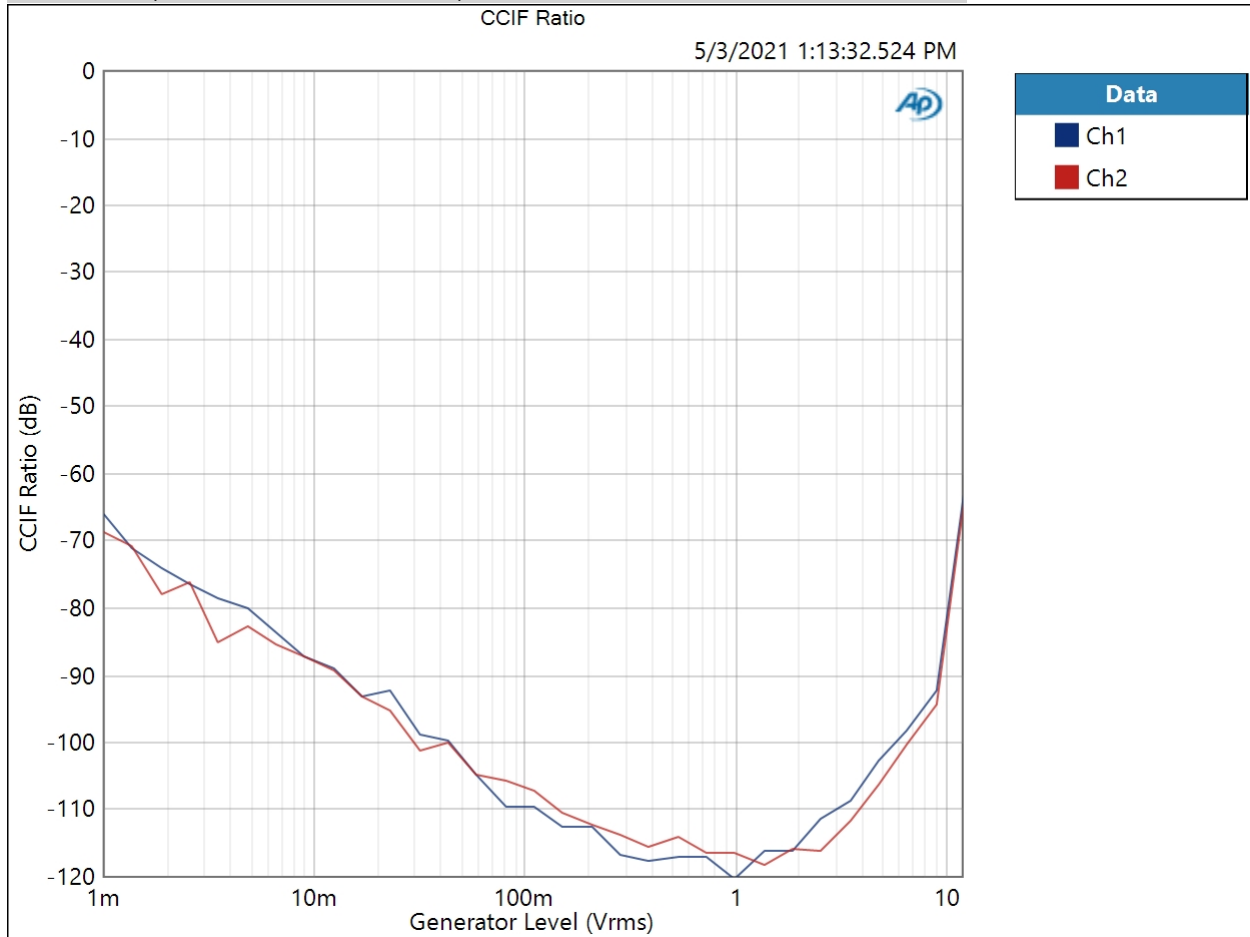
Step Type: Logarithmic

Number of Points: 31

Mode: d2+d3

Measured 1 5/3/2021 1:13:32 PM

CCIF Ratio (5/3/2021 1:13:32.524 PM)



Result: PASSED

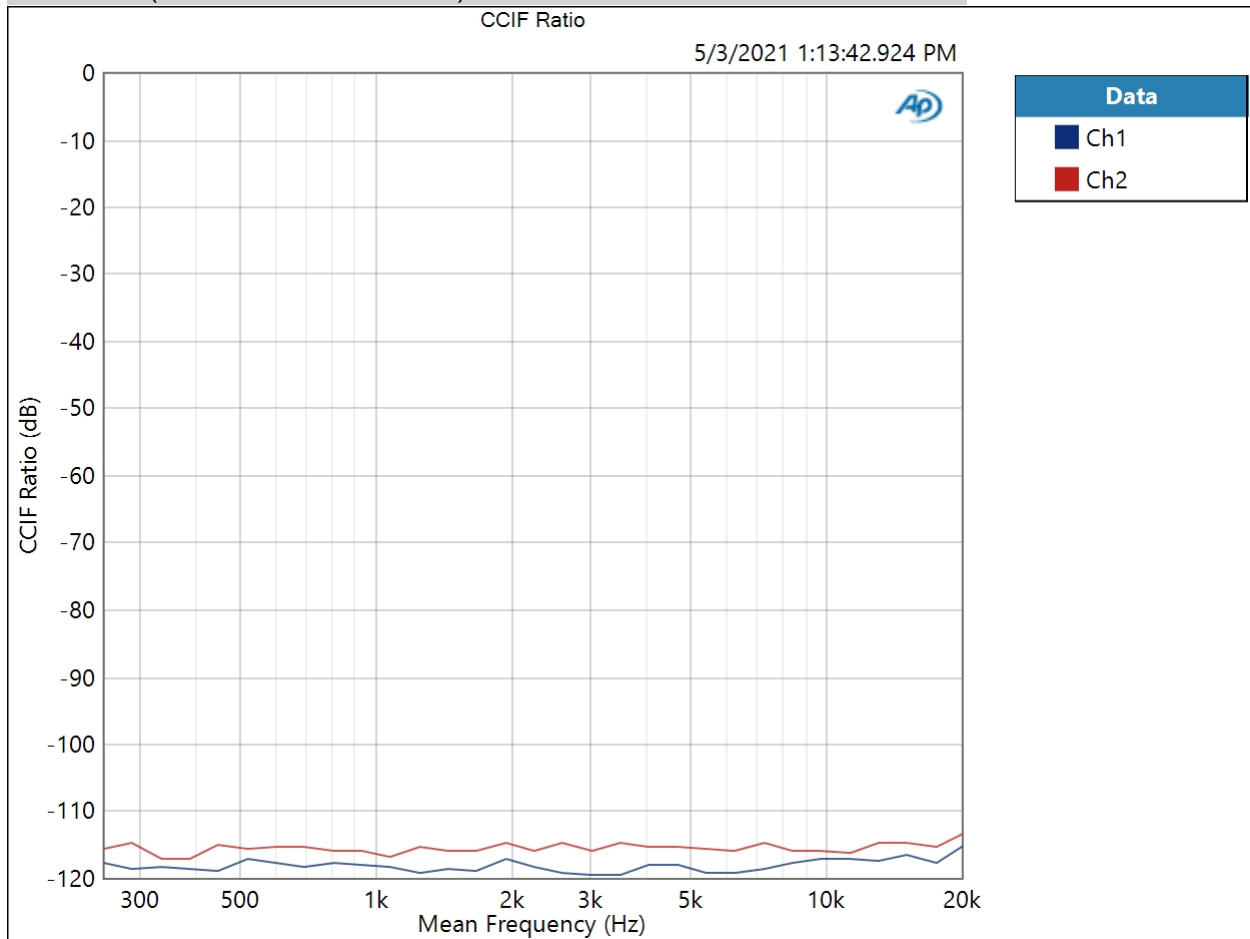
5/3/2021 1:14 PM



Preamp : IMD Frequency Sweep ( CCIF )

Generator Level: 1.000 Vrms  
 DC Offset: 0.000 V  
 Sweep Frequency: Mean Frequency  
 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 5/3/2021 1:13:42 PM

CCIF Ratio (5/3/2021 1:13:42.924 PM)



Result:  PASSED

Preamp : Crosstalk, One Channel Undriven

Waveform: Sine

Generator Mode: High Performance Sine Generator

Precision Tune: Disabled

Generator Level: 1.000 Vrms

Frequency: 10.0000 kHz

Crosstalk (5/3/2021 1:13:46.508 PM)

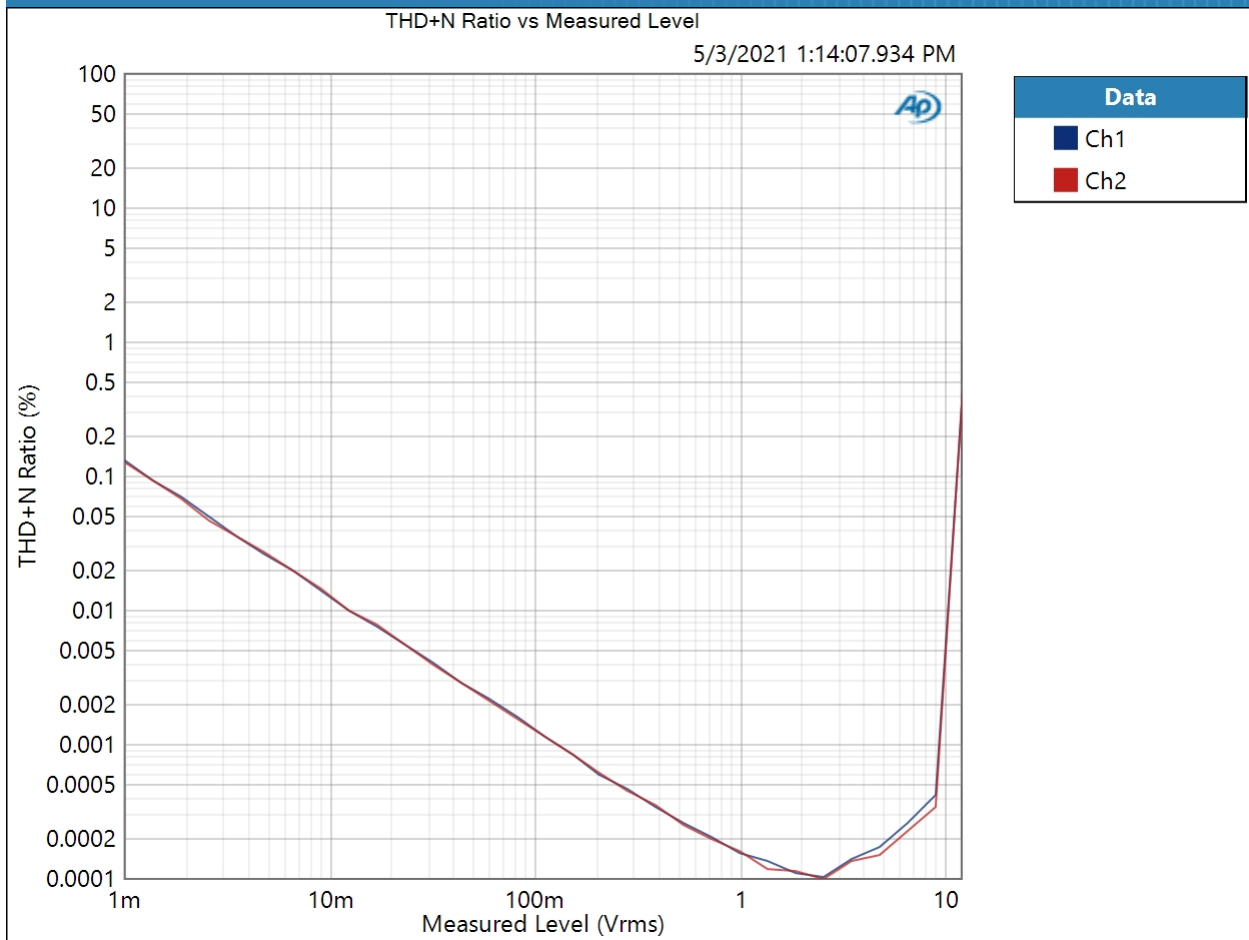
Ch1 -102.467 dB

Ch2 -111.405 dB

Preamp : Stepped Level Sweep

Waveform: Sine  
Generator Mode: High Performance Sine Generator  
Precision Tune: Disabled  
Frequency: 1.00000 kHz  
Start Level: 1.000 mVrms  
Stop Level: 12.00 Vrms  
Step Type: Logarithmic  
Number of Points: 31  
High-pass Filter: Elliptic  
High-pass Frequency: 20 Hz  
Low-pass Filter: Elliptic  
Low-pass Frequency: 20 kHz  
Weighting Filter: Signal Path  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/3/2021 1:14:07 PM

THD+N Ratio vs Measured Level (5/3/2021 1:14:07.934 PM)



Result: PASSED