

ICP/IEPE Microphone pre amplifier



Pre-Sequence Inputs:

ID: MV210 #1542

Summary

Signal Path1

Signal Path Setup	✓ PASSED
Stepped Level Sweep	✓ PASSED
THD+N	✓ PASSED
Frequency Response	✓ PASSED
Signal to Noise Ratio	✓ PASSED
Noise (RMS) A	✓ PASSED
Noise (RMS)	✓ PASSED
Signal Analyzer	✓ PASSED

Sequence Result:

Sequence Result: ✓ PASSED

APx Instrument

Instrument ID: 11083
Calibration Date: 09.06.2015
APx Version: 4.6.0.255.130221

Signal Path1 : Signal Path Setup

Output Connector:	Analog Unbalanced
Channels:	1
Generator Mode:	High Performance Sine Generator
Source Impedance:	20 ohm
AG52 Generator Option:	Installed
Output EQ:	None
Input Connector:	Analog Balanced
Channels:	1
Channel:	Ch2
Termination:	200 kohm
High Performance Sine Analyzer:	Disabled
Input Bandwidth:	AC (<10 Hz) - 90k (192 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

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Sync Out Polarity: Normal
Timebase Reference: Internal
Jitter: Disabled
• Triggers
Source: Off
Input Logic Level: 3,300 V
Edge: Rising

Signal Path1 : Verify Connections

Waveform: Sine
Generator Mode: High Performance Sine Generator
Generator Level: 100,0 mVrms
Frequency: 1,00000 kHz

Gain (07.11.2019 18:36:04.302)

Channel	Lower Limit	Value	Upper Limit	
Ch2	-5,000 dB	-0,388 dB	6,000 dB	✓

Result: ✓ PASSED

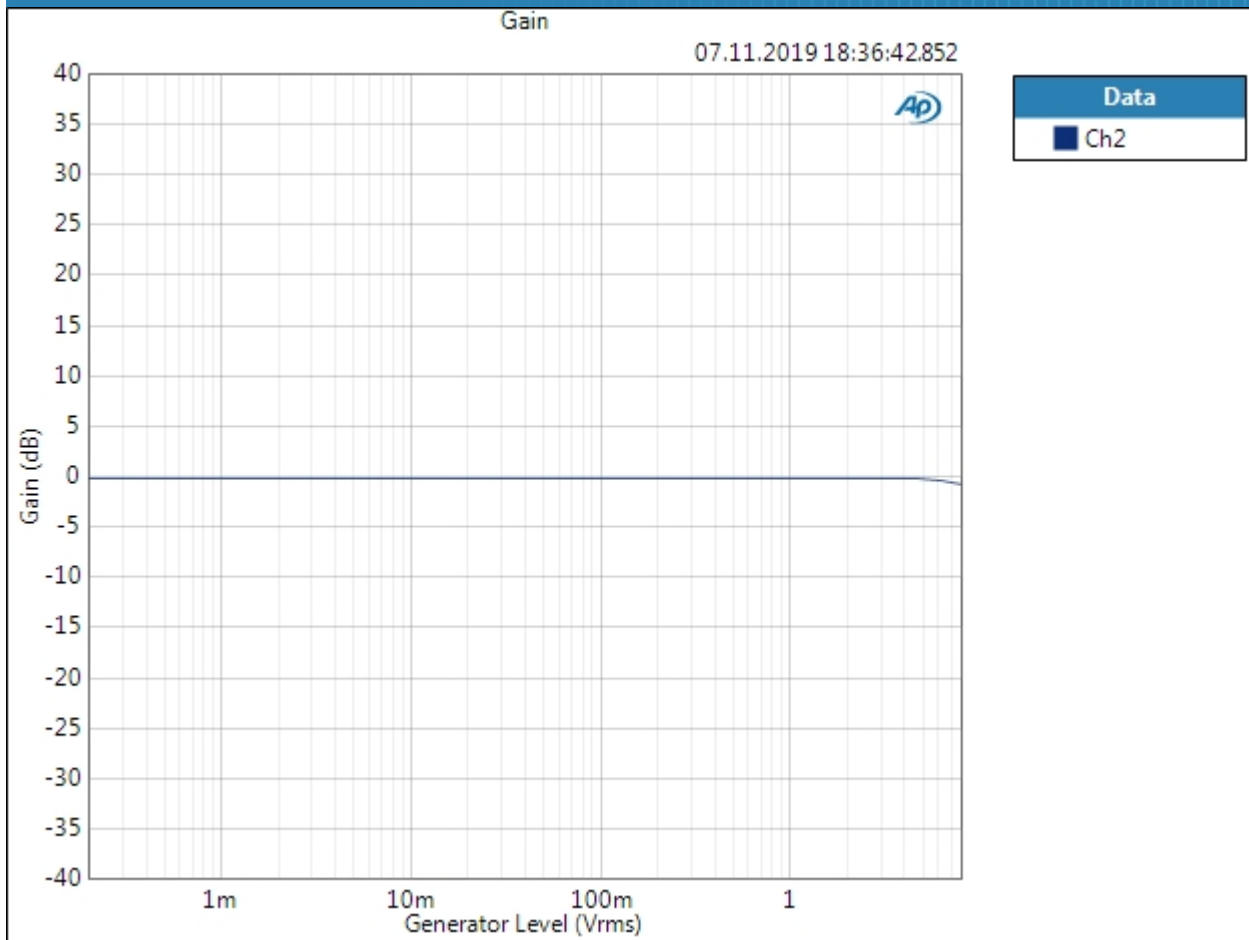
THD+N Ratio (07.11.2019 18:36:04.302)

Channel	Lower Limit	Value	Upper Limit	
Ch2	---- %	0,021198 %	0,500000 %	✓

Result: ✓ PASSED

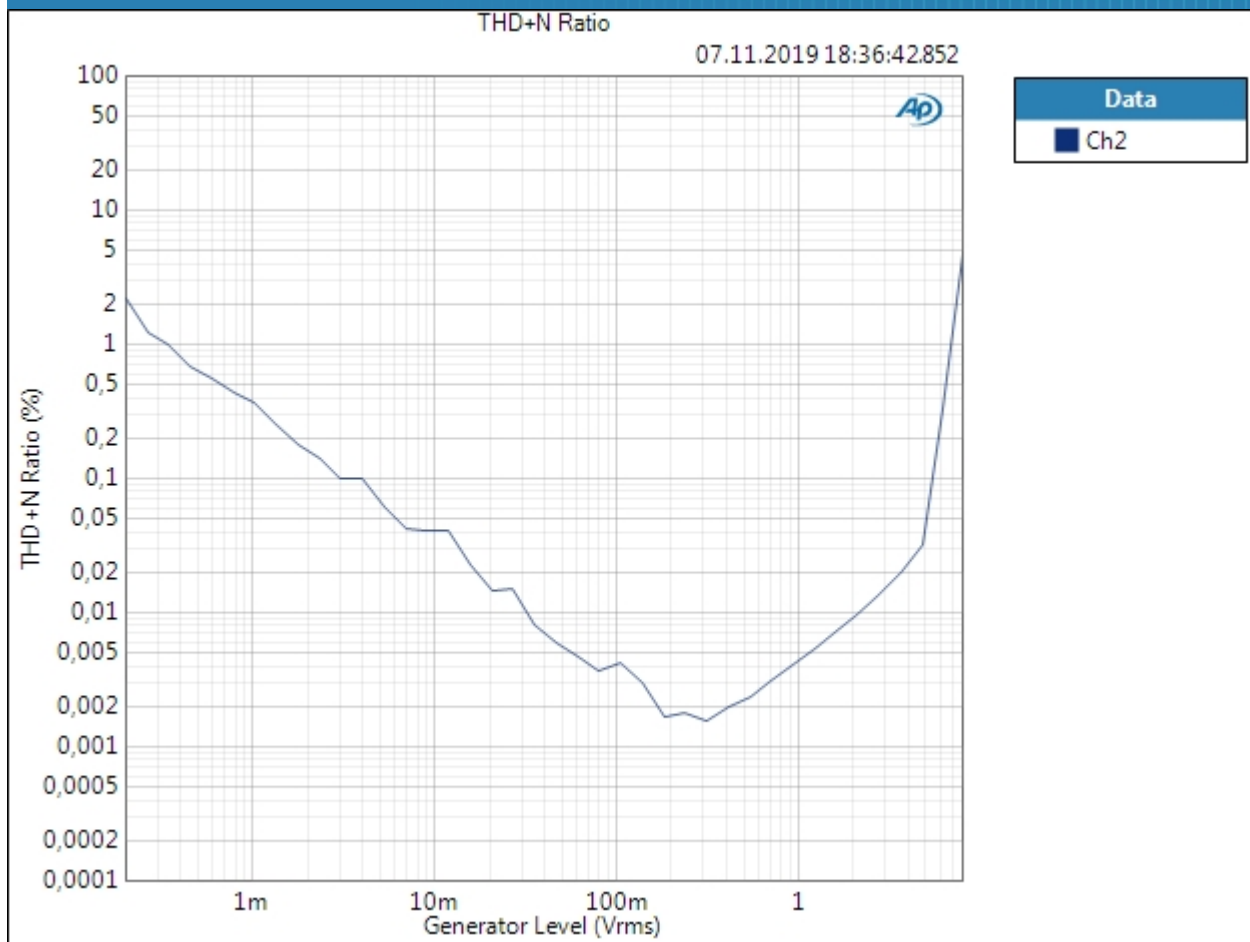
Signal Path1 : Stepped Level Sweep

Waveform: Sine
Generator Mode: High Performance Sine Generator
Generator Level: 100,0 mVrms
Frequency: 1,00000 kHz
Start Level: 200,0 uVrms
Stop Level: 8,000 Vrms
Step Type: Logarithmic
Number of Points: 40
Low-pass Filter: 20 kHz
Weighting Filter: Signal Path
High-pass Filter: 20 Hz
Notch Tuning Mode: Generator Frequency
Measured 1 07.11.2019 18:36:42
Gain (07.11.2019 18:36:42.852)



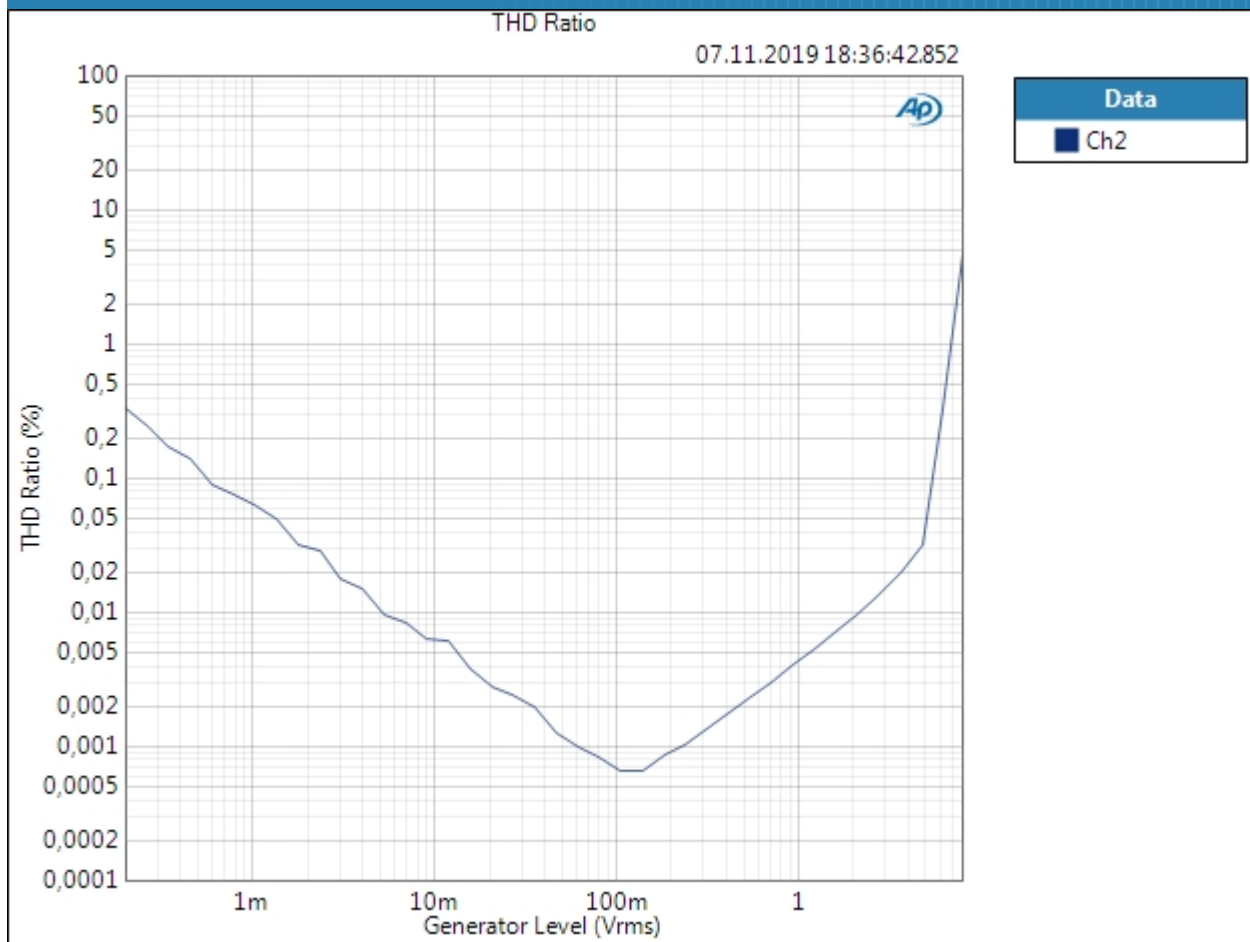
Result: PASSED

THD+N Ratio (07.11.2019 18:36:42.852)



Result: ✔ PASSED

THD Ratio (07.11.2019 18:36:42.852)



Result: PASSED

Signal Path1 : THD+N

Waveform: Sine
Generator Mode: High Performance Sine Generator
Generator Level: 100,0 mVrms
Frequency: 1,00000 kHz
Low-pass Filter: 20 kHz
Weighting Filter: Signal Path
High-pass Filter: 20 Hz
Notch Tuning Mode: Generator Frequency

THD+N Ratio (07.11.2019 18:36:46.112)

Ch2 0,003955 %

THD Ratio (07.11.2019 18:36:46.112)

Ch2 0,000527 %

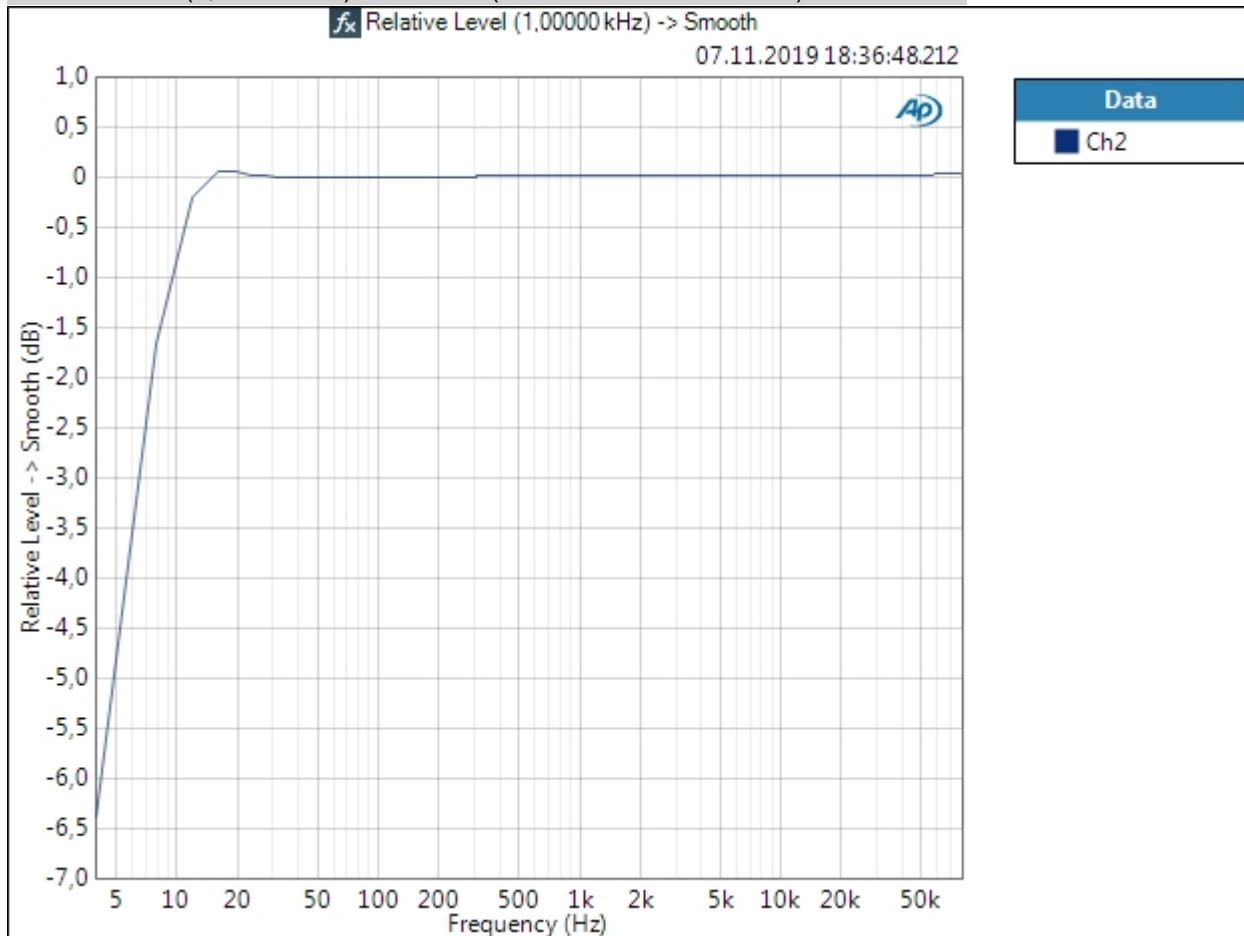
Noise Level (07.11.2019 18:36:46.112)

Ch2 3,879 uVrms

Signal Path1 : Frequency Response

Start Frequency: 1,00000 Hz
Stop Frequency: 80,1000 kHz
Generator Level: 100,0 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 07.11.2019 18:36:48

Relative Level (1,00000 kHz) -> Smooth (07.11.2019 18:36:48.212)



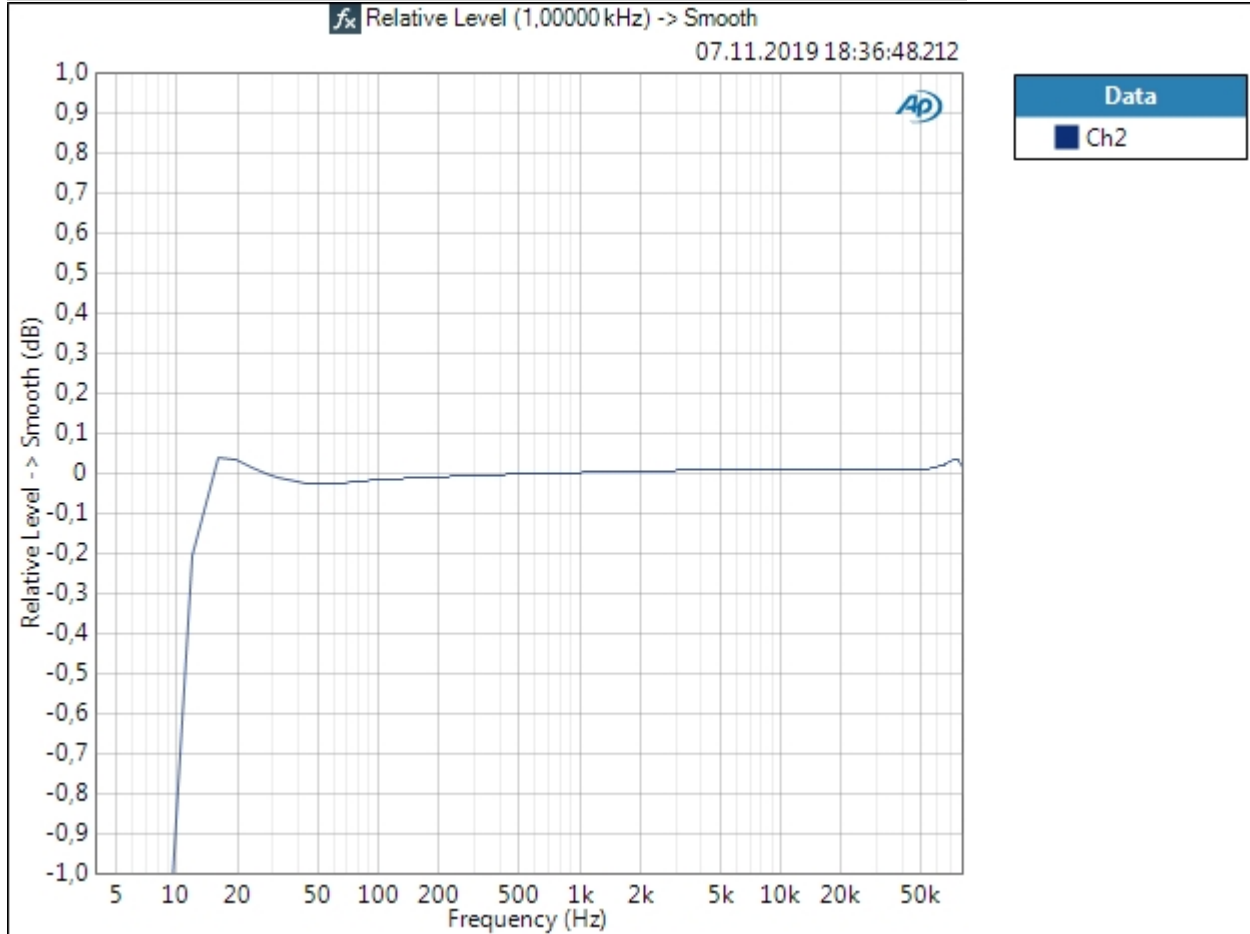
Relative Level (1,00000 kHz) -> Smooth Parameters

Smoothing: 1/12 octave

Source: Relative Level (1,00000 kHz)
Mode: Normalized at Reference
Ref Frequency: 1,00000 kHz

Result: PASSED

Relative Level (1,00000 kHz) -> Smooth (07.11.2019 18:36:48.212)



Relative Level (1,00000 kHz) -> Smooth Parameters

Smoothing: 1/12 octave
Source: Relative Level (1,00000 kHz)
Mode: Normalized at Reference
Ref Frequency: 1,00000 kHz

Result: PASSED

Signal Path1 : Signal to Noise Ratio

Waveform: Sine
Generator Mode: High Performance Sine Generator
Generator Level: 100,0 mVrms
Frequency: 1,00000 kHz
Low-pass Filter: 20 kHz
Weighting Filter: Signal Path
High-pass Filter: 20 Hz

Signal to Noise Ratio (07.11.2019 18:36:51.932)

Ch2 88,723 dB

Signal Path1 : Noise (RMS) A

Waveform: None
Low-pass Filter: 20 kHz
Weighting Filter: A-wt.
High-pass Filter: 20 Hz
Acquisition Time: 250,0 ms
Delay Time: 300,0 ms

Noise Level (07.11.2019 18:36:52.952)

Ch2 1,555 uVrms

Signal Path1 : Noise (RMS)

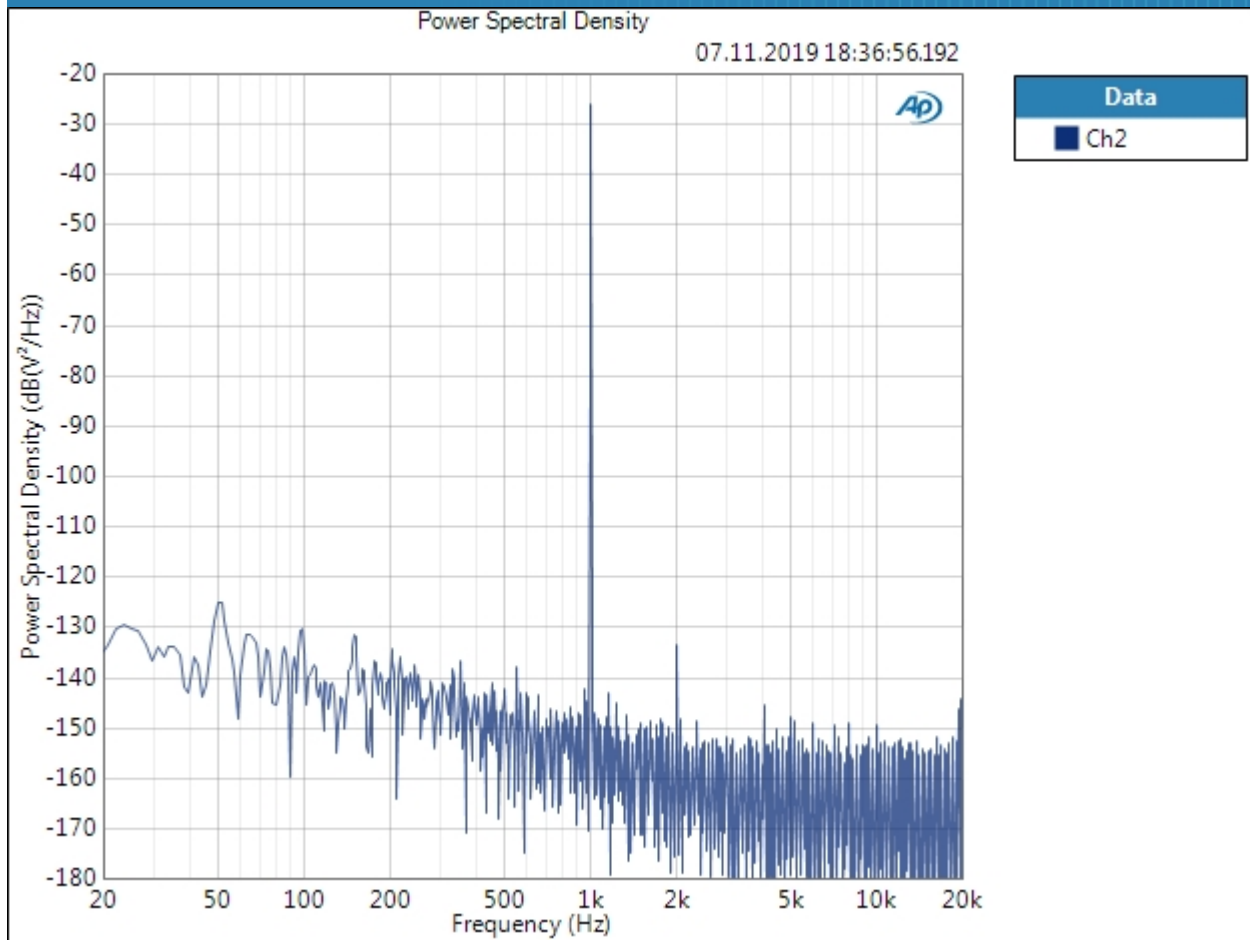
Waveform: None
Low-pass Filter: 20 kHz
Weighting Filter: Signal Path
High-pass Filter: 20 Hz
Acquisition Time: 250,0 ms
Delay Time: 300,0 ms

Noise Level (07.11.2019 18:36:53.912)

Ch2 3,458 uVrms

Signal Path1 : Signal Analyzer

Waveform: Sine
Generator Mode: High Performance Sine Generator
Generator Level: 100,0 mVrms
Frequency: 1,00000 kHz
Secondary Source: None
Measured 1 07.11.2019 18:36:56
Acquisition Type: Auto
Trigger: Free Run
Delay Time: 250,0 ms
Input Bandwidth: Use Signal Path
FFT Length: 128K
Averaging: Power
Averages: 1
Window: AP-Equiripple
Record Acquisition: False
Recording Type: Multiple Mono PCM (.wav)
Power Spectral Density (07.11.2019 18:36:56.192)



Result:  PASSED