

## Schiit Amp APx555 Standard Test Suite: Jotunheim



### 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

#### Dual 4490 DAC Card

|                                 |          |
|---------------------------------|----------|
| 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 |
| Bandpass Level Sweep            | ✓ 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

## Dual 4490 DAC Card : Signal Path Setup

|                                 |                                 |
|---------------------------------|---------------------------------|
| Output Connector:               | ASIO                            |
| Output Sample Rate:             | 48.0000 kHz                     |
| Output EQ:                      | None                            |
| Input Connector:                | Analog Balanced                 |
| Channels:                       | 2                               |
| Termination:                    | 200 kohm                        |
| High Performance Sine Analyzer: | Disabled                        |
| Input Bandwidth:                | AC (<10 Hz) - 22.4k (48 kHz SR) |
| Device Delay:                   | 0.000 s                         |
| Input EQ:                       | None                            |
| • References                    |                                 |
| dBr G:                          | -20.000 dBFS                    |
| 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

Dual 4490 DAC Card : Level and Gain

Waveform: Sine  
Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Frequency: 1.00000 kHz

RMS Level (5/21/2019 12:37:17.624 PM)

Ch1 539.2 mVrms  
Ch2 540.8 mVrms

Dual 4490 DAC Card : DC Level

Waveform: Sine  
Generator Level:  $-\infty$  dBFS  
DC Offset: 0.000 D  
Frequency: 1.00000 kHz  
Delay Time: 100.0 ms  
Acquisition Time: 333.0 ms

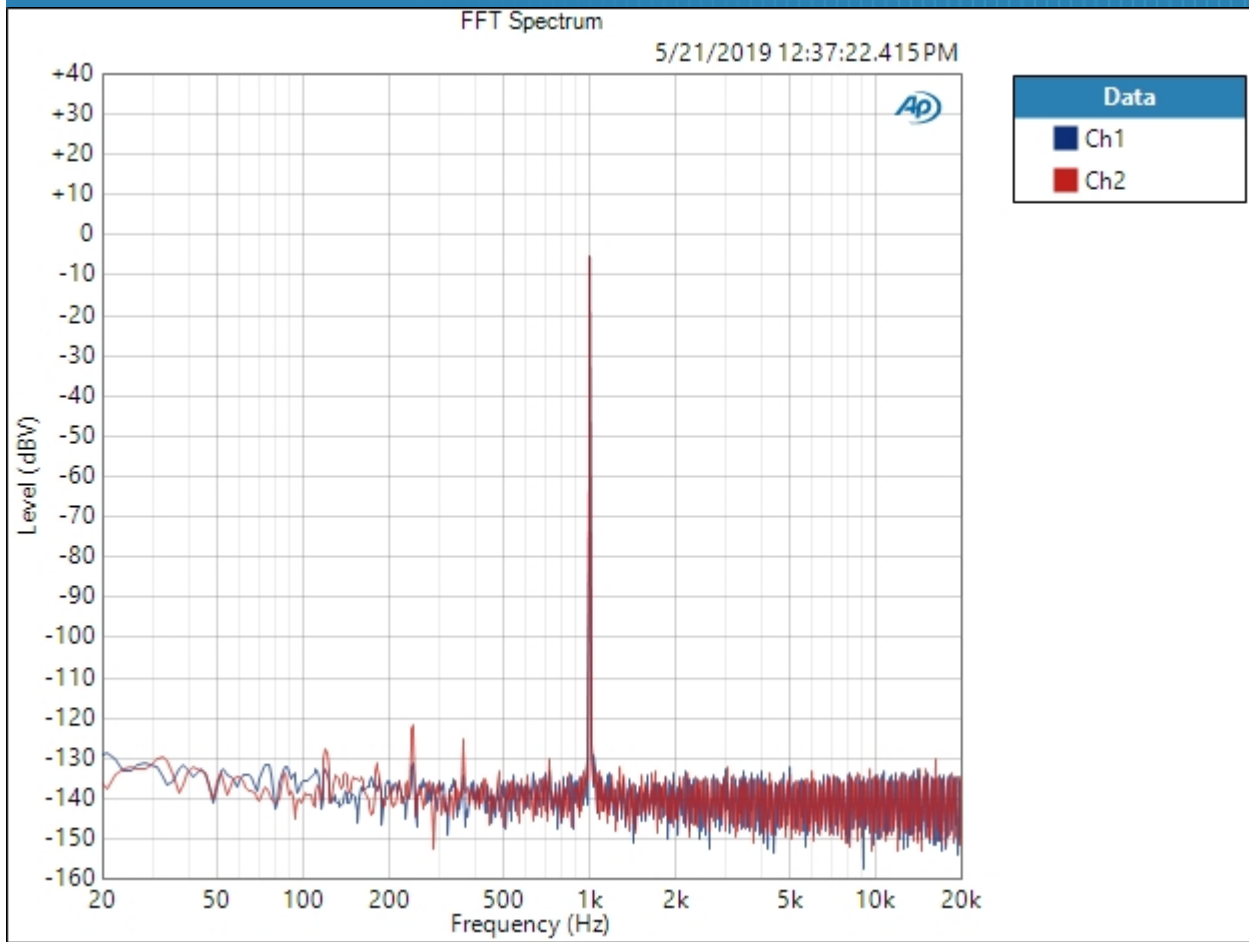
DC Level (5/21/2019 12:37:18.750 PM)

Ch1 10.05 mV  
Ch2 49.03 uV

Dual 4490 DAC Card : Signal Analyzer

Waveform: Sine  
Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Frequency: 1.00000 kHz  
Secondary Source: None  
Measured 1 5/21/2019 12:37:22 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 12:37:22.415 PM)

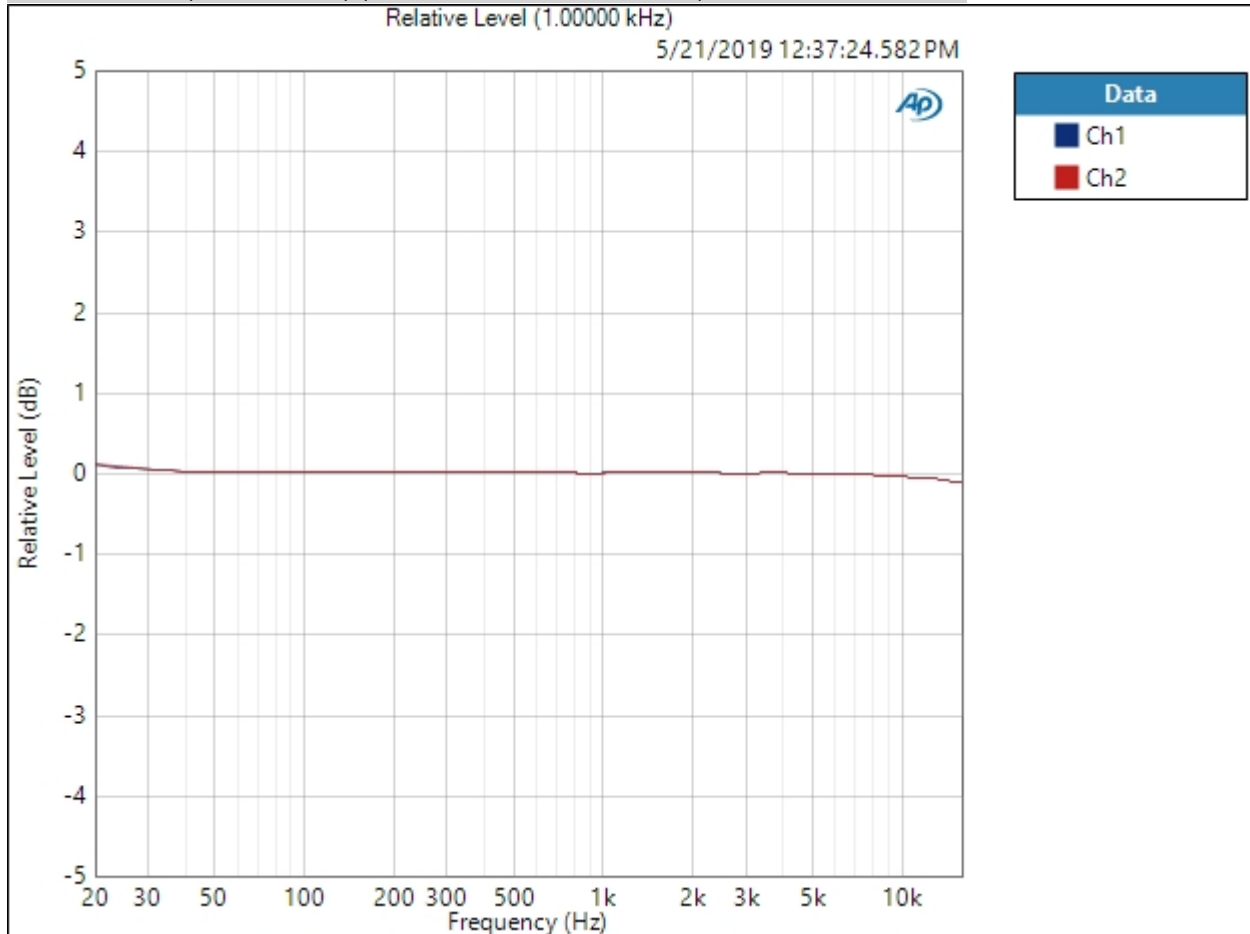


Result:  PASSED

Dual 4490 DAC Card : Frequency Response

Start Frequency: 20.0000 Hz  
 Stop Frequency: 16.0000 kHz  
 Generator Level: -20.000 dBFS  
 DC Offset: 0.000 D  
 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 12:37:24 PM

Relative Level (1.00000 kHz) (5/21/2019 12:37:24.582 PM)



Relative Level (1.00000 kHz) Parameters

Mode: Normalized at Reference

Ref Frequency: 1.00000 kHz

Result:  PASSED

Deviation (20.0000 Hz - 16.0000 kHz) (5/21/2019 12:37:24.582 PM)

Ch1  $\pm 0.115$  dB

Ch2  $\pm 0.115$  dB

Deviation (20.0000 Hz - 16.0000 kHz) Parameters

Min: 20.0000 Hz

Max: 16.0000 kHz

Dual 4490 DAC Card : Signal to Noise Ratio

Waveform: Sine

Generator Level: -20.000 dBFS

DC Offset: 0.000 D

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 12:37:26.496 PM)

Ch1 98.994 dB

Ch2 99.010 dB

Dual 4490 DAC Card : THD+N

Waveform: Sine  
 Generator Level: -20.000 dBFS  
 DC Offset: 0.000 D  
 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 12:37:28.301 PM)

Ch1 0.001417 %  
 Ch2 0.001421 %

THD Ratio (5/21/2019 12:37:28.301 PM)

Ch1 0.000226 %  
 Ch2 0.000245 %

Noise Ratio (5/21/2019 12:37:28.301 PM)

Ch1 0.001395 %  
 Ch2 0.001409 %

Distortion Product Ratio (5/21/2019 12:37:28.301 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  | -125.49 | -128.06 | -122.33 | -122.99 | -126.88 | -125.70 | -127.00 | -125.52 | -129.91 |
| Ch2     | -0.00  | -128.65 | -126.16 | -126.58 | -122.28 | -127.73 | -123.73 | -121.91 | -124.91 | -126.82 |

Distortion Product Ratio Parameters

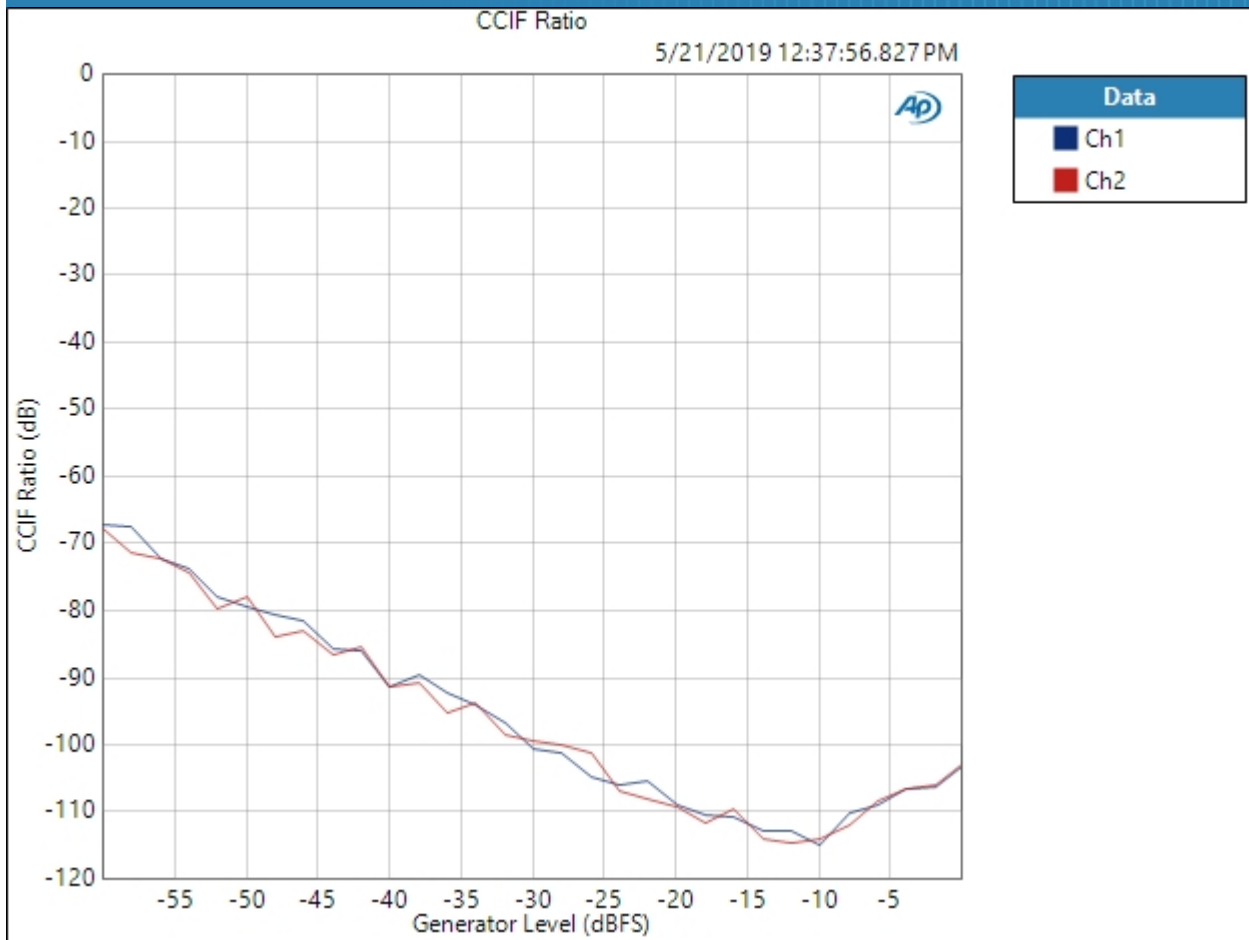
Frequency Unit: Hz  
 Ratio Unit: dB



Dual 4490 DAC Card : IMD Level Sweep ( CCIF )

IMD Type: CCIF  
Waveform: IMD  
Generator Level: -0.000 dBFS  
DC Offset: 0.000 D  
Mean Frequency: 12.5000 kHz  
Diff Frequency: 80.0000 Hz  
IMD Split: False  
Start Level: -60.000 dBFS  
Stop Level: -0.000 dBFS  
Step Type: Linear  
Number of Points: 31  
Step Size: +2.000 dBFS  
Mode: d2+d3  
Measured 1 5/21/2019 12:37:56 PM

CCIF Ratio (5/21/2019 12:37:56.827 PM)

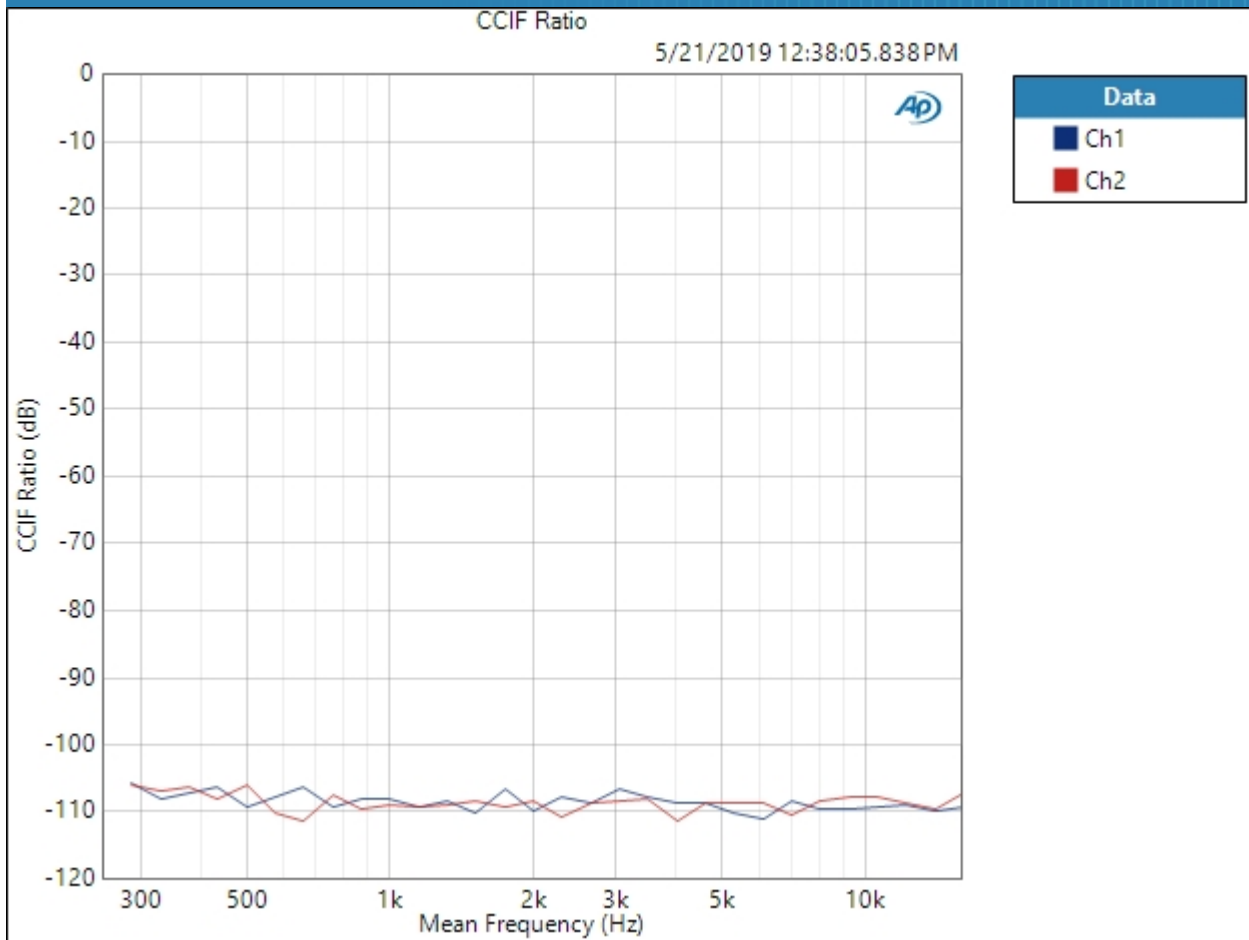


Result: PASSED

Dual 4490 DAC Card : IMD Frequency Sweep ( CCIF )

Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Sweep Frequency: Mean Frequency  
Mean Frequency: 12.5000 kHz  
Diff Frequency: 80.0000 Hz  
IMD Split: False  
Start Frequency: 15.9680 kHz  
Stop Frequency: 250.000 Hz  
Step Type: Logarithmic  
Number of Points: 31  
Mode: d2+d3  
Measured 1 5/21/2019 12:38:05 PM

CCIF Ratio (5/21/2019 12:38:05.838 PM)



Result: PASSED

Dual 4490 DAC Card : Crosstalk, One Channel Undriven

Waveform: Sine  
Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Frequency: 10.0000 kHz

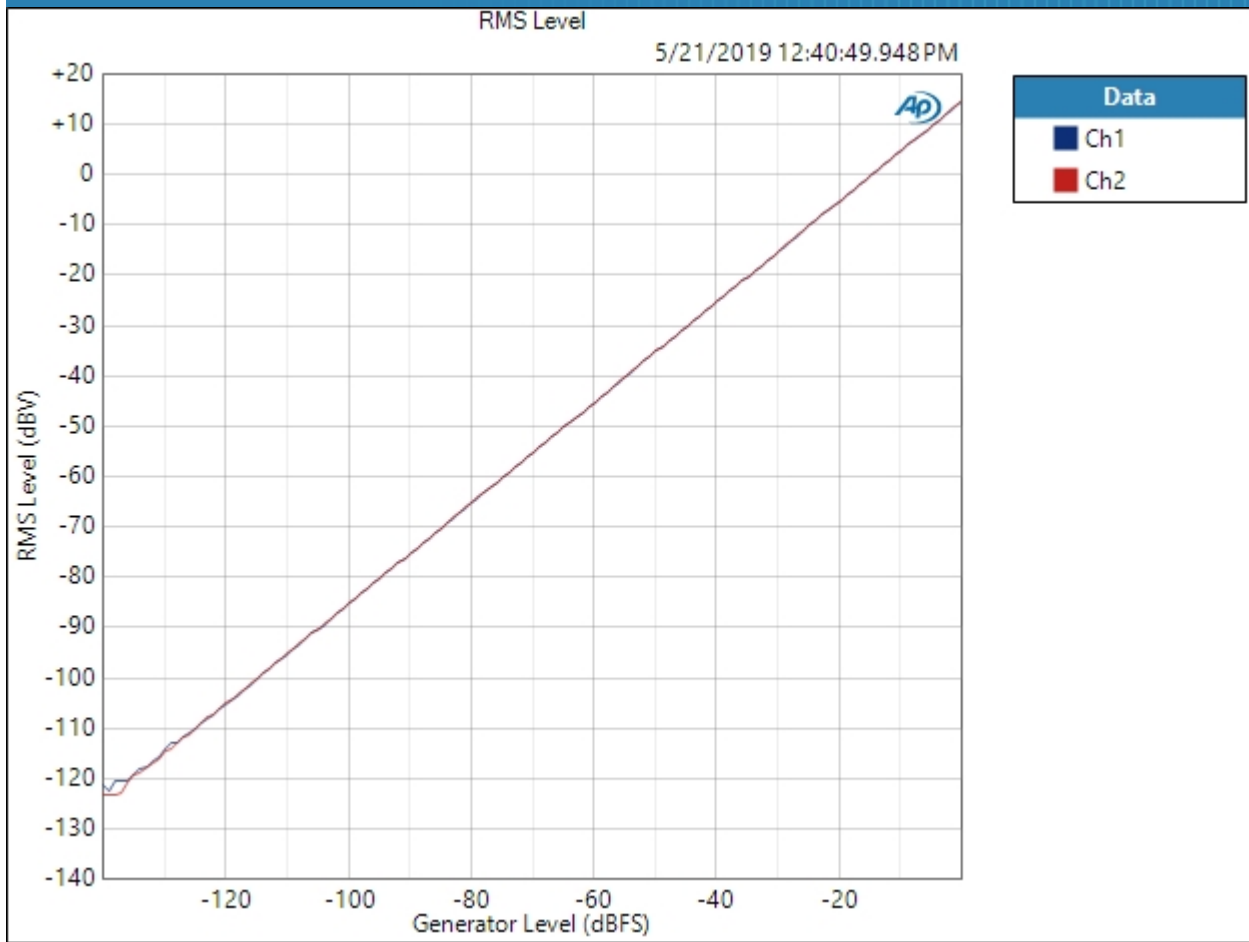
Crosstalk (5/21/2019 12:38:10.631 PM)

Ch1 -100.777 dB  
Ch2 -116.193 dB

Dual 4490 DAC Card : Bandpass Level Sweep

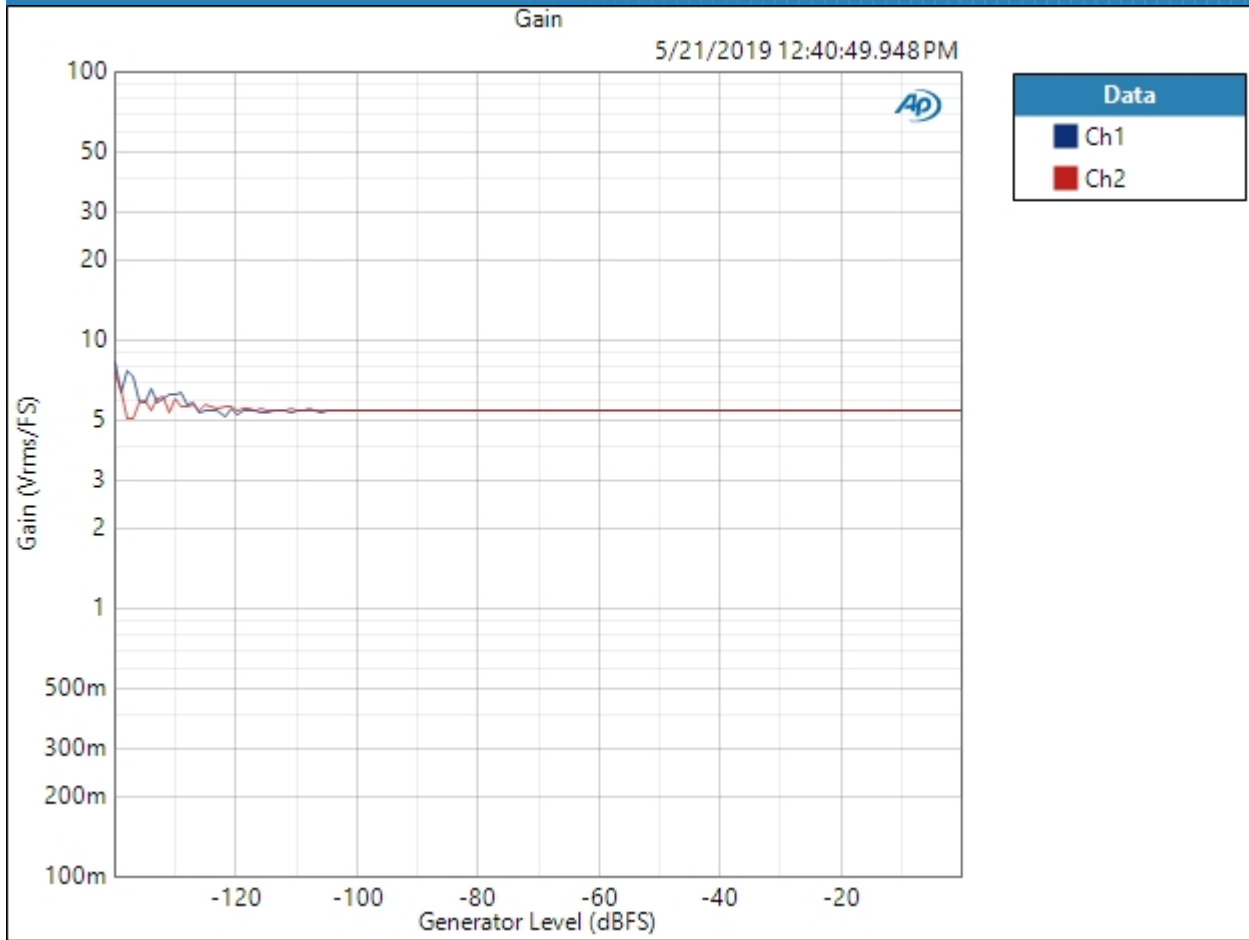
Waveform: Sine  
Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Frequency: 1.00000 kHz  
Start Level: -140.000 dBFS  
Stop Level: -0.000 dBFS  
Step Type: Linear  
Number of Points: 141  
Step Size: +1.000 dBFS  
Offset: 0.000 D  
Selectivity: Window width  
Bandpass Tuning Mode: Generator Frequency  
Measured 1 5/21/2019 12:40:49 PM

RMS Level (5/21/2019 12:40:49.948 PM)



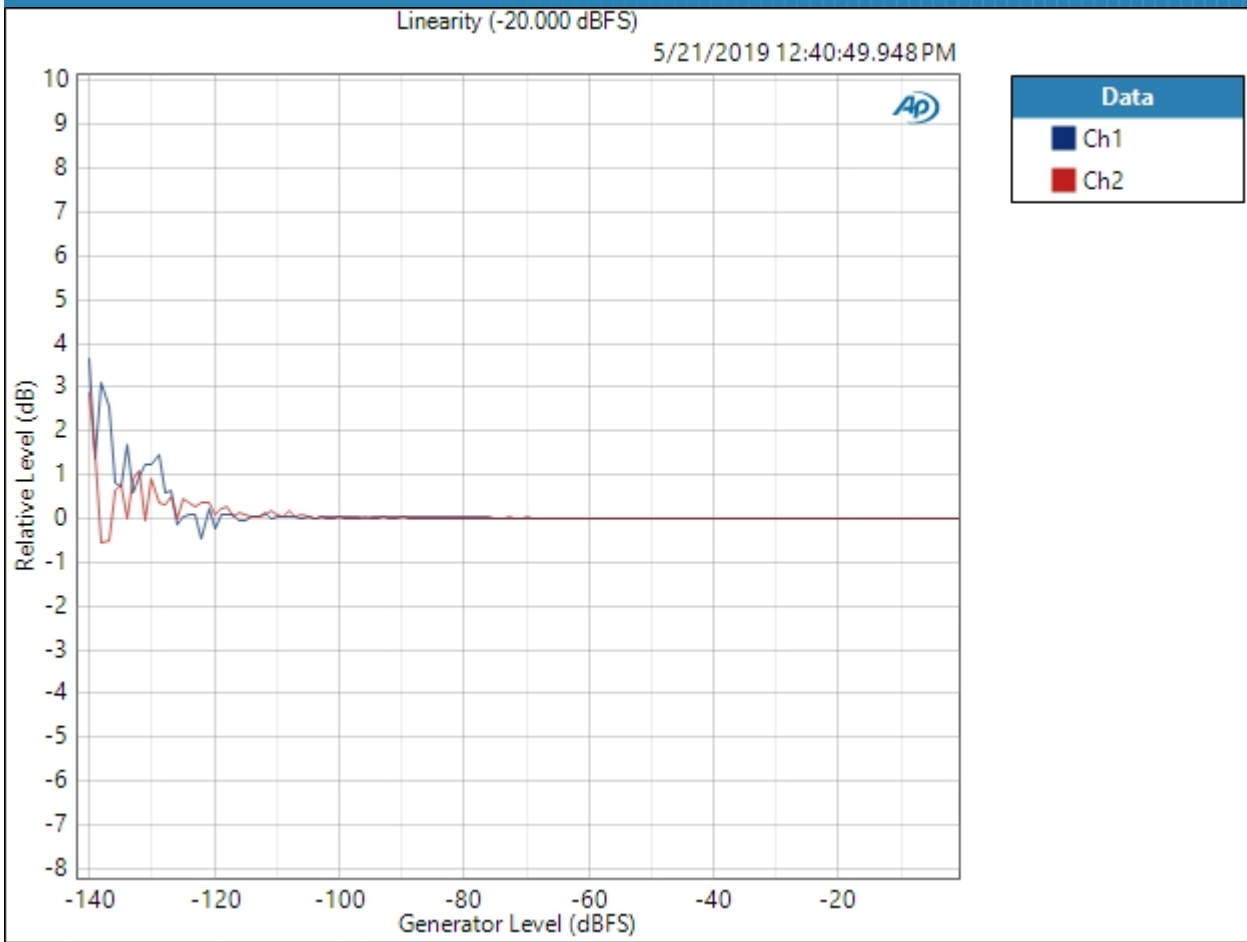
Result: PASSED

Gain (5/21/2019 12:40:49.948 PM)



Result: ✔ PASSED

Linearity (-20.000 dBFS) (5/21/2019 12:40:49.948 PM)



Linearity (-20.000 dBFS) Parameters

Mode: Normalized at Reference

Relative Level: -20.000 dBFS

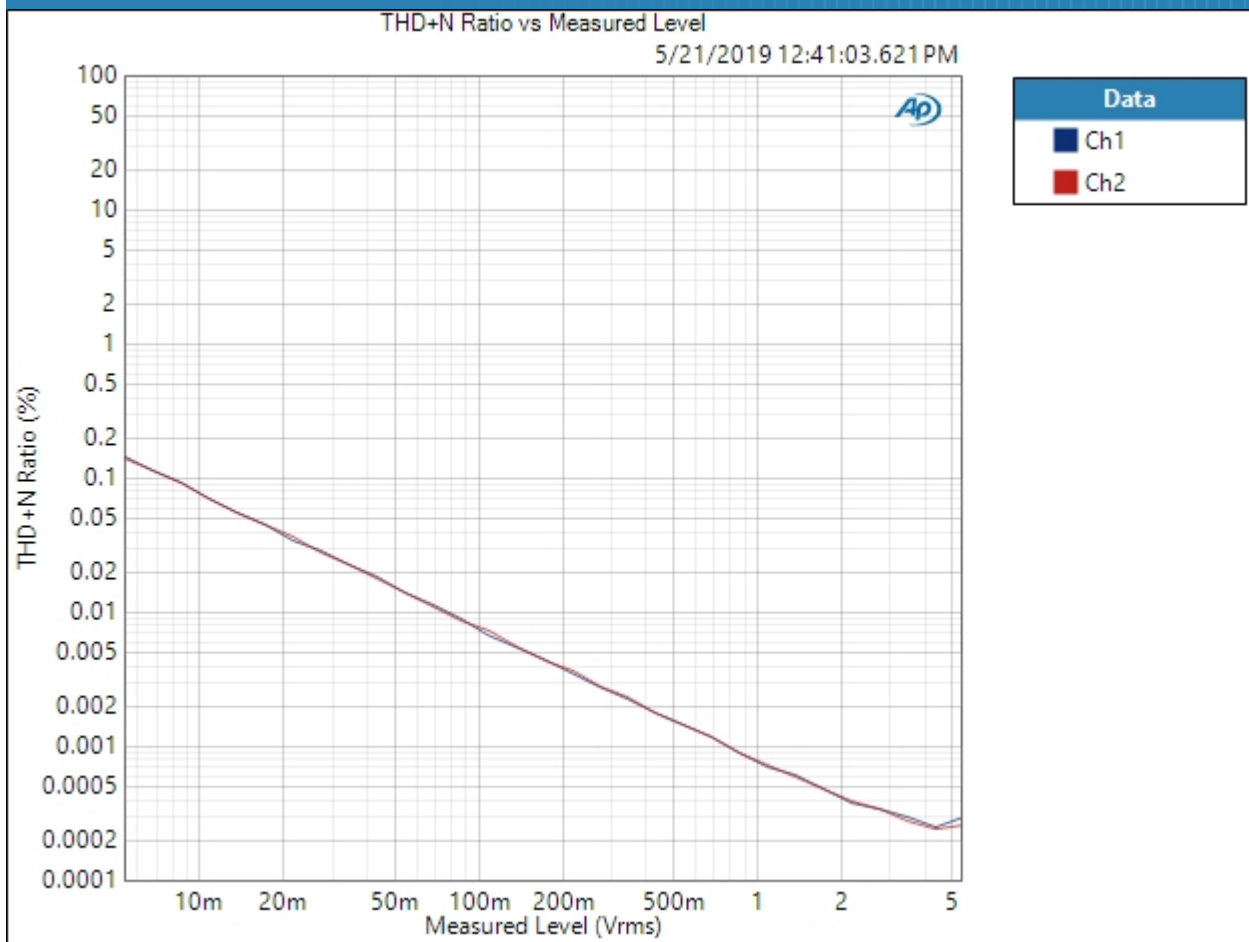
Result:  PASSED



Dual 4490 DAC Card : Stepped Level Sweep

Waveform: Sine  
Generator Level: -20.000 dBFS  
DC Offset: 0.000 D  
Frequency: 1.00000 kHz  
Start Level: -60.000 dBFS  
Stop Level: -0.000 dBFS  
Step Type: Linear  
Number of Points: 31  
Step Size: +2.000 dBFS  
Offset: 0.000 D  
Low-pass Filter: 20 kHz  
Weighting Filter: Signal Path  
High-pass Filter: 20 Hz  
Notch Tuning Mode: Generator Frequency  
Measured 1 5/21/2019 12:41:03 PM

THD+N Ratio vs Measured Level (5/21/2019 12:41:03.621 PM)



Result: PASSED