

dac2541 ASIO 44K SE Lin 160dBFS REPORT

Overall Result: **PASS**

| SUMMARY: | RESULT |
|------------------------------|--------|
| A01 Ampl, Phase, Gain | ✓ |
| A02 Ampl, Phase vs Freq | ✓ |
| A03 Gain vs Ampl | ✓ |
| A04 THD+N, THD, nth-HD | ✓ |
| A05 THD+N vs Freq | ✓ |
| A06 THD+N vs Ampl | ✓ |
| A07 Noise, DNR | ✓ |
| A08 Crosstalk A to B | ✓ |
| A09 Crosstalk B to A | ✓ |
| A10 Crosstalk A to B vs Freq | ✓ |
| A11 Crosstalk B to A vs Freq | ✓ |
| A12 FFT 1000 Hz THD+N | ✓ |
| A13 FFT 50+7000Hz | ✓ |
| A14 FFT 600+1700 Hz | ✓ |
| A15 FFT 19+20 KHz | ✓ |
| A16 FFT residual noise | ✓ |
| A17 FFT -90 dBFS | OK |
| A17a FFT -120 dBFS | OK |
| A18 FFT -90 dBFS 16 bit | OK |
| A19 FFT imaging | OK |
| A20 FFT inferred jitter | OK |

KEY: ✓ = Test passes, ✗ = Test fails, OK = Test has run but has no limit checking, (✗) = Test has failed to run or has not completed, [✓] = Test passes but is not required, [✗] = Test fails but is not required, ? = Test is required but has not been run.
- = Test is not required.

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A01 Ampl, Phase, Gain: PASSED

Measured at 1/25/2021 1:51:11 PM

| Generator Settings | |
|--------------------|-------------------------|
| Channel A: | sine, 0 dBFS at 1000 Hz |
| Channel B: | sine, 0 dBFS at 1000 Hz |

| Signal Analyzer Readings | | |
|---------------------------|-----------|-----------------------|
| RMS amplitude (Channel A) | 7.481 dBu | < 24 dBu > -20 dBu |
| RMS amplitude (Channel B) | 7.484 dBu | < 24 dBu > -20 dBu |
| Inter-channel phase | 0.01 ° | < 10 ° > -10 ° |

| CTA Readings | | |
|--|----------|---------------------|
| Gain (Channel A RMS) | 0.001 dB | < 20 dB > -40 dB |
| Gain (Channel B RMS) | 0.004 dB | < 20 dB > -40 dB |
| Settings: Generator relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-pass filter at the generator frequency | | |

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A02 Ampl, Phase vs Freq: PASSED

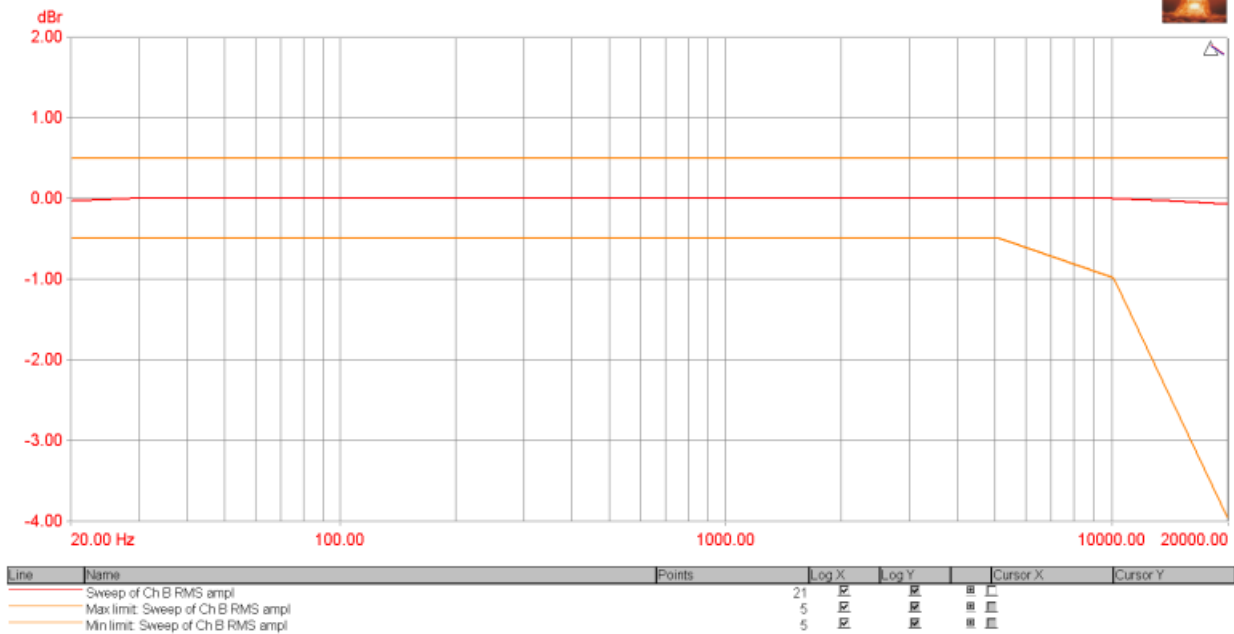
Measured at 1/25/2021 1:51:15 PM

| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

Frequency Response and Inter-channel Phase



Frequency Response and Inter-channel Phase



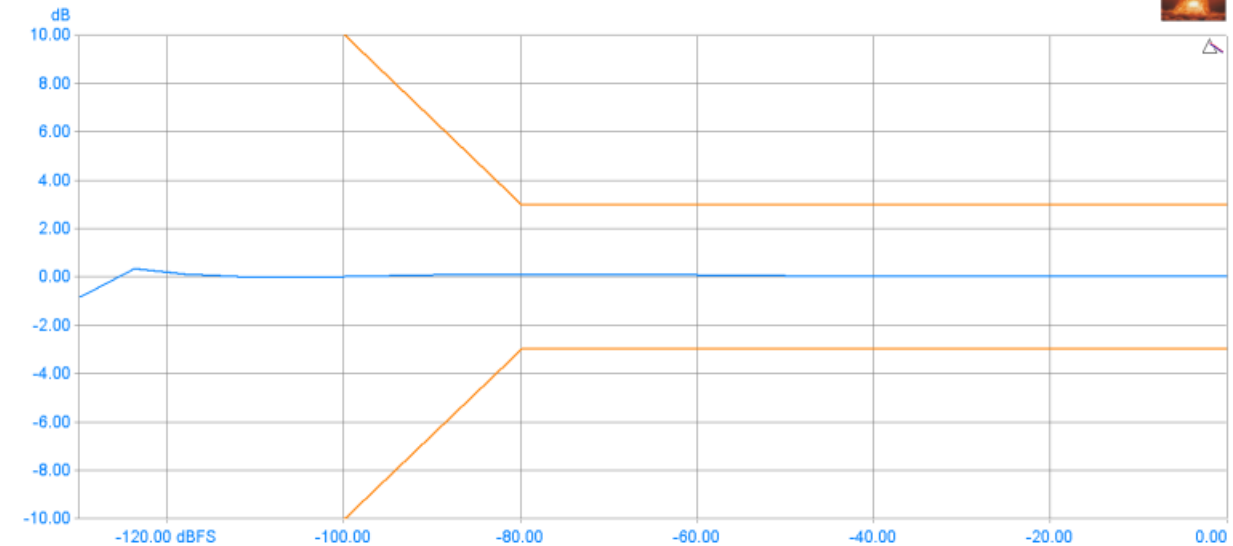
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A03 Gain vs Ampl: PASSED

Measured at 1/25/2021 1:51:26 PM

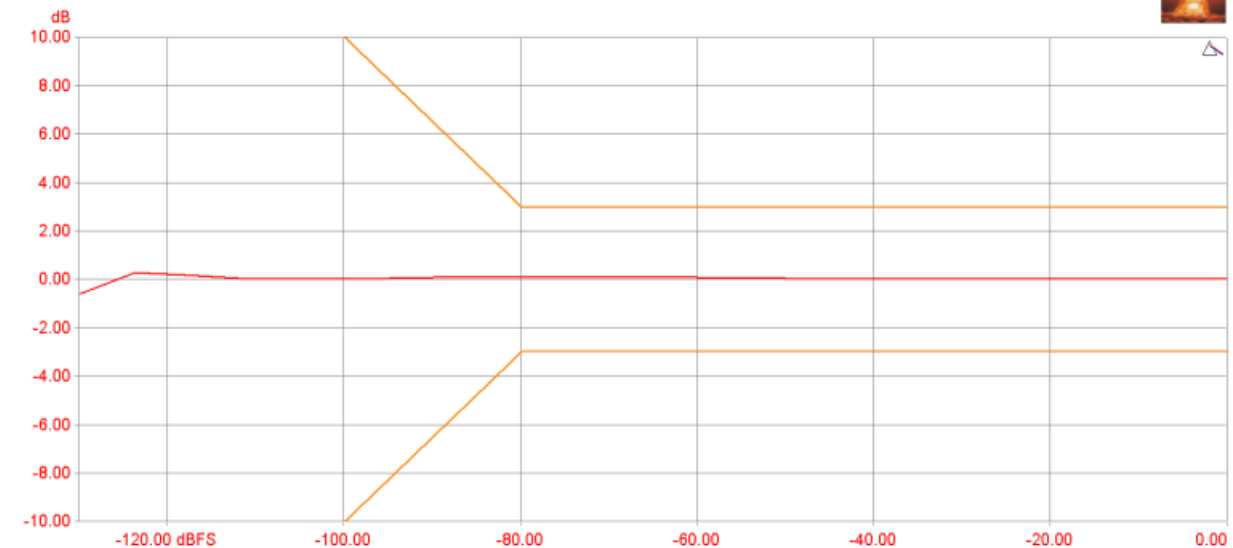
| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -6 dBFS at 1000 Hz |
| Channel B: | sine, -6 dBFS at 1000 Hz |

Gain vs Amplitude



| Line | Name | Points | Log X | Log Y | Cursor X | Cursor Y |
|------|---|--------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 17 | Sweep of FFT Det 1: Gain: Ch A | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | Max limit: Sweep of FFT Det 1: Gain: Ch A | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | Min limit: Sweep of FFT Det 1: Gain: Ch A | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

Gain vs Amplitude



| Line | Name | Points | Log X | Log Y | Cursor X | Cursor Y |
|------|---|--------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 17 | Sweep of FFT Det 1: Gain: Ch B | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | Max limit: Sweep of FFT Det 1: Gain: Ch B | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3 | Min limit: Sweep of FFT Det 1: Gain: Ch B | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |

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A04 THD+N,THD, nth-HD: **PASSED**

Measured at 1/25/2021 1:52:30 PM

| Generator Settings | |
|--------------------|-------------------------|
| Channel A: | sine, 0 dBFS at 1000 Hz |
| Channel B: | sine, 0 dBFS at 1000 Hz |

| CTA Readings | | |
|---|-----------|----------------|
| THD+N - relative (Channel A RMS) | 0.00182 % | <200 % >0 % |
| THD+N - relative (Channel B RMS) | 0.00340 % | <200 % >0 % |
| Settings: Self relative, 22 Hz - 20kHz AES17, unweighted RMS with 1/12th octave band-reject filter at the generator frequency | | |

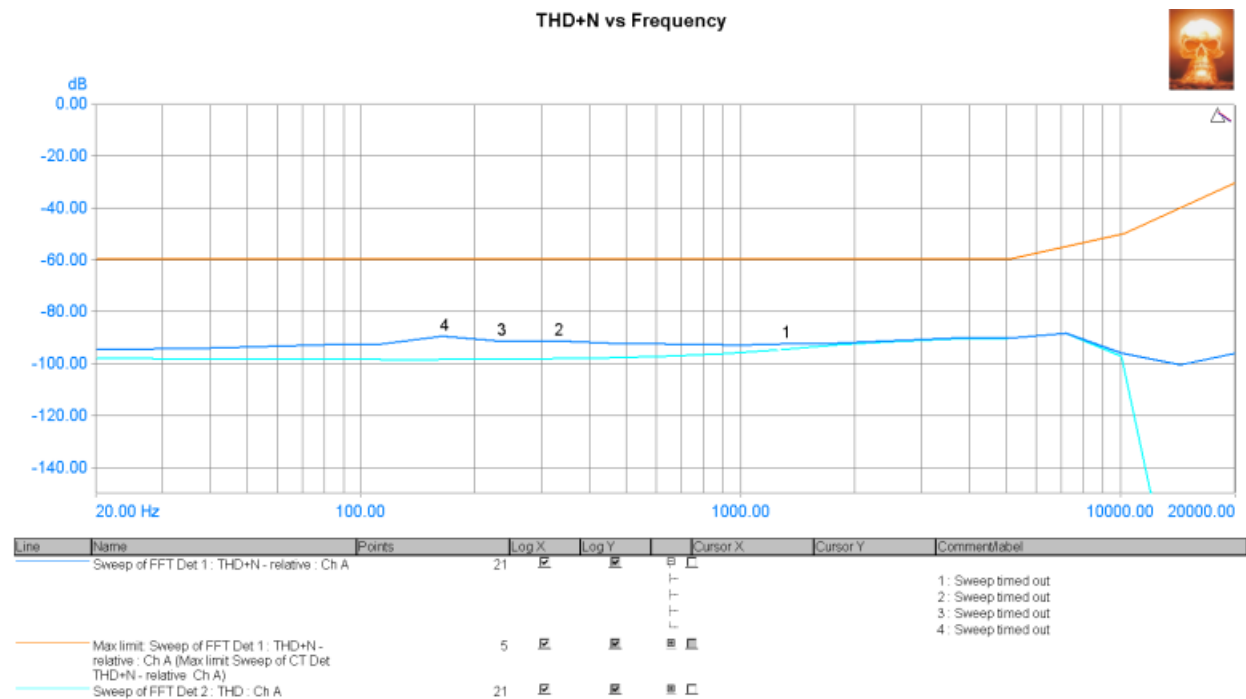
| FFT Detector Readings | | |
|---|-----------|----------------|
| THD (Channel A) | 0.00160 % | <200 % >0 % |
| THD (Channel B) | 0.00331 % | <200 % >0 % |
| FFTD 1 Settings: Self relative, 22 Hz - 20kHz AES17, unweighted with band-pass notch filters from the 2nd to 10th harmonics | | |
| 2nd Harmonic Distortion (Channel A) | 0.00138 % | <200 % >0 % |
| 2nd Harmonic Distortion (Channel B) | 0.00317 % | <200 % >0 % |
| FFTD 2 Settings: Self relative, 22 Hz - 20kHz AES17, unweighted with band-pass notch filter at the 2nd harmonic | | |
| 3rd Harmonic Distortion (Channel A) | 0.00044 % | <200 % >0 % |
| 3rd Harmonic Distortion (Channel B) | 0.00059 % | <200 % >0 % |
| FFTD 3 Settings: Self relative, 22 Hz - 20kHz AES17, unweighted with band-pass notch filter at the 3rd harmonic | | |
| THD+N - relative (Channel A) | 0.00174 % | <200 % >0 % |
| THD+N - relative (Channel B) | 0.00337 % | <200 % >0 % |
| FFTD 4 Settings: Self relative, 22 Hz - 20kHz AES17, unweighted with window notch (14 bins) band-reject filter at the input frequency | | |

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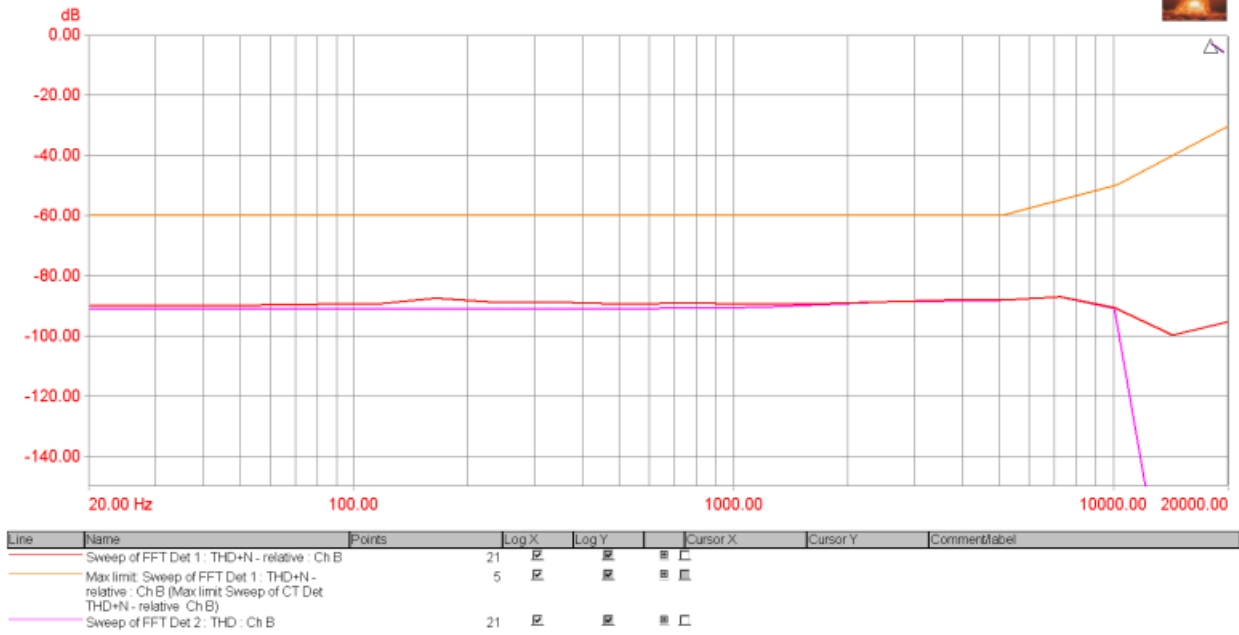
A05 THD+N vs Freq: PASSED

Measured at 1/25/2021 1:52:43 PM

| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |



THD+N vs Frequency


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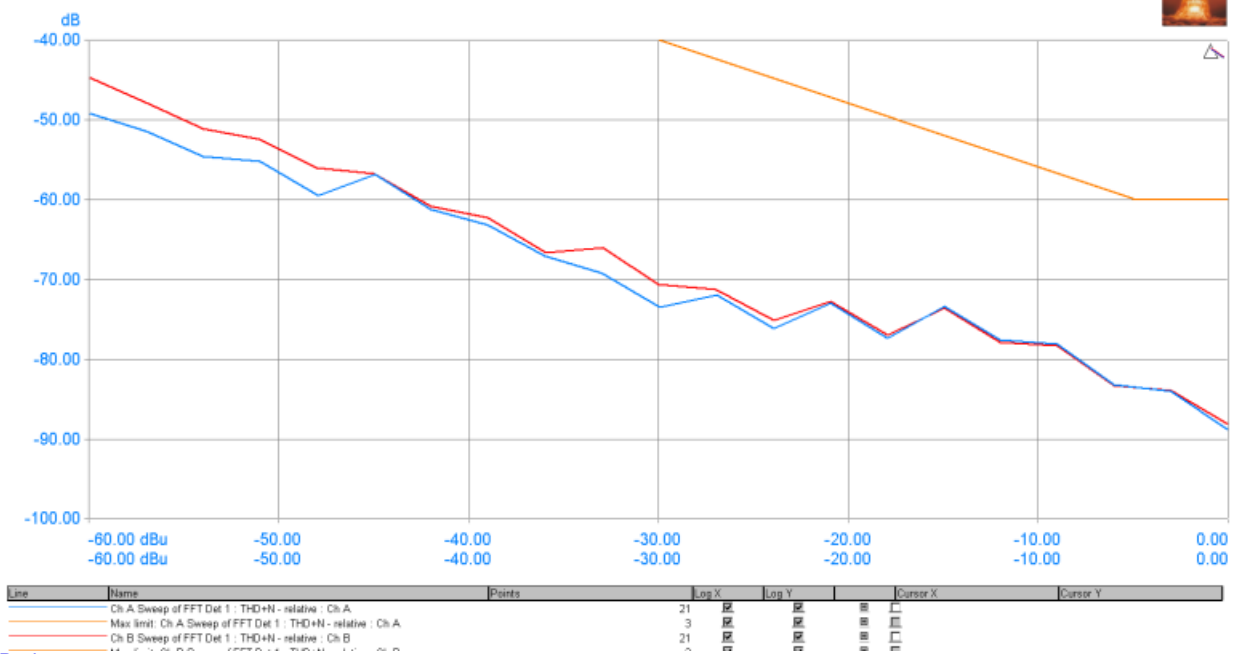
A06 THD+N vs Ampl: PASSED

Measured at 1/25/2021 1:53:56 PM

Generator Settings

| | |
|------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

THD+N vs Amplitude


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A07 Noise, DNR: PASSED

Measured at 1/25/2021 1:54:25 PM

Generator Settings

| | |
|------------|-------------------------------|
| Channel A: | sine, -60 dBFS at 1000.488 Hz |
| Channel B: | sine, -60 dBFS at 1000.488 Hz |

| FFT Detector Readings | | |
|--|--------------|---------------------|
| THD+N - relative (Channel A) | -56.850 dB | Not limit checked. |
| THD+N - relative (Channel B) | -56.992 dB | Not limit checked. |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with 1/3rd octave band-reject filter at the generator frequency | | |
| Noise (residual) (Channel A) | -116.945 dBu | Not limit checked. |
| Noise (residual) (Channel B) | -115.394 dBu | Not limit checked. |
| FFTD 2 Settings: 22 Hz - 22 kHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic | | |
| DAC DNR Residual Async | 124.456 dB | < 150 dB > 60 dB |
| DAC DNR Residual Async | 122.908 dB | < 150 dB > 60 dB |
| FFTD 3 Settings: User: DAC SNR Residual Async | | |

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A08 Crosstalk A to B: PASSED

Measured at 1/25/2021 1:54:44 PM

| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

| CTA Readings | | |
|--|-------------|----------|
| Cross-talk (Channel B RMS) | -128.805 dB | < -45 dB |
| Settings: Channel relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the opposite channel generator frequency | | |

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A09 Crosstalk B to A: PASSED

Measured at 1/25/2021 1:54:52 PM

| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

| CTA Readings | | |
|--|-------------|----------|
| Cross-talk (Channel A RMS) | -121.693 dB | < -45 dB |
| Settings: Channel relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the opposite channel generator frequency | | |

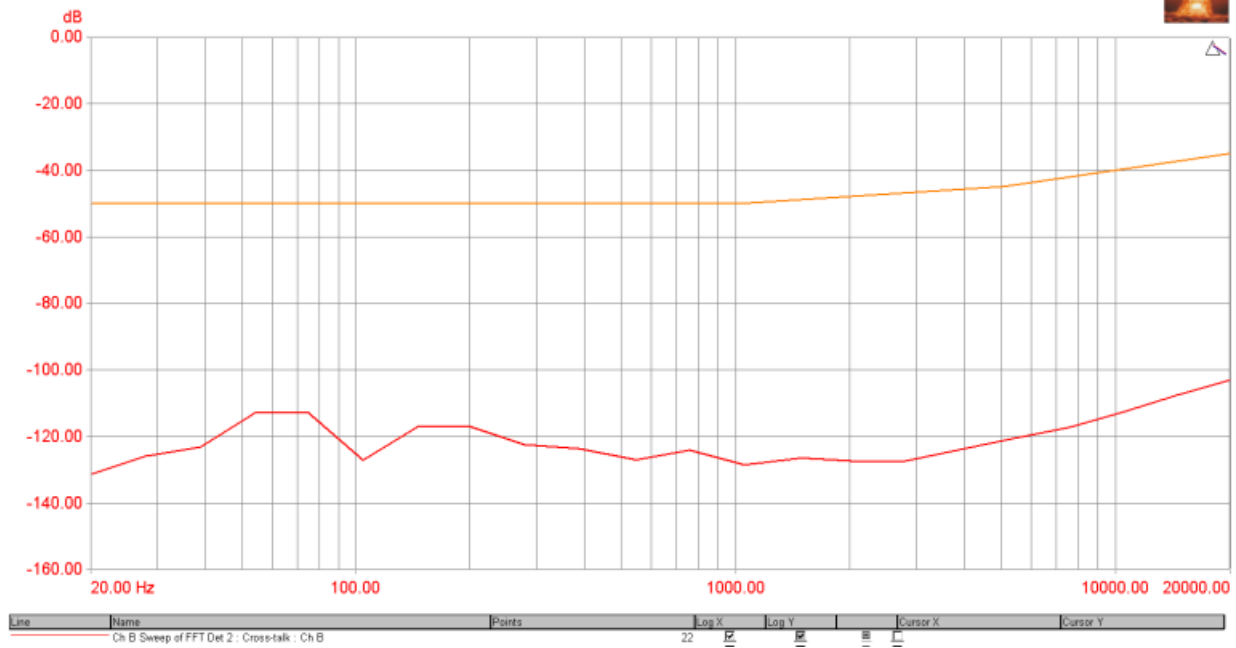
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A10 Crosstalk A to B vs Freq: PASSED

Measured at 1/25/2021 1:54:55 PM

| Generator Settings | |
|--------------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

Cross-talk A to B vs Frequency


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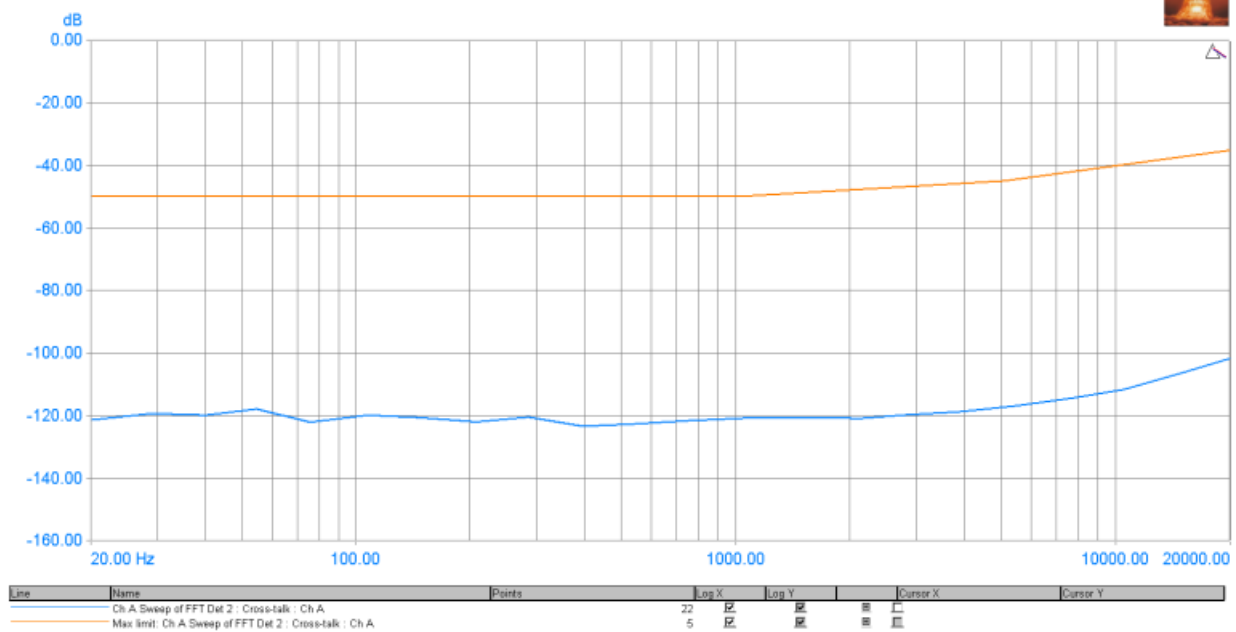
A11 Crosstalk B to A vs Freq: PASSED

Measured at 1/25/2021 1:55:51 PM

Generator Settings

| | |
|------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

Cross-talk A to B vs Frequency


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A12 FFT 1000 Hz THD+N: PASSED

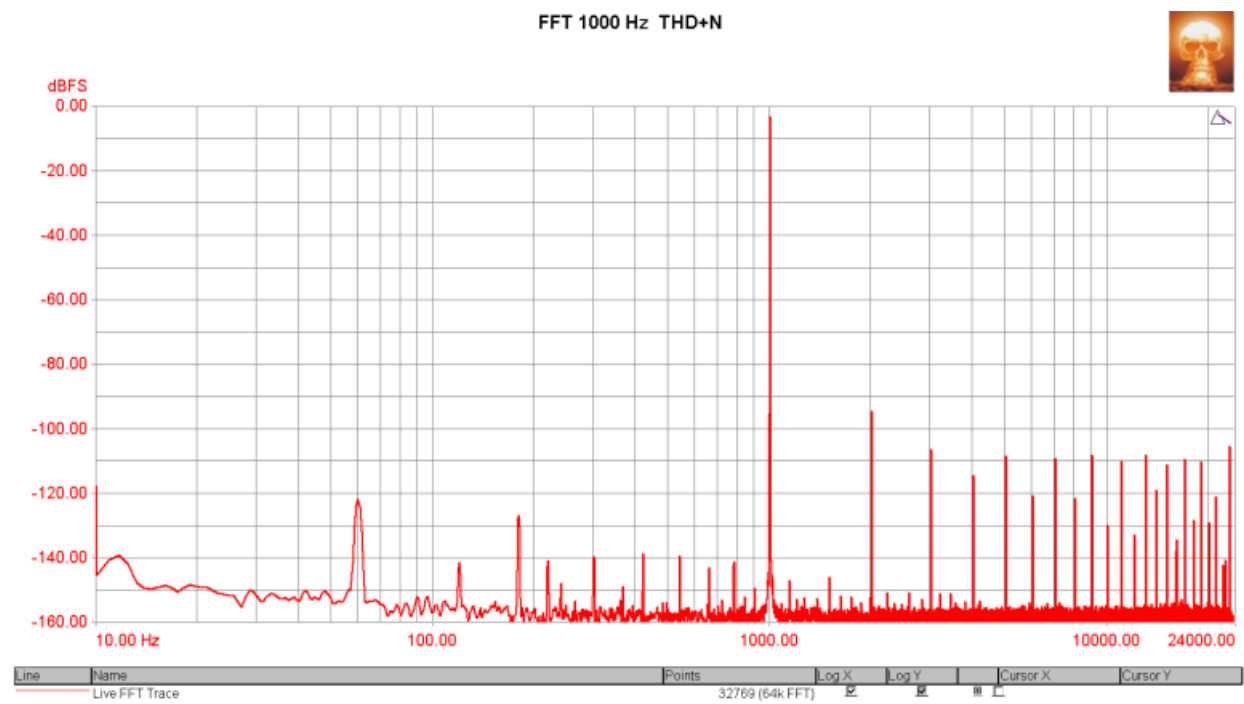
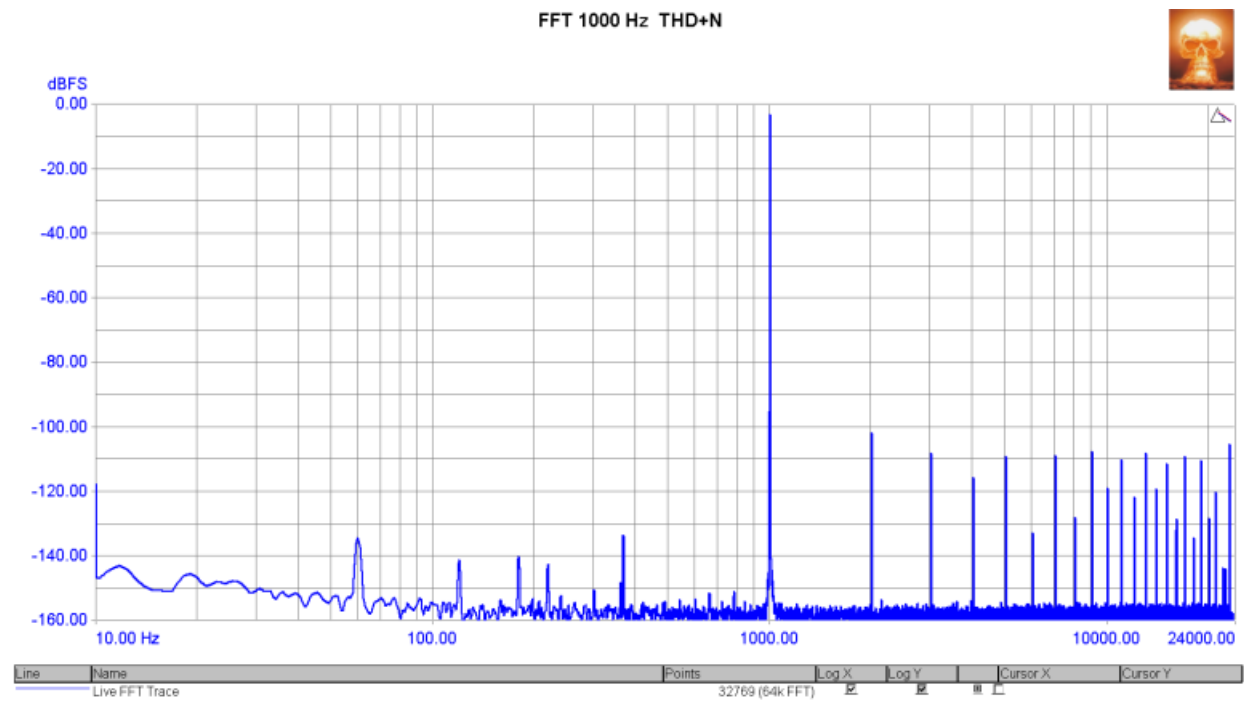
Measured at 1/25/2021 1:56:44 PM

Generator Settings

| | |
|------------|--------------------------|
| Channel A: | sine, -3 dBFS at 1000 Hz |
| Channel B: | sine, -3 dBFS at 1000 Hz |

| Signal Analyzer Readings | | |
|-------------------------------------|-----------|--------------------|
| RMS amplitude (Selected : Ch A) | 4.482 dBu | Not limit checked. |
| RMS amplitude (Non-selected : Ch A) | 4.485 dBu | Not limit checked. |

| CTA Readings | | |
|--|-----------|-----------------------------|
| THD+N - relative (Selected : Ch ARMS) | 0.00196 % | < 0.075 % > 0.00000001 % |
| THD+N - relative (Non-selected : Ch ARMS) | 0.00299 % | < 0.075 % > 0.00000001 % |
| Settings: Self relative, 22 Hz - 20kHz AES17, unweighted RMS with 1/3rd octave band-reject filter at the input frequency | | |



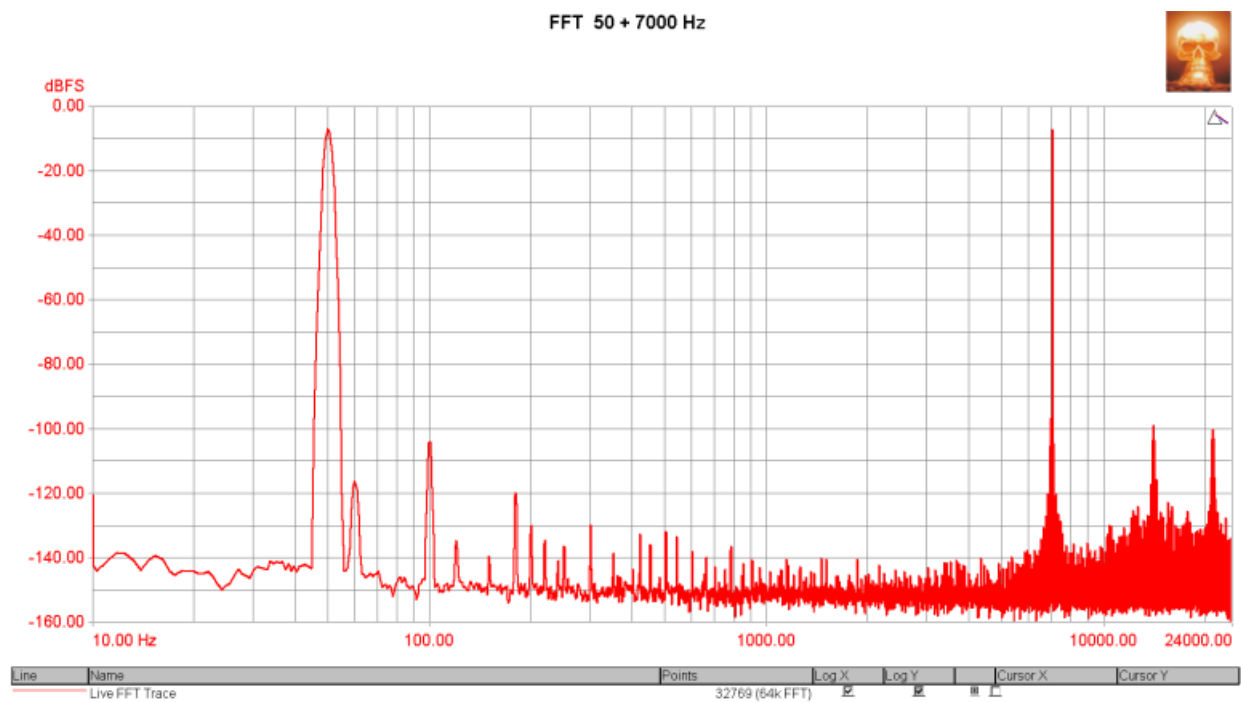
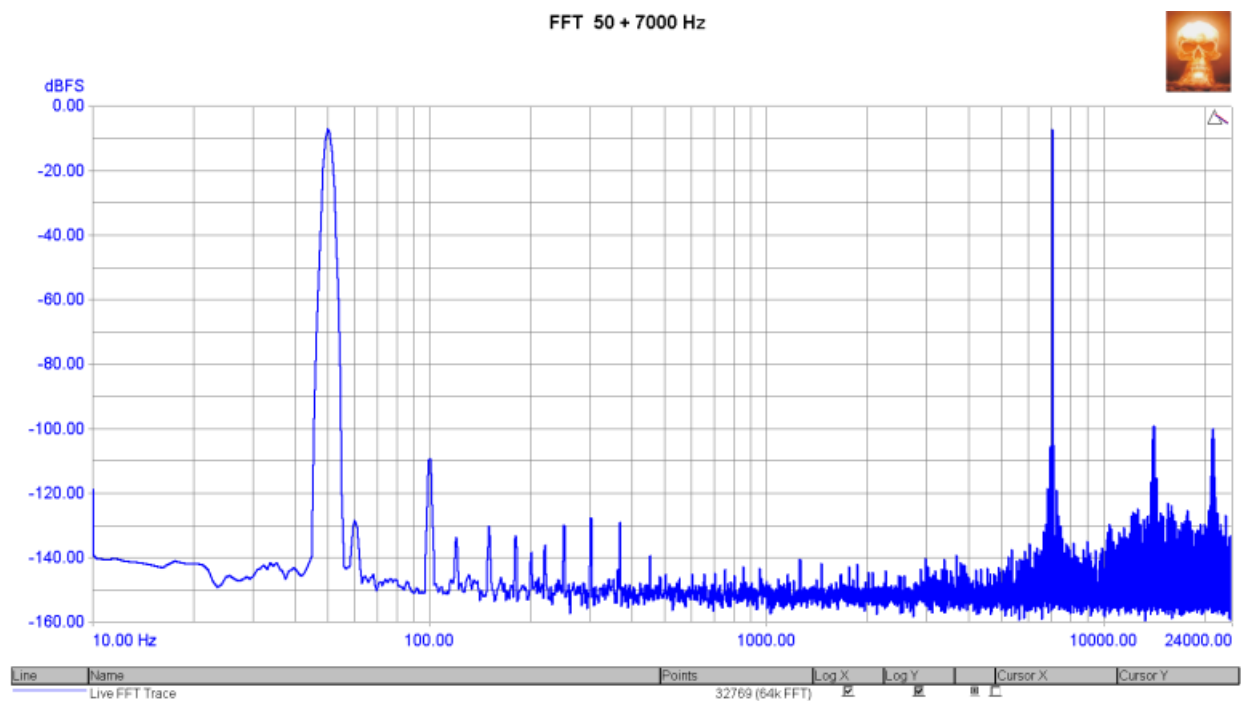
| FFT Detector Readings | | |
|---|-----------|--------------------|
| THD+N - relative (Channel A) | 0.00189 % | Not limit checked. |
| THD+N - relative (Channel B) | 0.00308 % | Not limit checked. |
| FFTD 1 Settings: Self relative, 22 Hz - 20kHz AES17, unweighted with window notch (14 bins) band-reject filter at the input frequency | | |

Measured at 1/25/2021 1:58:07 PM

| Generator Settings | |
|--------------------|---|
| Channel A: | Twin-tone, -7 dBFS at 50 Hz and 1 amplitude ratio at 7000Hz |
| Channel B: | Twin-tone, -7 dBFS at 50 Hz and 1 amplitude ratio at 7000Hz |

| Signal Analyzer Readings | | |
|---------------------------|-----------|--------------------|
| RMS amplitude (Channel A) | 3.483 dBu | Not limit checked. |
| RMS amplitude (Channel B) | 3.486 dBu | Not limit checked. |

| CTA Readings | | |
|---|-----------|-----------------|
| IMD SMPTE-DIN (Channel A RMS) | 0.00119 % | <0.02 % >0 % |
| IMD SMPTE-DIN (Channel B RMS) | 0.00317 % | <0.02 % >0 % |
| Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS using SMPTE-DIN IMD demodulation. | | |



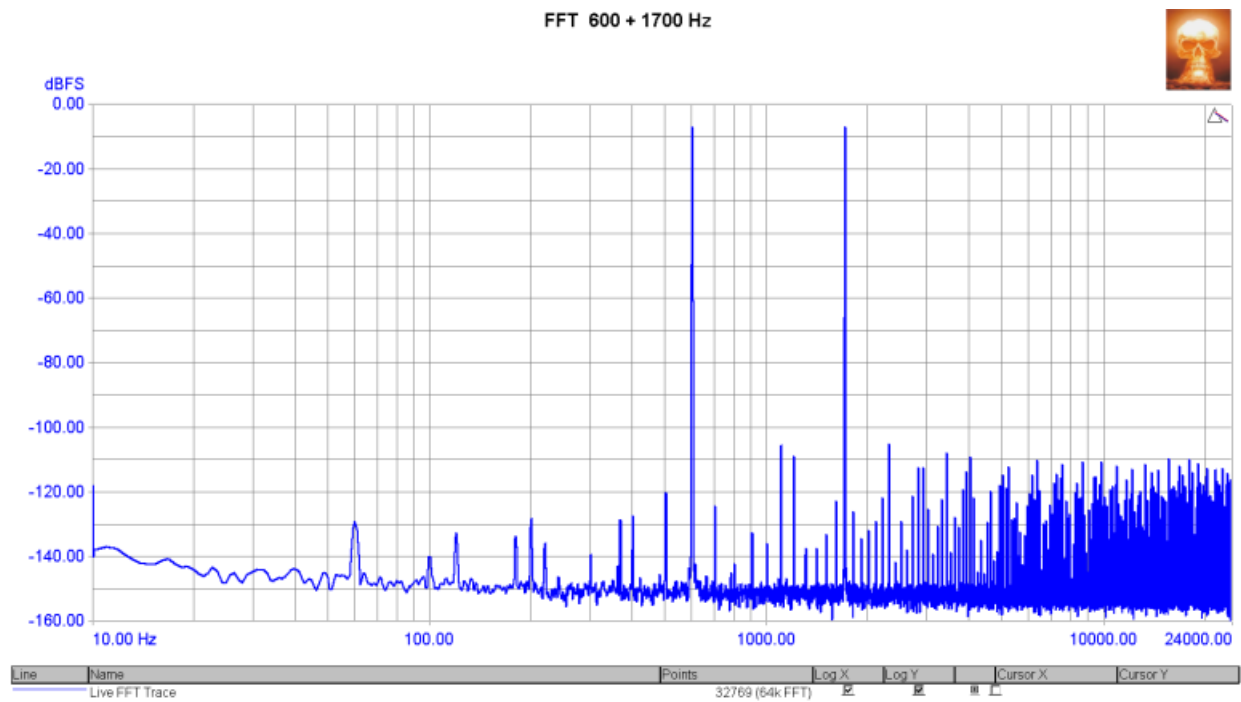
A14 FFT 600+1700 Hz: PASSED

Measured at 1/25/2021 1:58:30 PM

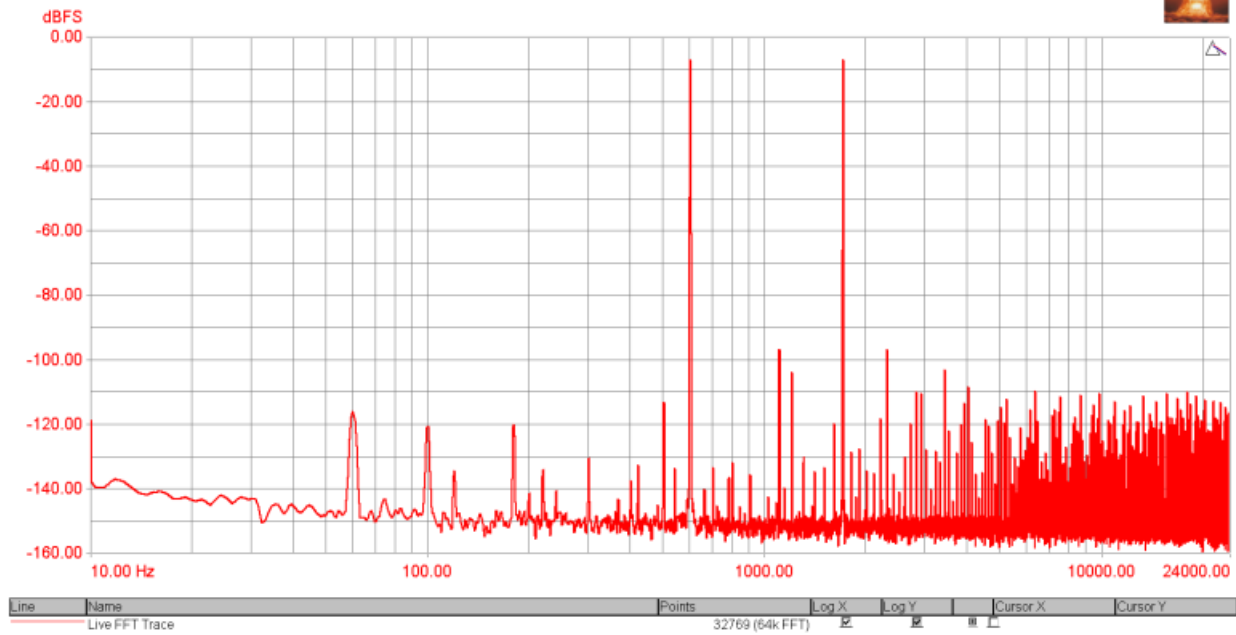
| Generator Settings | |
|--------------------|--|
| Channel A: | Twin-tone, -7 dBFS at 600 Hz and 1 amplitude ratio at 1700Hz |
| Channel B: | Twin-tone, -7 dBFS at 600 Hz and 1 amplitude ratio at 1700Hz |

| Signal Analyzer Readings | | |
|---------------------------|-----------|--------------------|
| RMS amplitude (Channel A) | 3.478 dBu | Not limit checked. |
| RMS amplitude (Channel B) | 3.503 dBu | Not limit checked. |

| CTA Readings | | |
|---|-----------|-------------------|
| IMD SMPTE-DIN (Channel A RMS) | 0.01272 % | < 0.02 % > 0 % |
| IMD SMPTE-DIN (Channel B RMS) | 0.01269 % | < 0.02 % > 0 % |
| Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS using SMPTE-DIN IMD demodulation. | | |



FFT 600 + 1700 Hz


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A15 FFT 19+20 KHz: PASSED

Measured at 1/25/2021 1:58:54 PM

Generator Settings

| | |
|------------|---|
| Channel A: | Twin-tone, -6.03 dBFS at 19000 Hz and 0 dB offset at 1000 Hz offset |
| Channel B: | Twin-tone, -6.03 dBFS at 19000 Hz and 0 dB offset at 1000 Hz offset |

Signal Analyzer Readings

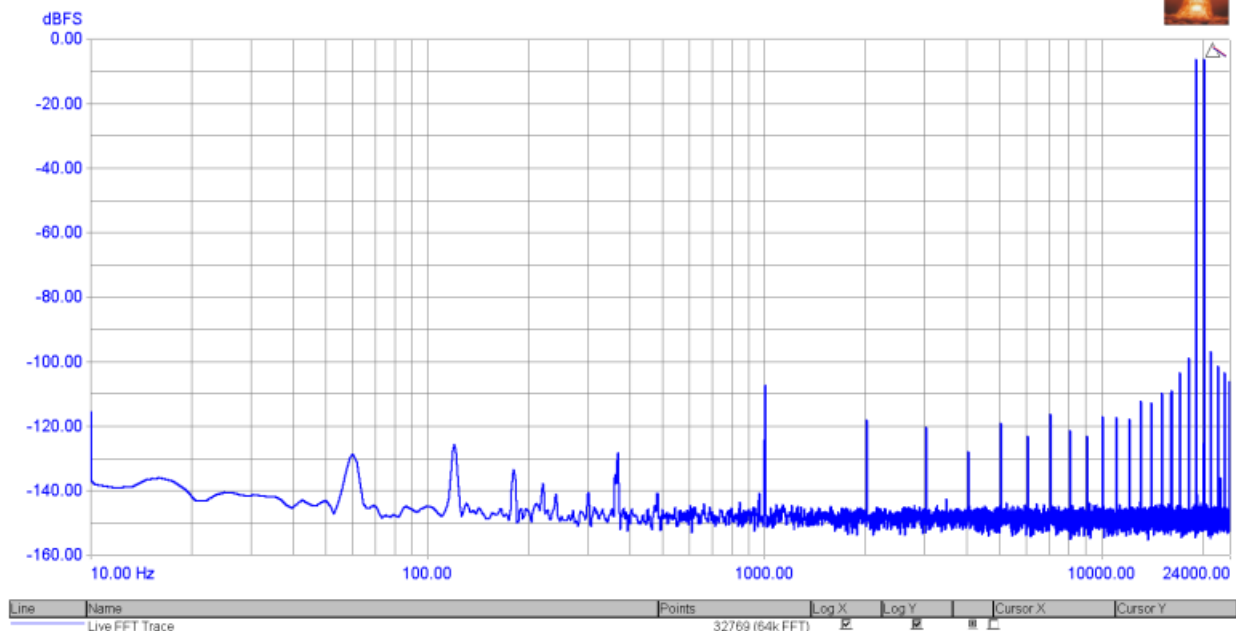
| | | |
|---------------------------|-----------|--------------------|
| RMS amplitude (Channel A) | 4.371 dBu | Not limit checked. |
| RMS amplitude (Channel B) | 4.371 dBu | Not limit checked. |

CTA Readings

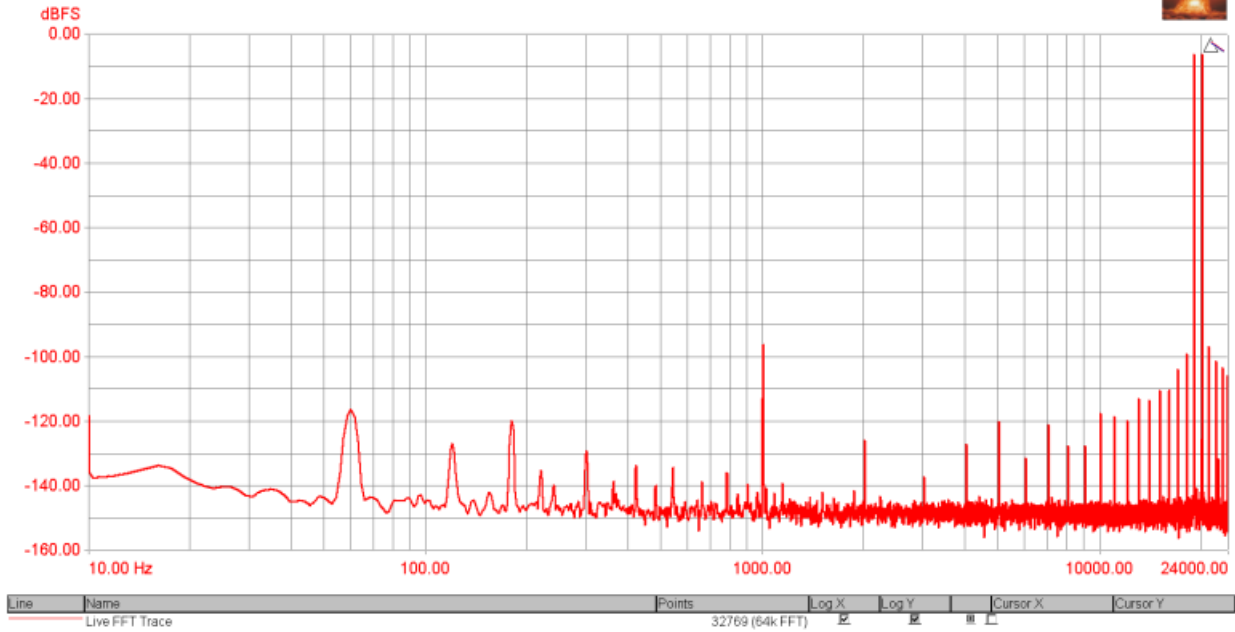
| | | |
|--------------------------|-----------|---------|
| IMD CCIF (Channel A RMS) | 0.00071 % | < 0.1 % |
| IMD CCIF (Channel B RMS) | 0.00223 % | < 0.1 % |

Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the intermodulation difference frequency

FFT 19 + 20 KHz



FFT 19 + 20 KHz



FFT Detector Readings

| | | |
|---|-----------|---------|
| IMD CCIF (Channel A) | 0.00060 % | < 0.1 % |
| IMD CCIF (Channel B) | 0.00220 % | < 0.1 % |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-pass filter at the intermodulation difference frequency | | |

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A16 FFT residual noise: PASSED

Measured at 1/25/2021 1:59:16 PM

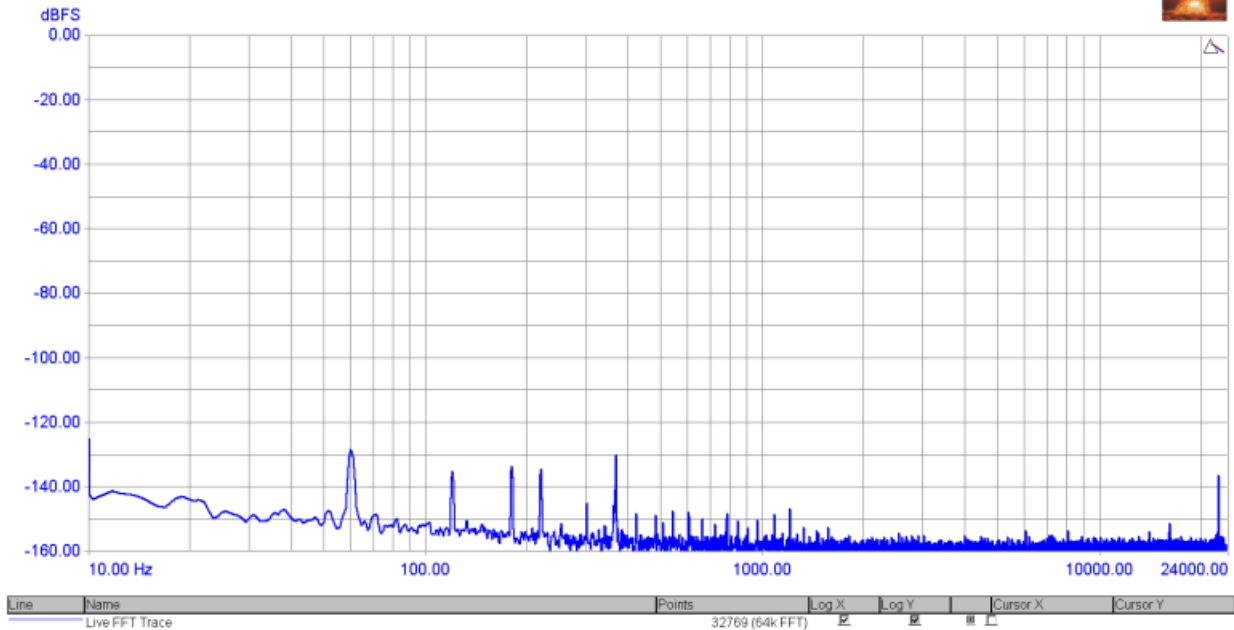
Generator Settings

| | |
|------------|-----|
| Channel A: | Off |
| Channel B: | Off |

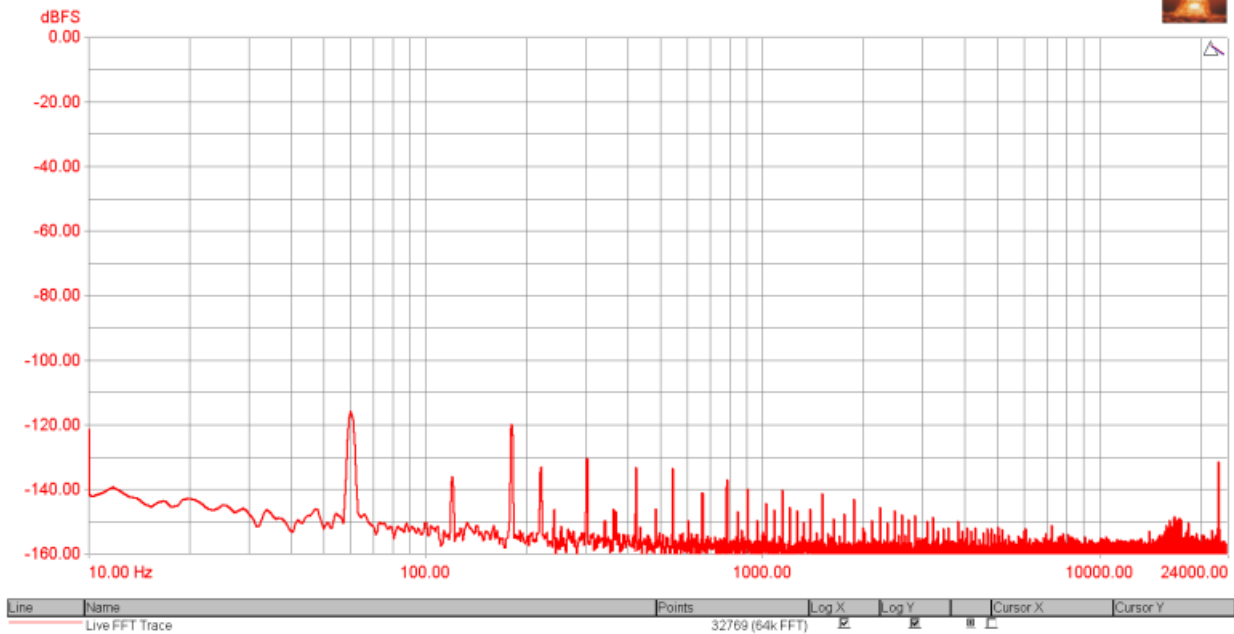
Signal Analyzer Readings

| | | |
|---------------------------|--------------|--------------------|
| RMS amplitude (Channel A) | -109.740 dBu | Not limit checked. |
| RMS amplitude (Channel B) | -105.144 dBu | Not limit checked. |

FFT residual noise



FFT residual noise



FFT Detector Readings

| | | |
|------------------------------|---------------|---------------------------|
| Noise (residual) (Channel A) | -117.867 dBFS | < -60 dBFS > -150 dBFS |
| Noise (residual) (Channel B) | -112.705 dBFS | < -60 dBFS > -150 dBFS |

FFTD 1 Settings: 22 Hz - 22 kHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic

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A17 FFT -90 dBFS: Not limit checked.

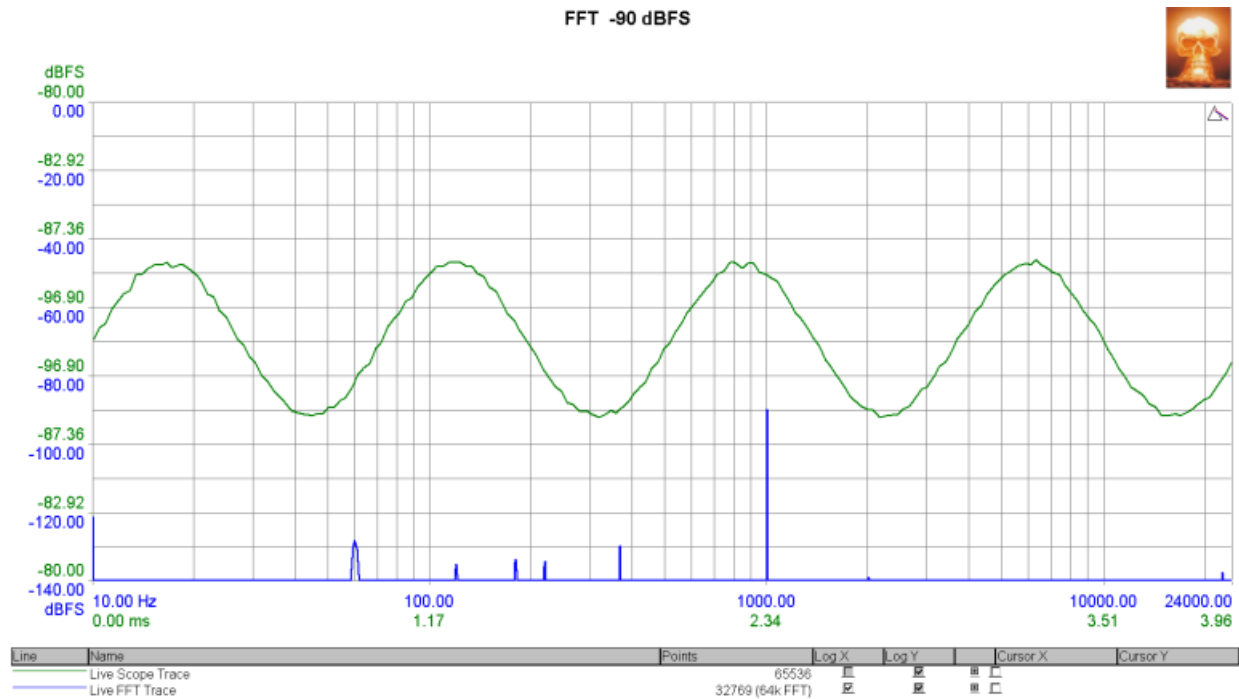
Measured at 1/25/2021 1:59:40 PM

Generator Settings

| | |
|------------|---------------------------|
| Channel A: | sine, -90 dBFS at 1000 Hz |
| Channel B: | sine, -90 dBFS at 1000 Hz |

Signal Analyzer Readings

| | | |
|---------------------------------|-------------|--------------------|
| RMS amplitude (Selected : Ch A) | -82.433 dBu | Not limit checked. |
|---------------------------------|-------------|--------------------|



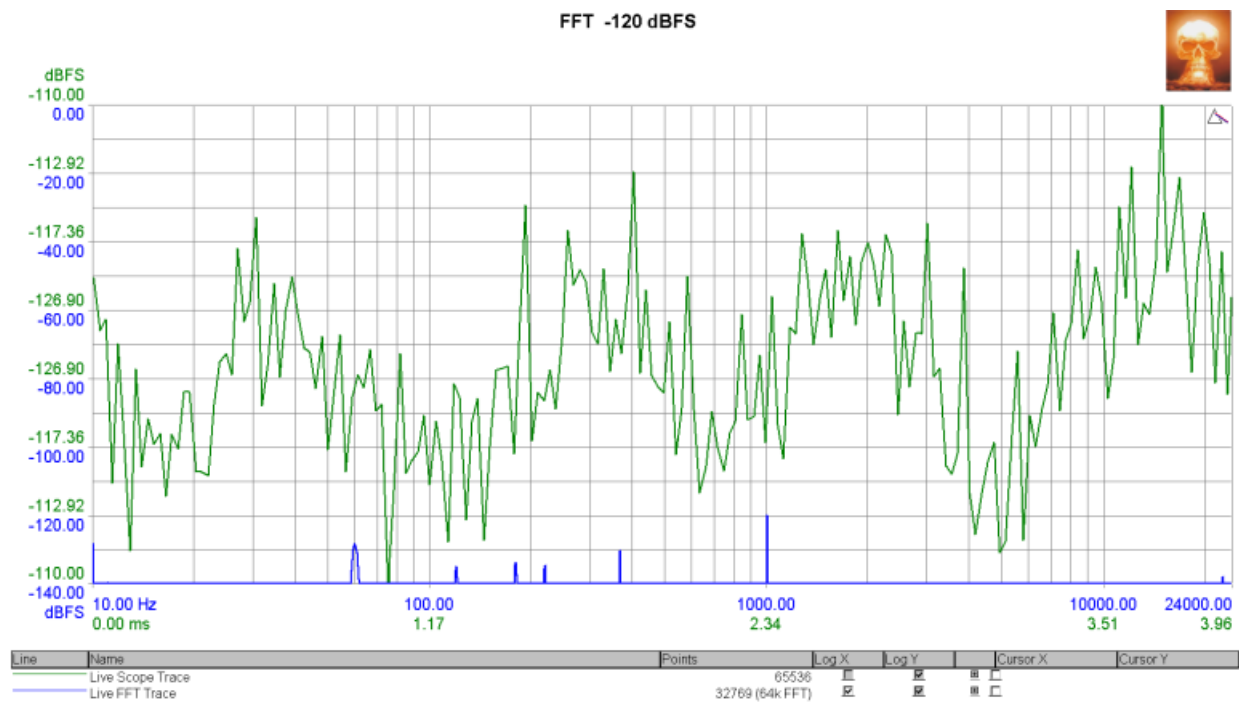
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A17a FFT -120 dBFS: Not limit checked.

Measured at 1/25/2021 1:59:55 PM

| Generator Settings | |
|--------------------|----------------------------|
| Channel A: | sine, -120 dBFS at 1000 Hz |
| Channel B: | sine, -120 dBFS at 1000 Hz |

| Signal Analyzer Readings | | |
|---------------------------------|---------------------|--------------------|
| RMS amplitude (Selected : Ch A) | -107.896 dBu | Not limit checked. |



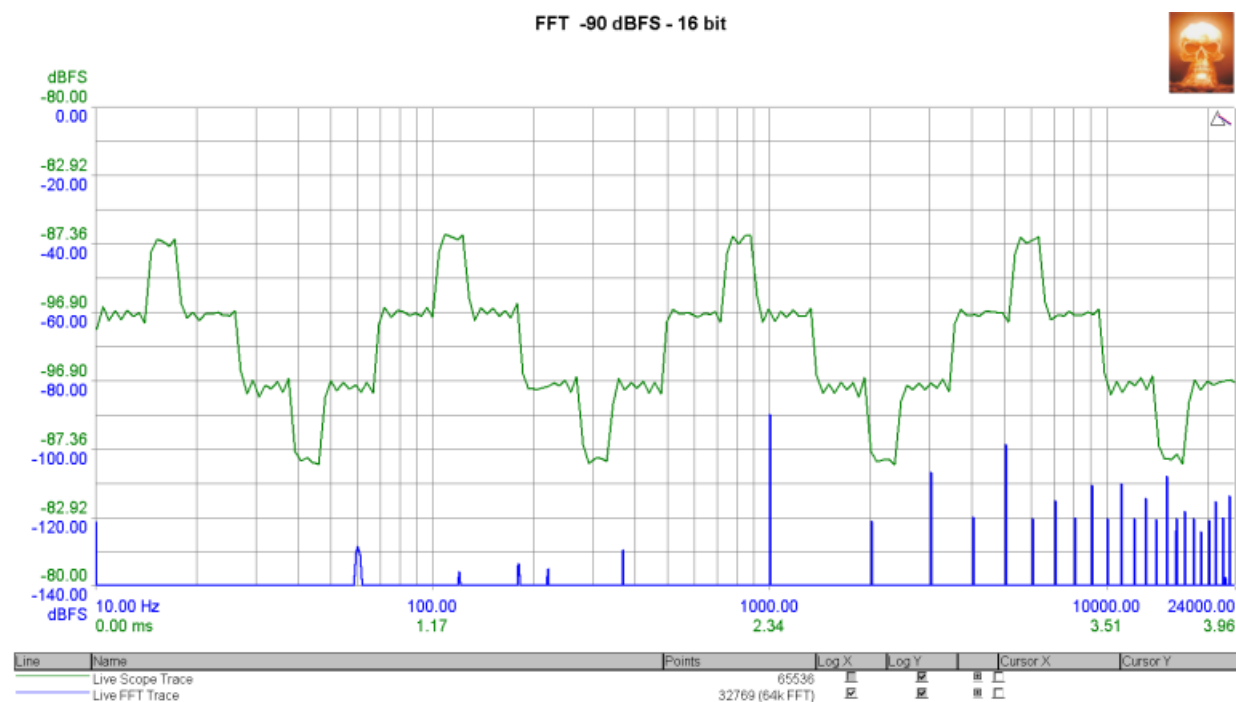
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A18 FFT -90 dBFS 16 bit: Not limit checked.

Measured at 1/25/2021 2:03:24 PM

| Generator Settings | |
|--------------------|---------------------------|
| Channel A: | sine, -90 dBFS at 1000 Hz |
| Channel B: | sine, -90 dBFS at 1000 Hz |

| Signal Analyzer Readings | | |
|---------------------------------|-------------|--------------------|
| RMS amplitude (Selected : Ch A) | -81.520 dBu | Not limit checked. |

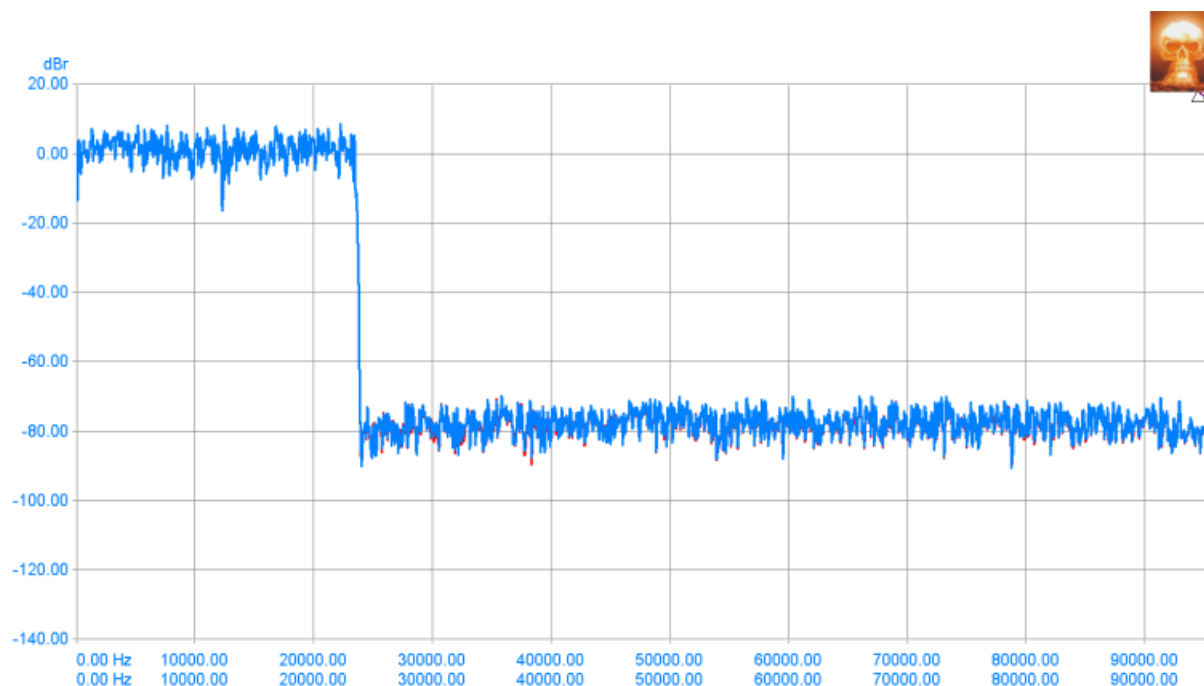


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A19 FFT imaging: Not limit checked.

Measured at 1/25/2021 2:00:24 PM

| Generator Settings | |
|--------------------|---------------------------------|
| Channel A: | white noise, -6 dBFS |
| Channel B: | white noise, -6 dBFS (inverted) |



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A20 FFT inferred jitter: Not limit checked.

Measured at 1/25/2021 2:00:48 PM

| Generator Settings | |
|--------------------|--------------------------------------|
| Channel A: | sine, -6 dBFS at 11025 Hz |
| Channel B: | sine, -6 dBFS at 11025 Hz (inverted) |

