

Cavalli Liquid Gold X SE 300R Tests 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 2 3 4 - THD+N minus 2nd and 3rd harmonics | ✓ |
| A05 THD+N vs Freq | ✓ |
| A06 THD+N vs Ampl | ✓ |
| A07 Noise, SNR | ✓ |
| 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 | ✓ |

KEY: ✓ = Test passes, ✗ = Test fails, OK = Test has run but has no limit checking, (✗) = Test has failed to run or has not completed,
[N] = 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 3/9/2020 11:42:30 AM

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

| Signal Analyzer Readings | | |
|---------------------------|------------|---------------------|
| RMS amplitude (Channel A) | 0.162 dBu | < 3 dBu > -3 dBu |
| RMS amplitude (Channel B) | -0.190 dBu | < 3 dBu > -3 dBu |
| Inter-channel phase | -0.03 ° | < 10 ° > -10 ° |

| CTA Readings | | |
|--|-----------|-------------------|
| Gain (Channel A RMS) | 0.162 dB | < 3 dB > -3 dB |
| Gain (Channel B RMS) | -0.191 dB | < 3 dB > -3 dB |
| Settings: Generator relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-pass filter at the generator frequency | | |

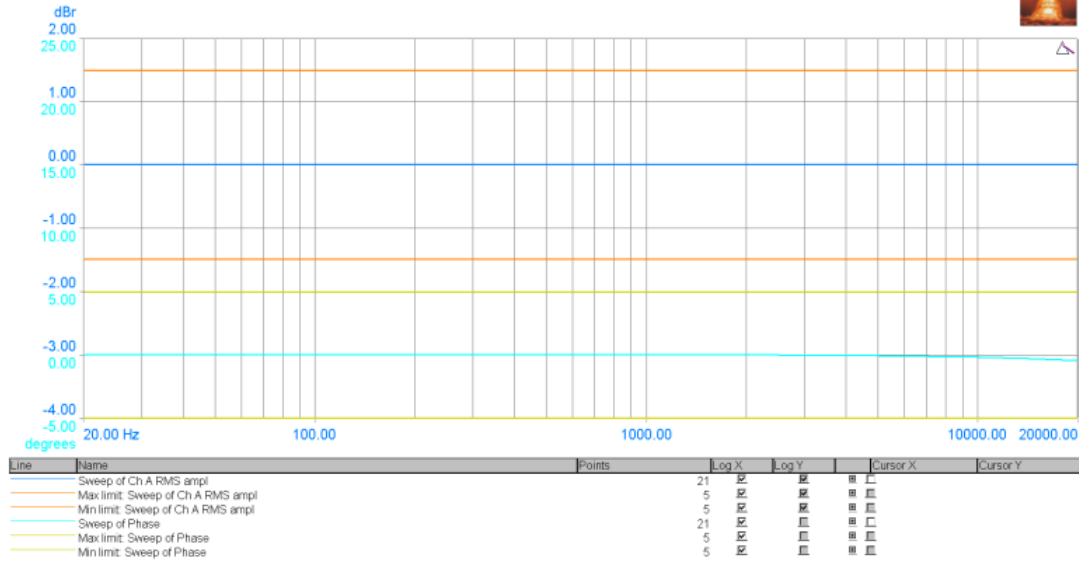
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A02 Ampl, Phase vs Freq: PASSED

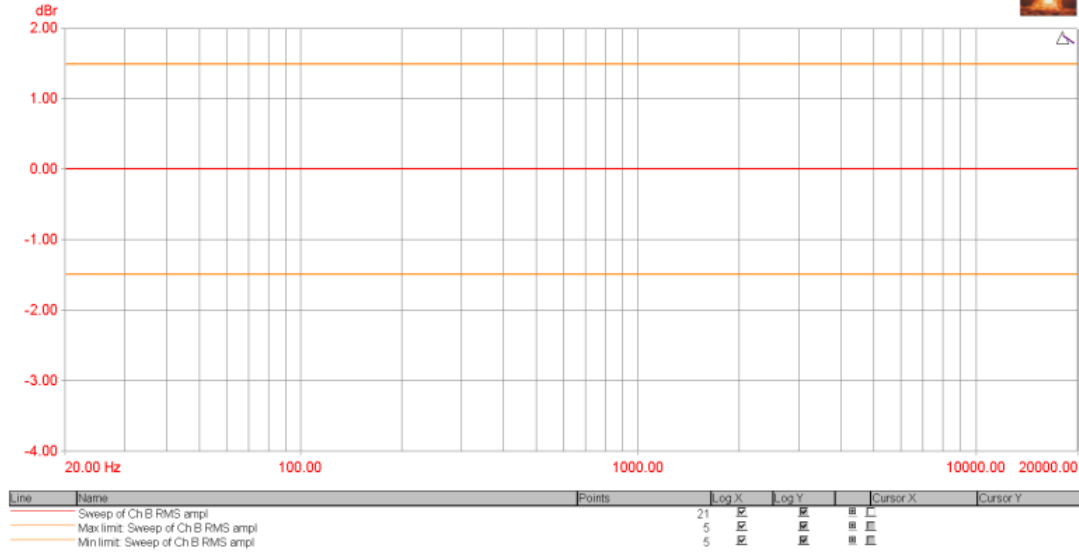
Measured at 3/9/2020 11:42:33 AM

| 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



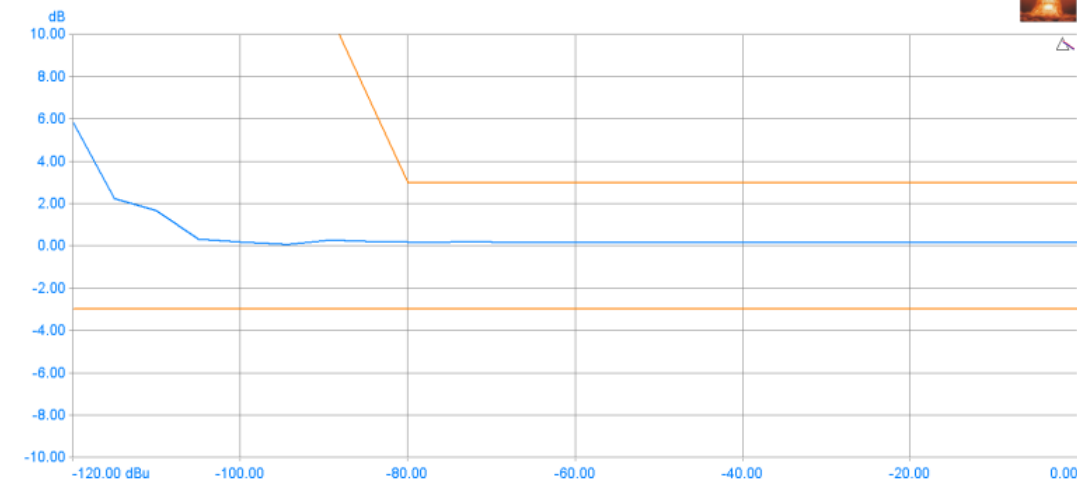
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A03 Gain vs Ampl: **PASSED**

Measured at 3/9/2020 11:42:39 AM

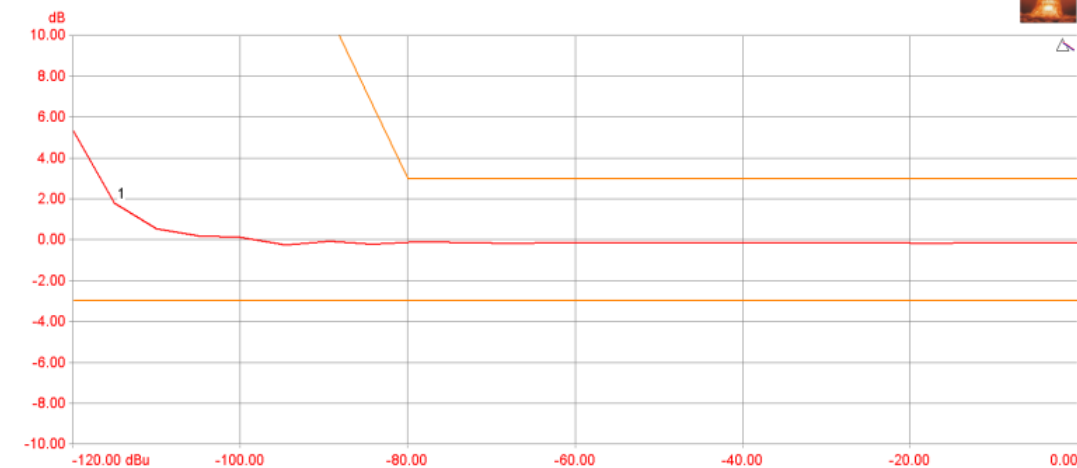
| Generator Settings | |
|--------------------|------------------------|
| Channel A: | sine, 0 dBu at 1000 Hz |
| Channel B: | sine, 0 dBu at 1000 Hz |

Gain vs Amplitude



| Line | Name | Points | Log X | Log Y | Cursor X | Cursor Y |
|------|---------------------------------------|--------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 1 | Sweep of CT Det. Gain: Ch A | 25 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 | Max limit Sweep of CT Det. Gain: Ch A | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 | Min limit Sweep of CT Det. Gain: Ch A | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Gain vs Amplitude



| Line | Name | Points | Log X | Log Y | Cursor X | Cursor Y | Comment/Label |
|------|---------------------------------------|--------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|--------------------|
| 1 | Sweep of CT Det. Gain: Ch B | 25 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | 1: Sweep timed out |
| 2 | Max limit Sweep of CT Det. Gain: Ch B | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |
| 3 | Min limit Sweep of CT Det. Gain: Ch B | 3 | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | |

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A04 THD+N, THD, nth-HD 2 3 4 - THD+N minus 2nd and 3rd harmonics: **PASSED**

Measured at 3/9/2020 11:42:51 AM

Generator Settings

| | |
|------------|------------------------|
| Channel A: | sine, 0 dBu at 1000 Hz |
| Channel B: | sine, 0 dBu at 1000 Hz |

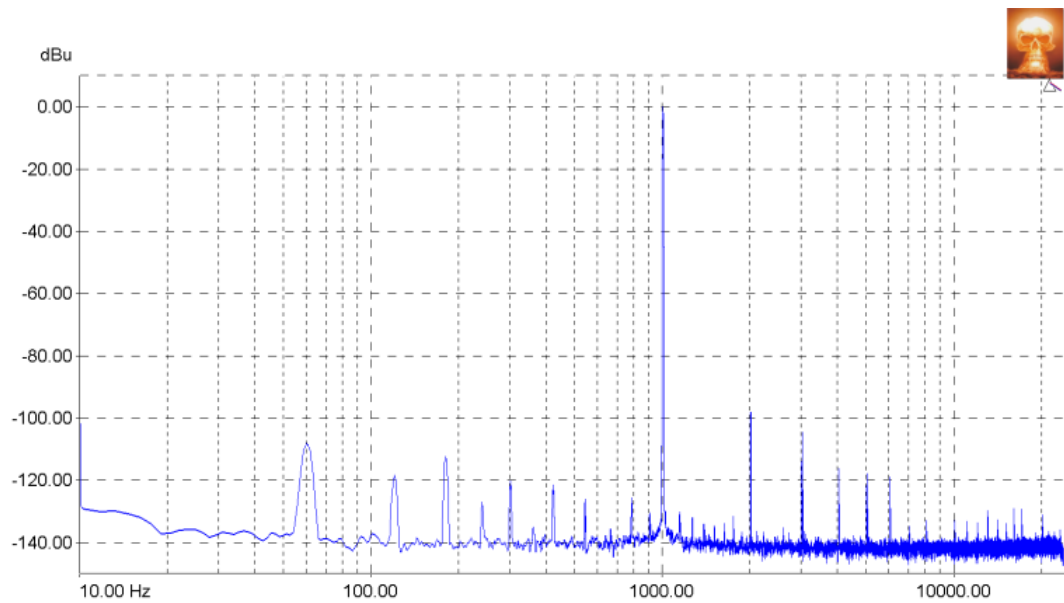
Signal Analyzer Readings

| | | |
|---------------------------|------------|--------------------|
| RMS amplitude (Channel A) | 0.162 dBu | Not limit checked. |
| RMS amplitude (Channel B) | -0.190 dBu | Not limit checked. |

CTA Readings

| | | |
|----------------------------------|-----------|------------------|
| THD+N - relative (Channel A RMS) | 0.00199 % | < 200 % > 0 % |
| THD+N - relative (Channel B RMS) | 0.00196 % | < 200 % > 0 % |

Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-reject filter at the input frequency



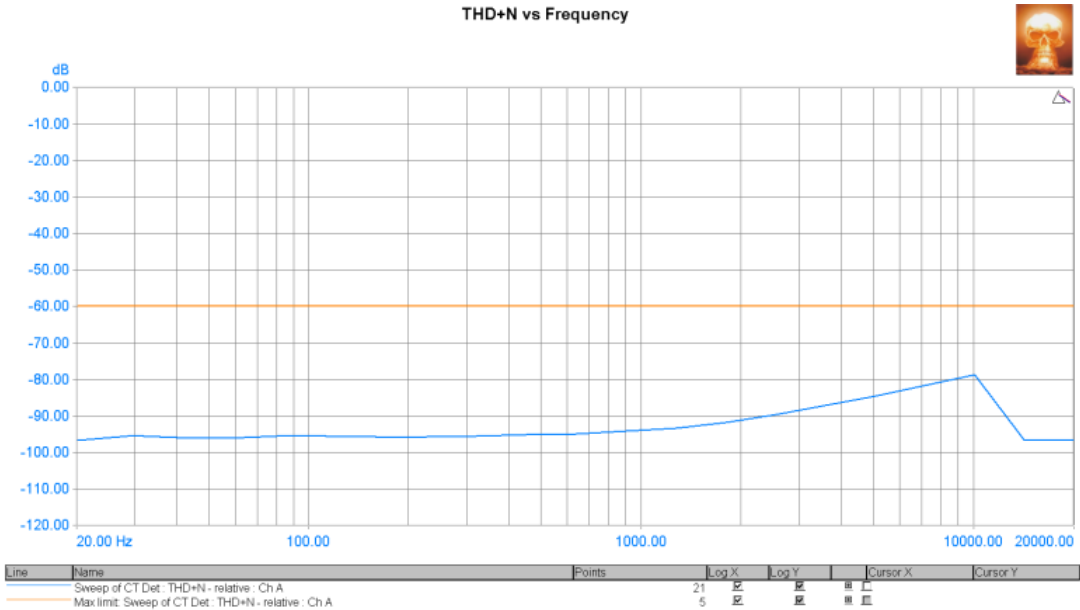
| FFT Detector Readings | | |
|---|-----------|-----------------------|
| THD (Channel A) | 0.00137 % | < 200 % > 0 % |
| THD (Channel B) | 0.00139 % | < 200 % > 0 % |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filters from the 2nd to 10th harmonics | | |
| 2nd Harmonic Distortion (Channel A) | 0.00122 % | < 200 % > 0 % |
| 2nd Harmonic Distortion (Channel B) | 0.00135 % | < 200 % > 0 % |
| FFTD 2 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filter at the 2nd harmonic | | |
| 3rd Harmonic Distortion (Channel A) | 0.00056 % | < 200 % > 0 % |
| 3rd Harmonic Distortion (Channel B) | 0.00026 % | < 200 % > 0 % |
| FFTD 3 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filter at the 3rd harmonic | | |
| 4th Harmonic Distortion (Channel A) | 0.00015 % | Not limit checked. |
| 4th Harmonic Distortion (Channel B) | 0.00013 % | Not limit checked. |
| FFTD 4 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filter at the 4th harmonic | | |
| 5th Harmonic Distortion (Channel A) | 0.00013 % | Not limit checked. |
| 5th Harmonic Distortion (Channel B) | 0.00012 % | Not limit checked. |
| FFTD 5 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filter at the 5th harmonic | | |
| 4+HD + N (Channel A) | 0.00084 % | < 0.05 % > 0 % |
| 4+HD + N (Channel B) | 0.00082 % | < 0.05 % > 0 % |
| FFTD 6 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-reject notch filters, fundamental to the 3rd harmonic | | |
| Hum (Channel A) | 0.00038 % | < 0.017783 % > 0 % |
| Hum (Channel B) | 0.00035 % | < 0.017783 % > 0 % |
| FFTD 7 Settings: Self relative, 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-pass filter at 60 Hz | | |
| Noise (residual) (Channel A) | 0.00081 % | < 0.017783 % > 0 % |
| Noise (residual) (Channel B) | 0.00080 % | < 0.017783 % > 0 % |
| FFTD 8 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic | | |

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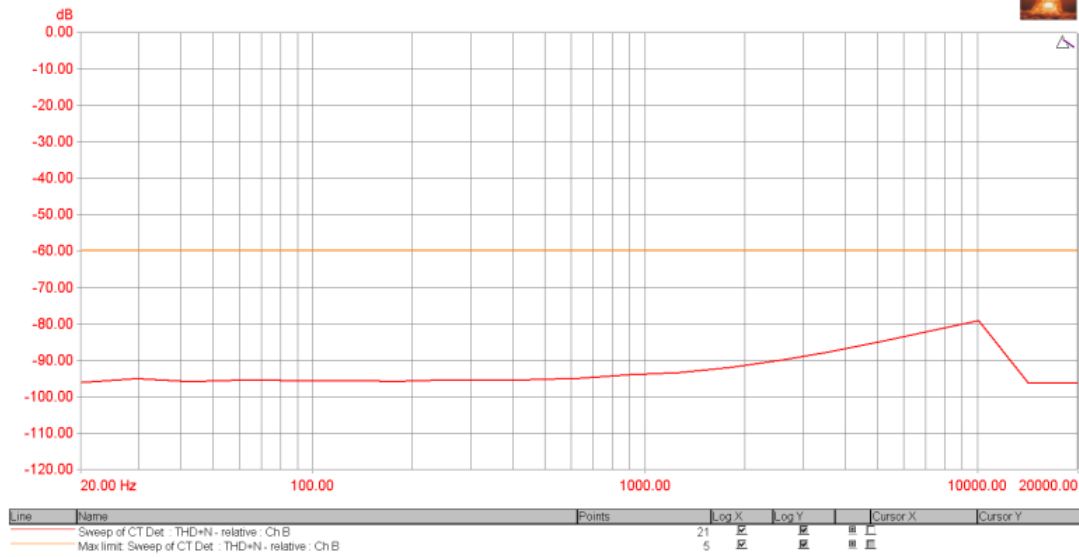
A05 THD+N vs Freq: PASSED

Measured at 3/9/2020 11:43:54 AM

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



THD+N vs Frequency



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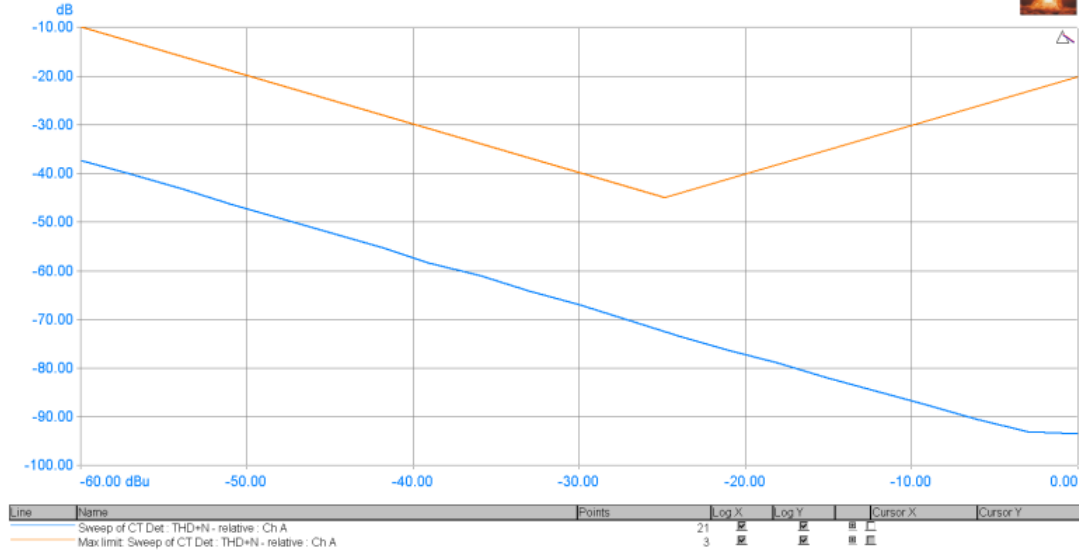
A06 THD+N vs Ampl: PASSED

Measured at 3/9/2020 11:44:06 AM

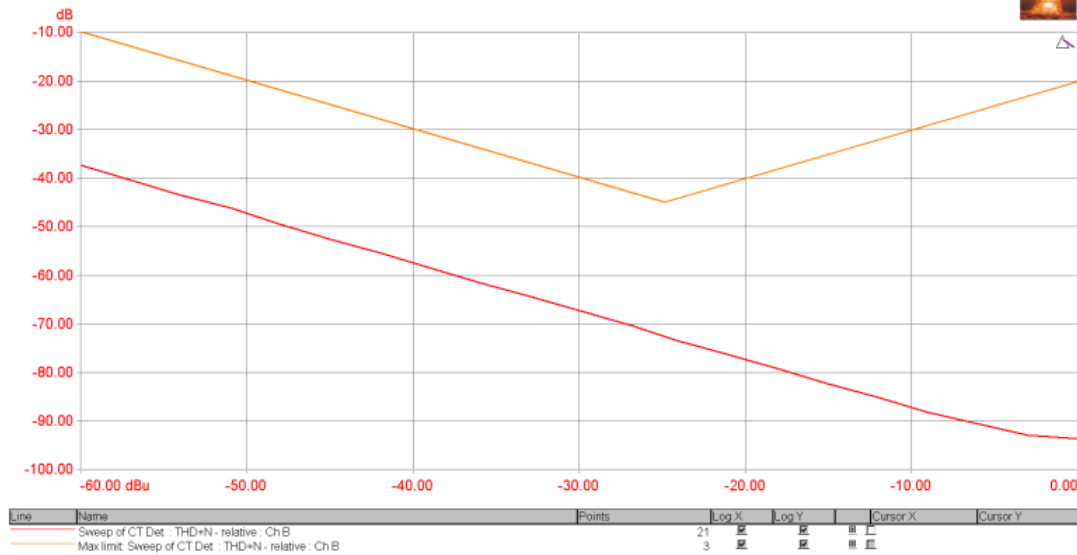
Generator Settings

| | |
|------------|------------------------|
| Channel A: | sine, 0 dBu at 1000 Hz |
| Channel B: | sine, 0 dBu at 1000 Hz |

THD+N vs Amplitude



THD+N vs Amplitude


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A07 Noise, SNR: PASSED

Measured at 3/9/2020 11:44:14 AM

| Generator Settings | | |
|--------------------|---------------------------|--|
| Channel A: | sine, -60 dBFS at 1000 Hz | |
| Channel B: | sine, -60 dBFS at 1000 Hz | |

| FFT Detector Readings | | |
|---|--------------|-------------------------|
| Noise (unweighted) (Channel A) | -114.649 dBr | < 200 dBr > -200 dBr |
| Noise (unweighted) (Channel B) | -115.786 dBr | < 200 dBr > -200 dBr |
| FFTD 1 Settings: 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-reject filter at the generator frequency | | |
| SNR (Channel A) | -114.795 dBr | < 200 dBr > -200 dBr |
| SNR (Channel B) | -115.915 dBr | < 200 dBr > -200 dBr |
| FFTD 2 Settings: 22 Hz - 22 kHz, unweighted with 1/3rd octave band-reject filter at the generator frequency | | |

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A08 Crosstalk A to B: PASSED

Measured at 3/9/2020 11:44:17 AM

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

| CTA Readings | | |
|--|------------|----------|
| Cross-talk (Channel B RMS) | -87.603 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 3/9/2020 11:44:20 AM

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

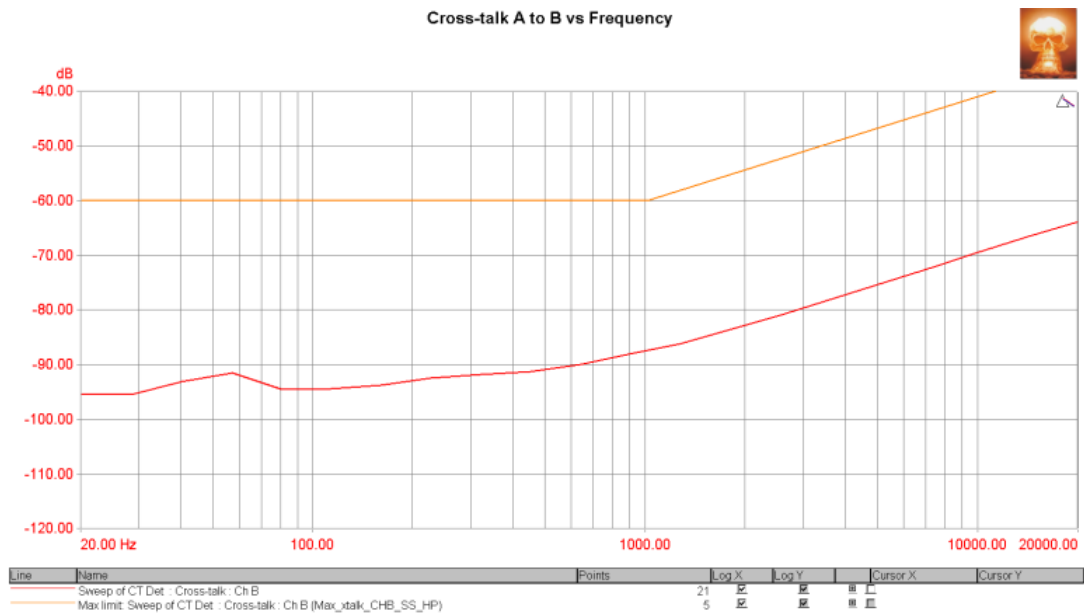
| CTA Readings | | |
|--|------------|----------|
| Cross-talk (Channel A RMS) | -88.652 dB | < -45 dB |
| Settings: Channel relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the opposite channel generator frequency | | |

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A10 Crosstalk A to B vs Freq: PASSED

Measured at 3/9/2020 11:44:22 AM

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

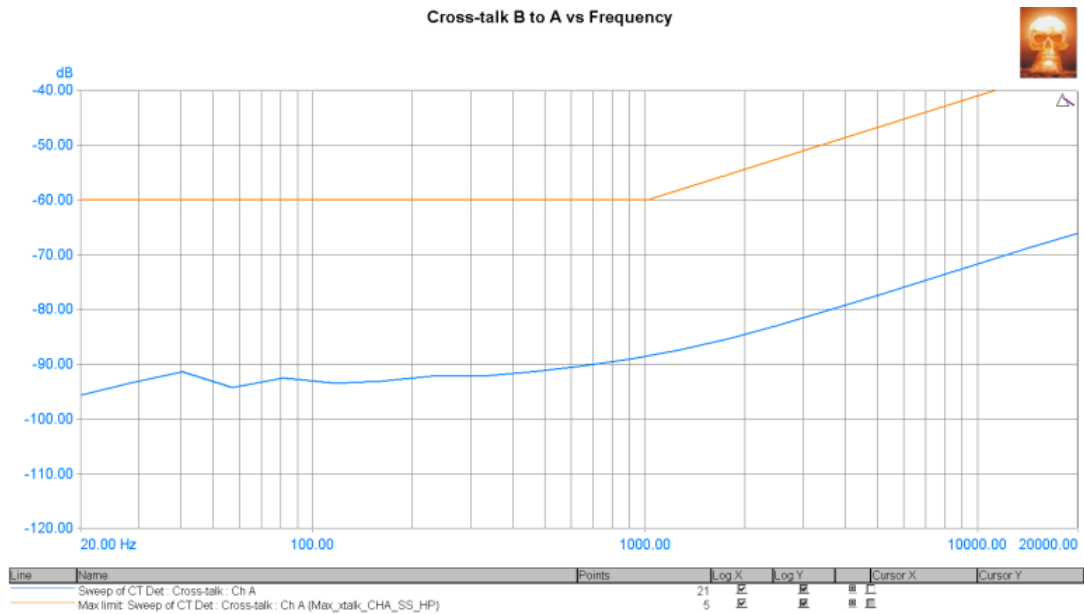


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A11 Crosstalk B to A vs Freq: PASSED

Measured at 3/9/2020 11:44:29 AM

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



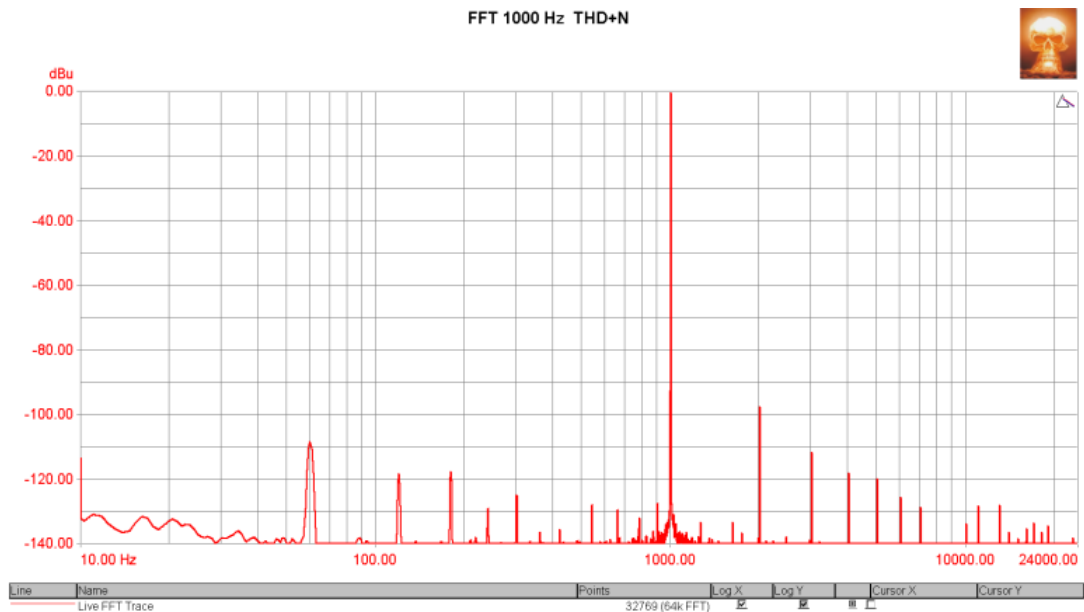
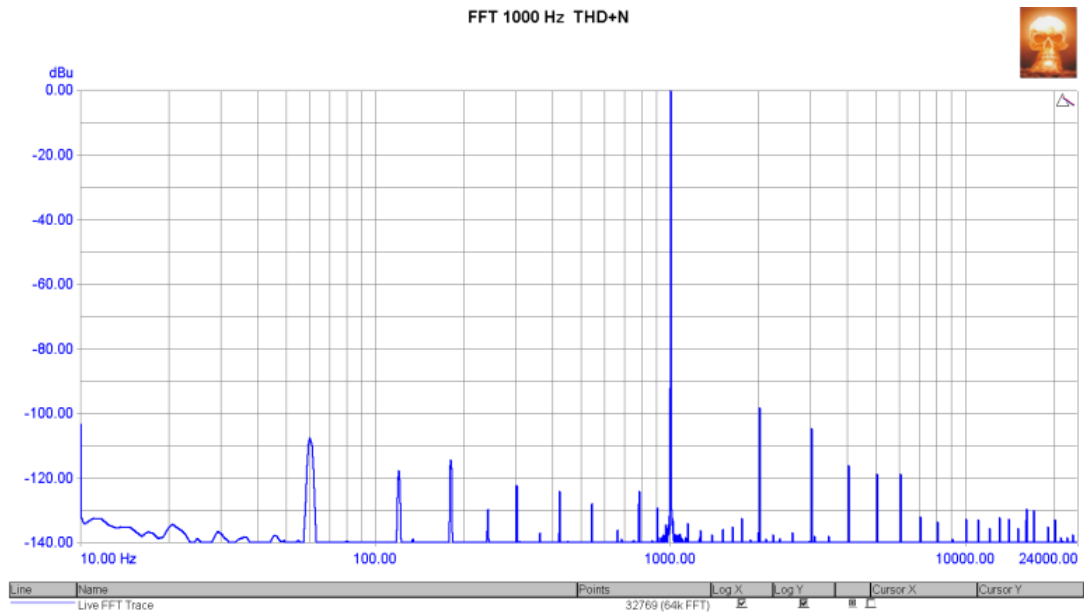
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A12 FFT 1000 Hz THD+N: PASSED

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

| Signal Analyzer Readings | | |
|-------------------------------------|------------|--------------------|
| RMS amplitude (Selected : Ch A) | 0.162 dBu | Not limit checked. |
| RMS amplitude (Non-selected : Ch A) | -0.190 dBu | Not limit checked. |

| CTA Readings | | |
|---|-----------|----------------|
| THD+N - relative (Selected : Ch ARMS) | 0.00205 % | < 5 % > 0 % |
| THD+N - relative (Non-selected : Ch ARMS) | 0.00197 % | < 5 % > 0 % |
| Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-reject filter at the input frequency | | |

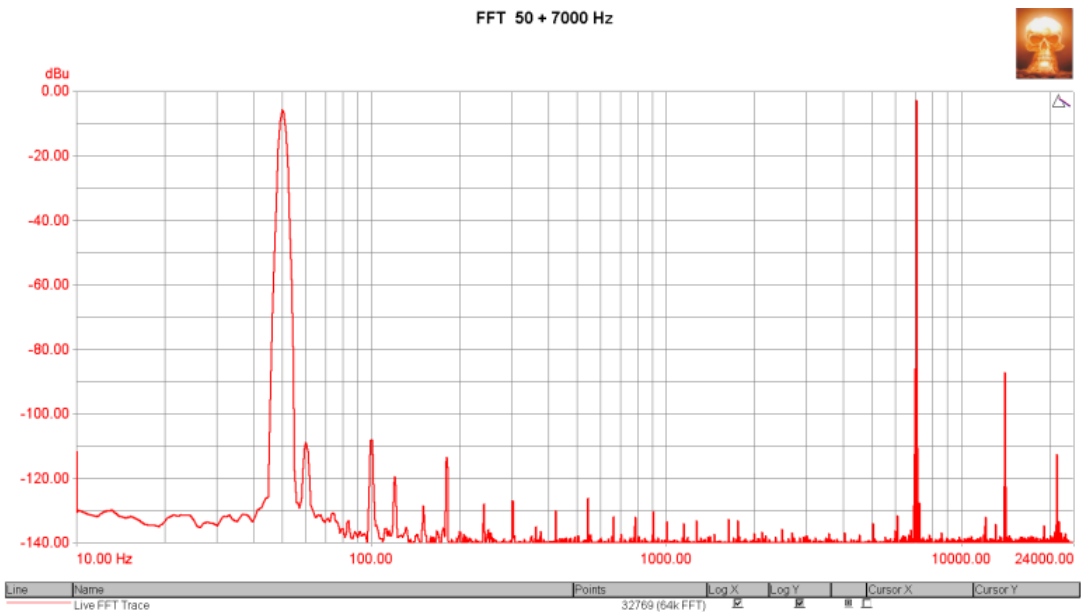
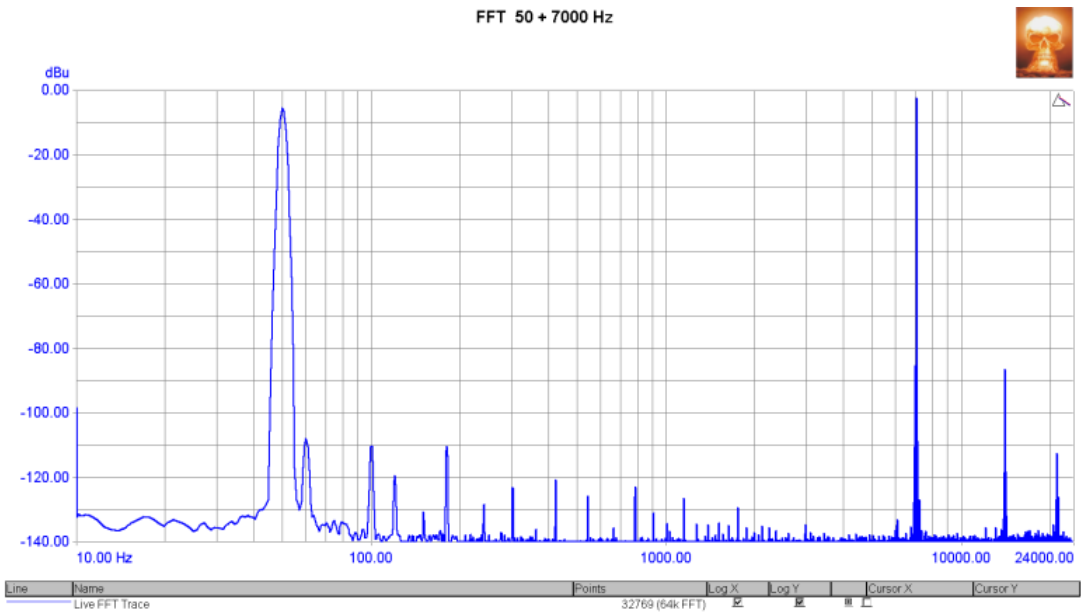


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A13 FFT 50+7000Hz: PASSED

| Generator Settings | | |
|--------------------|---|--|
| Channel A: | Twin-tone, 0 dBu at 50 Hz and 1 amplitude ratio at 7000Hz | |
| Channel B: | Twin-tone, 0 dBu at 50 Hz and 1 amplitude ratio at 7000Hz | |

| Signal Analyzer Readings | | |
|---------------------------|-----------|--------------------|
| RMS amplitude (Channel A) | 3.171 dBu | Not limit checked. |
| RMS amplitude (Channel B) | 2.814 dBu | Not limit checked. |



| FFT Detector Readings | | |
|---|-----------|----------------|
| IMD SMPTE-DIN (Channel A) | 0.00763 % | < 7 % > 0 % |
| IMD SMPTE-DIN (Channel B) | 0.00747 % | < 7 % > 0 % |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with intermodulation notch band reject | | |

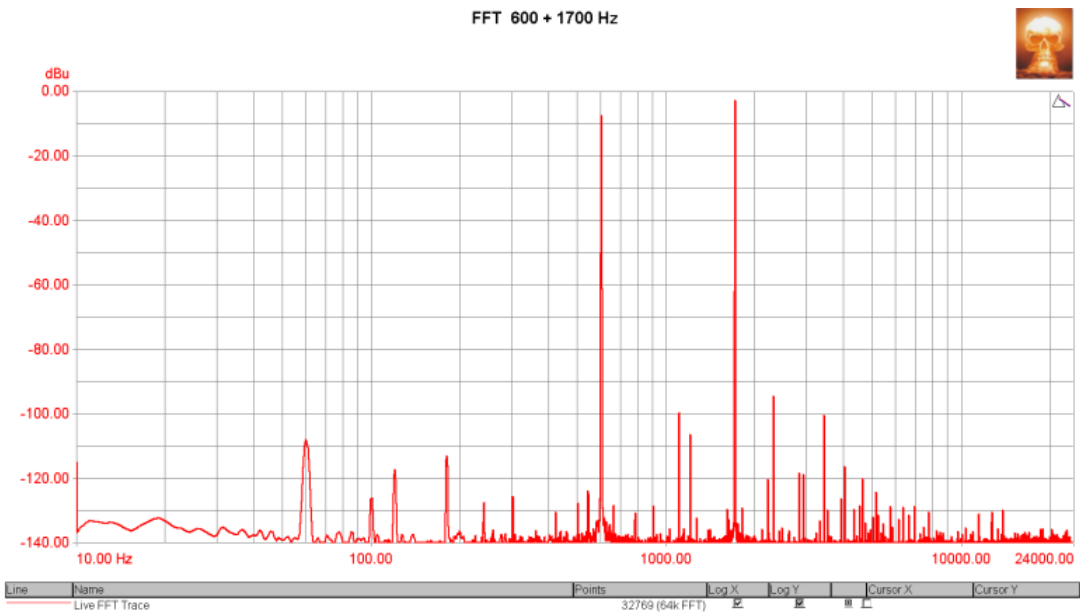
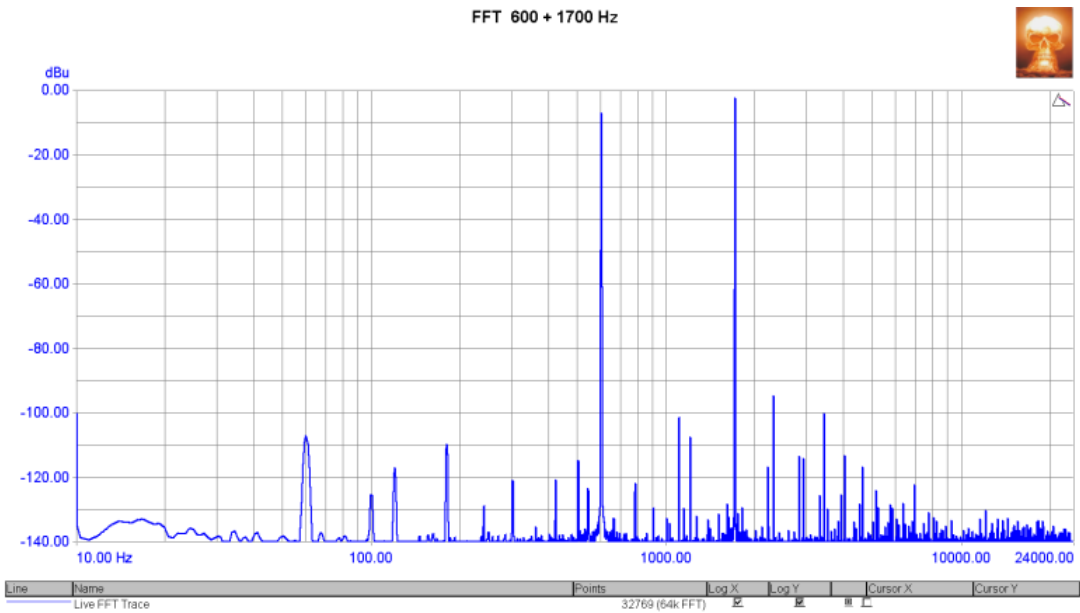
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A14 FFT 600+1700 Hz: PASSED

Measured at 3/9/2020 11:47:18 AM

| Generator Settings | |
|--------------------|--|
| Channel A: | Twin-tone, 0 dBu at 600 Hz and 1 amplitude ratio at 1700Hz |
| Channel B: | Twin-tone, 0 dBu at 600 Hz and 1 amplitude ratio at 1700Hz |

| Signal Analyzer Readings | | |
|---------------------------|-----------|--------------------|
| RMS amplitude (Channel A) | 3.152 dBu | Not limit checked. |
| RMS amplitude (Channel B) | 2.838 dBu | Not limit checked. |



| FFT Detector Readings | | |
|---|-----------|----------------|
| IMD SMPTE-DIN (Channel A) | 0.00195 % | < 7 % > 0 % |
| IMD SMPTE-DIN (Channel B) | 0.00215 % | < 7 % > 0 % |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with intermodulation notch band reject | | |

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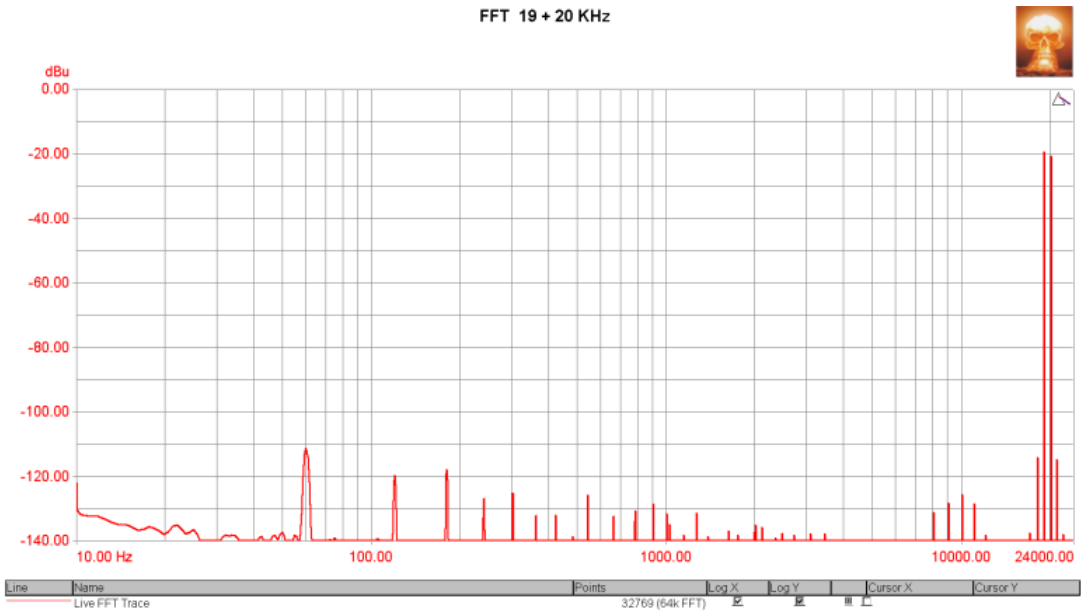
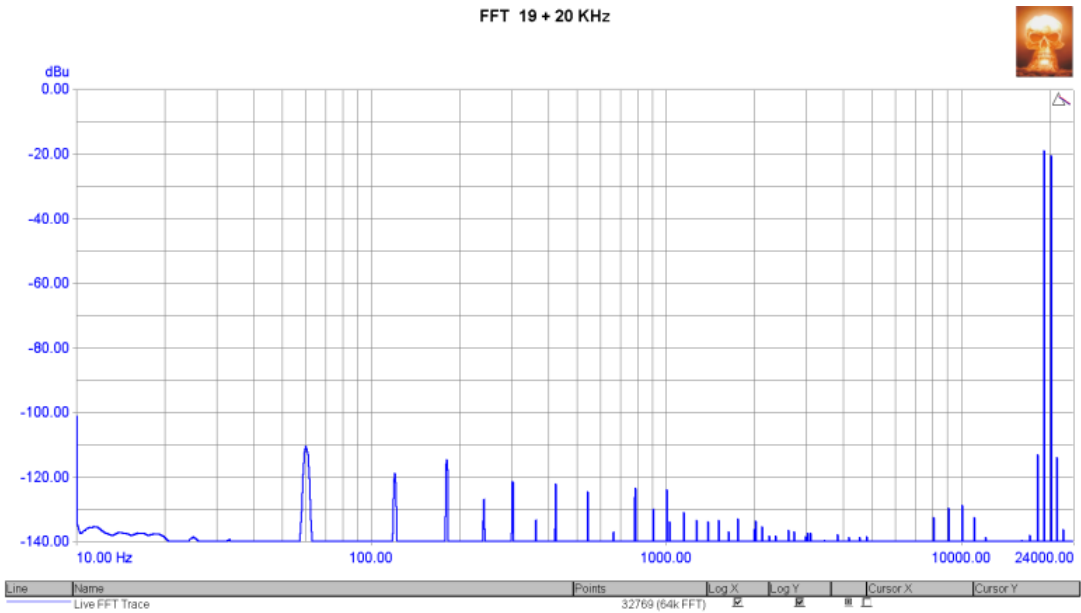
A15 FFT 19+20 KHz: PASSED

Measured at 3/9/2020 11:48:39 AM

| Generator Settings | | |
|--------------------|--|--|
| Channel A: | Twin-tone, -16 dBu at 19000 Hz and 1 amplitude ratio at 1000 Hz offset | |
| Channel B: | Twin-tone, -16 dBu at 19000 Hz and 1 amplitude ratio at 1000 Hz offset | |

| Signal Analyzer Readings | | |
|---------------------------|-------------|--------------------|
| RMS amplitude (Channel A) | -12.859 dBu | Not limit checked. |
| RMS amplitude (Channel B) | -13.213 dBu | Not limit checked. |

| CTA Readings | | |
|---|-----------|-------|
| IMD CCIF (Channel A RMS) | 0.00053 % | < 1 % |
| IMD CCIF (Channel B RMS) | 0.00022 % | < 1 % |
| Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the intermodulation difference frequency | | |



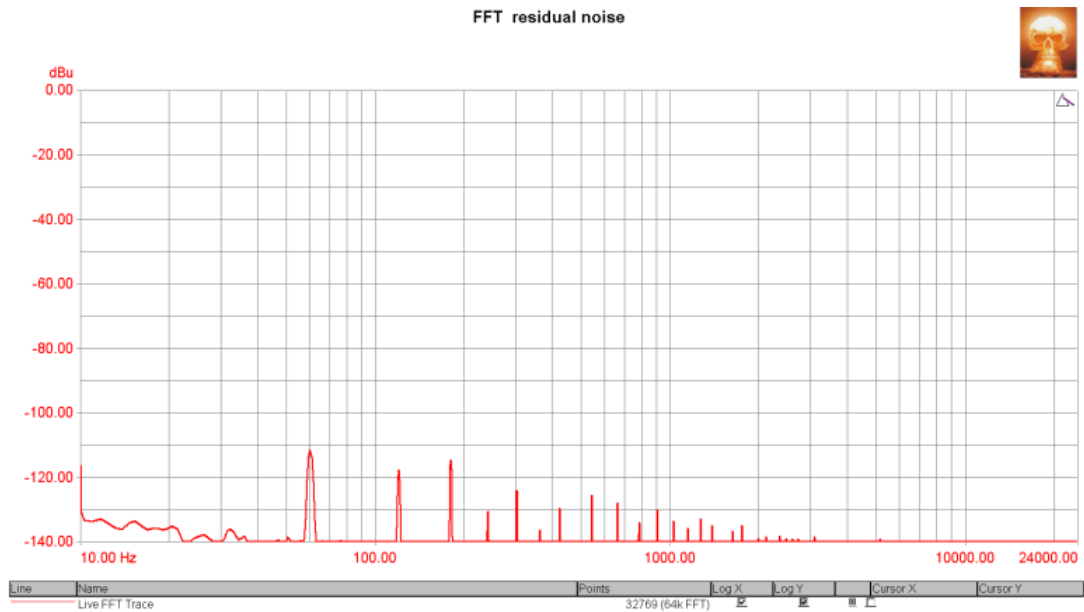
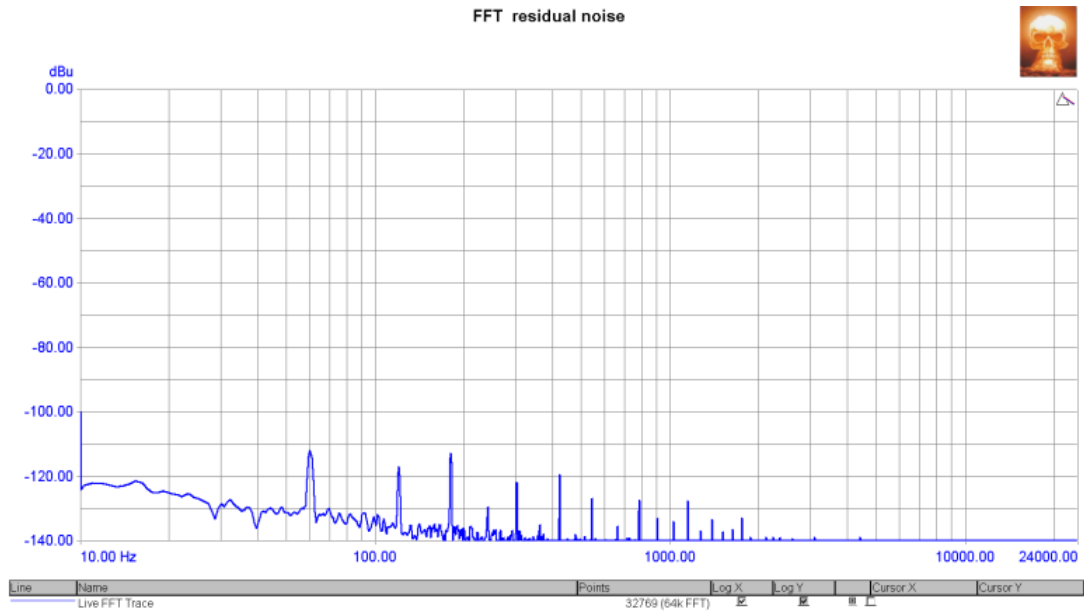
| FFT Detector Readings | | |
|---|-----------|-------|
| IMD CCIF (Channel A) | 0.00034 % | < 1 % |
| IMD CCIF (Channel B) | 0.00016 % | < 1 % |
| FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-pass filter at the intermodulation difference frequency | | |

A16 FFT residual noise: PASSED

Measured at 3/9/2020 11:50:02 AM

| Generator Settings | | |
|--------------------|--|-----|
| Channel A: | | Off |
| Channel B: | | Off |

| Signal Analyzer Readings | | |
|---------------------------|-------------|--------------------|
| RMS amplitude (Channel A) | -95.510 dBu | Not limit checked. |
| RMS amplitude (Channel B) | -96.498 dBu | Not limit checked. |



| FFT Detector Readings | | |
|--|--------------|-------------------------|
| Noise (residual) (Channel A) | -102.574 dBu | < -80 dBu > -140 dBu |
| Noise (residual) (Channel B) | -103.578 dBu | < -80 dBu > -140 dBu |
| FFTD 1 Settings: 22 Hz - 22 KHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic | | |