

Vali2+ 6bz7a 300R 0dBu STD TESTS UNBAL 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, (X) = Test has failed to run or has not completed, [N] = Test passes but is not required, [X] = 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 11/20/2020 12:08:44 PM

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)	0.061 dBu	< 3 dBu > -3 dBu
RMS amplitude (Channel B)	-0.075 dBu	< 3 dBu > -3 dBu
Inter-channel phase	-0.05 °	< 10 ° > -10 °

CTA Readings		
Gain (Channel A RMS)	0.061 dB	< 3 dB > -3 dB
Gain (Channel B RMS)	-0.075 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		

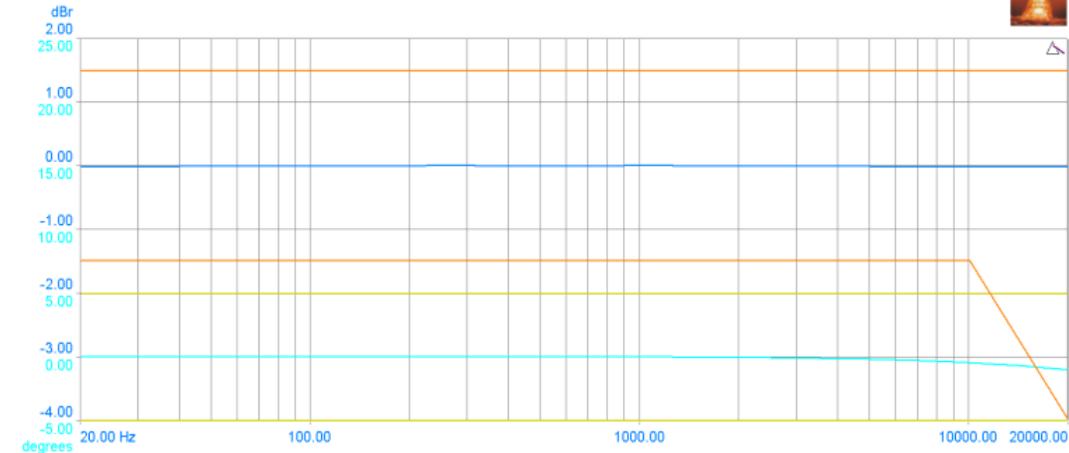
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A02 Ampl, Phase vs Freq: PASSED

Measured at 11/20/2020 12:08:47 PM

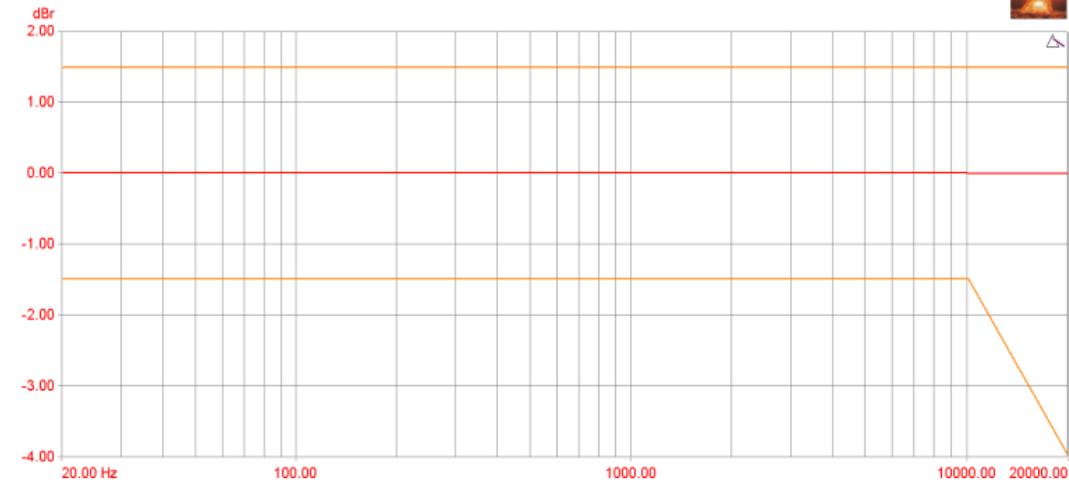
Generator Settings	
Channel A:	sine, -3 dBFS at 1000 Hz
Channel B:	sine, -3 dBFS at 1000 Hz

Frequency Response and Inter-channel Phase



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
1	Sweep of Ch A RMS ampl	21	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Max limit: Sweep of Ch A RMS ampl	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Min limit: Sweep of Ch A RMS ampl	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Sweep of Phase	21	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Max limit: Sweep of Phase	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Min limit: Sweep of Phase	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Frequency Response and Inter-channel Phase



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
1	Sweep of Ch B RMS ampl	21	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Max limit: Sweep of Ch B RMS ampl	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Min limit: Sweep of Ch B RMS ampl	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

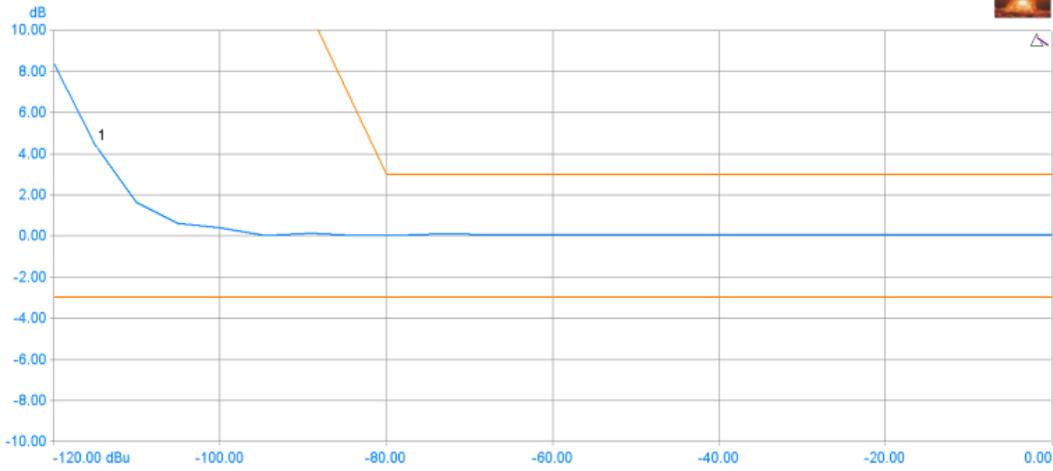
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A03 Gain vs Ampl: PASSED

Measured at 11/20/2020 12:08:53 PM

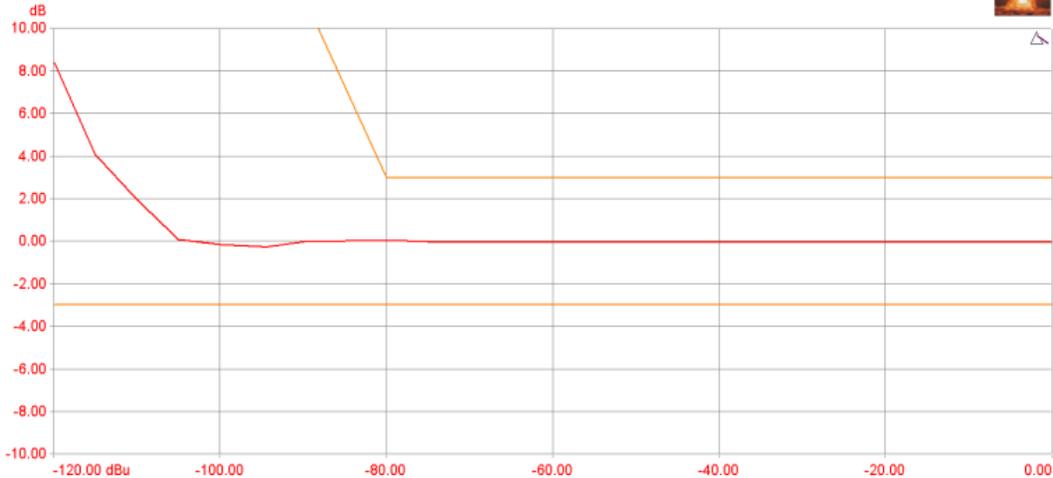
Generator Settings	
Channel A:	sine, 0 dBu at 1000 Hz
Channel B:	sine, 0 dBu at 1000 Hz

Gain vs Amplitude



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

Gain vs Amplitude



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
1	Sweep of CT Det.: Gain: Ch B	25	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	Max limit: Sweep of CT Det.: Gain: Ch B	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
	Min limit: Sweep of CT Det.: Gain: Ch B	3	<input checked="" type="checkbox"/>	<input checked="" 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 11/20/2020 12:09:05 PM

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)	0.062 dBu	Not limit checked.
RMS amplitude (Channel B)	-0.072 dBu	Not limit checked.

CTA Readings		
THD+N - relative (Channel A RMS)	0.21802 %	< 200 % > 0 %
THD+N - relative (Channel B RMS)	0.21259 %	< 200 % > 0 %

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

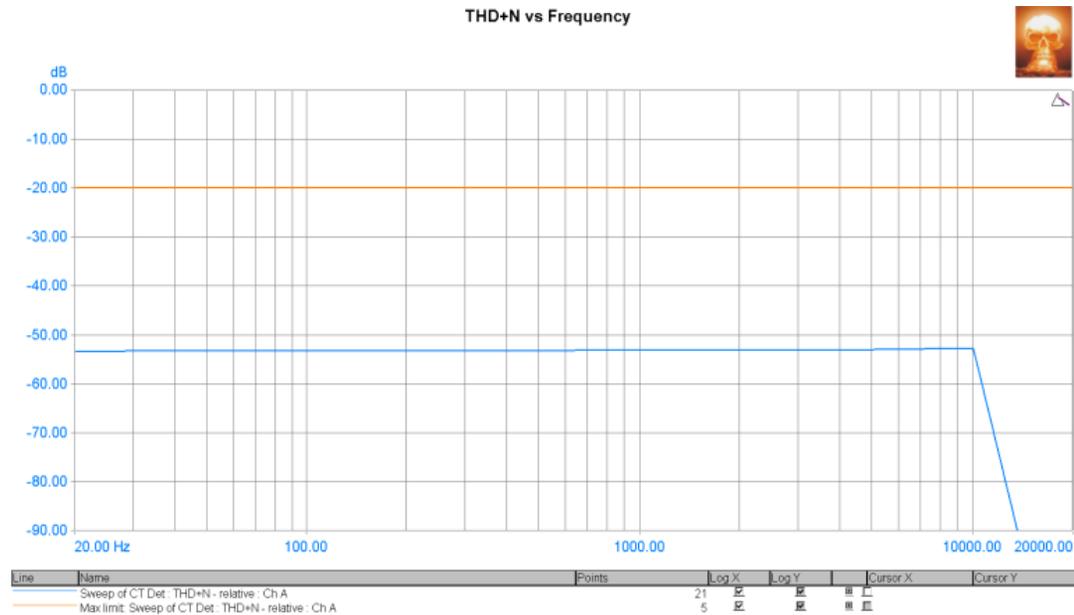
FFT Detector Readings		
THD (Channel A)	0.23315 %	< 200 % > 0 %
THD (Channel B)	0.22706 %	< 200 % > 0 %
FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filters from the 2nd to 10th harmonics		
2nd Harmonic Distortion (Channel A)	0.23299 %	< 200 % > 0 %
2nd Harmonic Distortion (Channel B)	0.22692 %	< 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)	0.00843 %	< 200 % > 0 %
3rd Harmonic Distortion (Channel B)	0.00798 %	< 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)	0.00077 %	Not limit checked.
4th Harmonic Distortion (Channel B)	0.00067 %	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)	0.00018 %	Not limit checked.
5th Harmonic Distortion (Channel B)	0.00016 %	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)	0.00126 %	< 0.05 % > 0 %
4+HD + N (Channel B)	0.00135 %	< 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)	0.00014 %	< 0.017783 % > 0 %
Hum (Channel B)	0.00055 %	< 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)	0.00096 %	< 0.017783 % > 0 %
Noise (residual) (Channel B)	0.00116 %	< 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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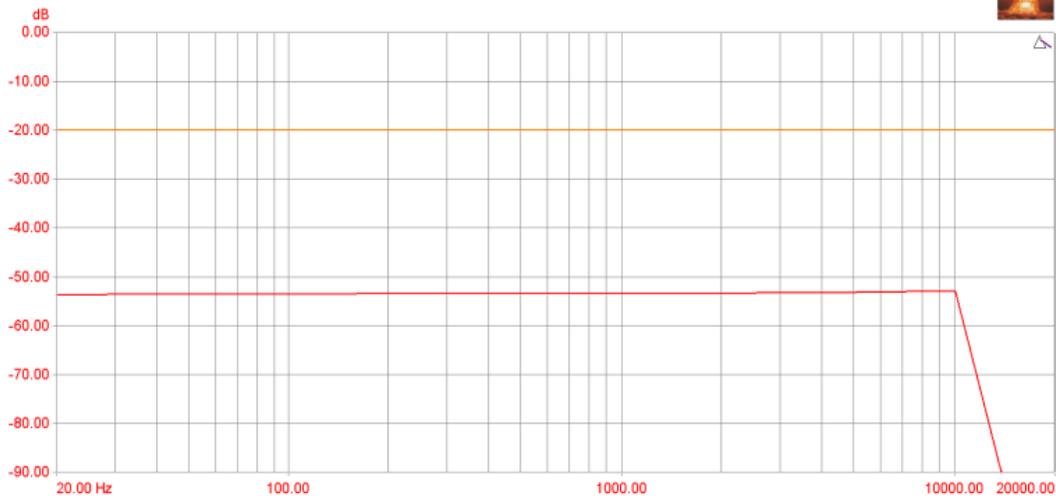
A05 THD+N vs Freq: PASSED

Measured at 11/20/2020 12:10:08 PM

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



THD+N vs Frequency



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
1	Sweep of CT Det : THD+N - relative : Ch B	21	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Max limit: Sweep of CT Det : THD+N - relative : Ch B	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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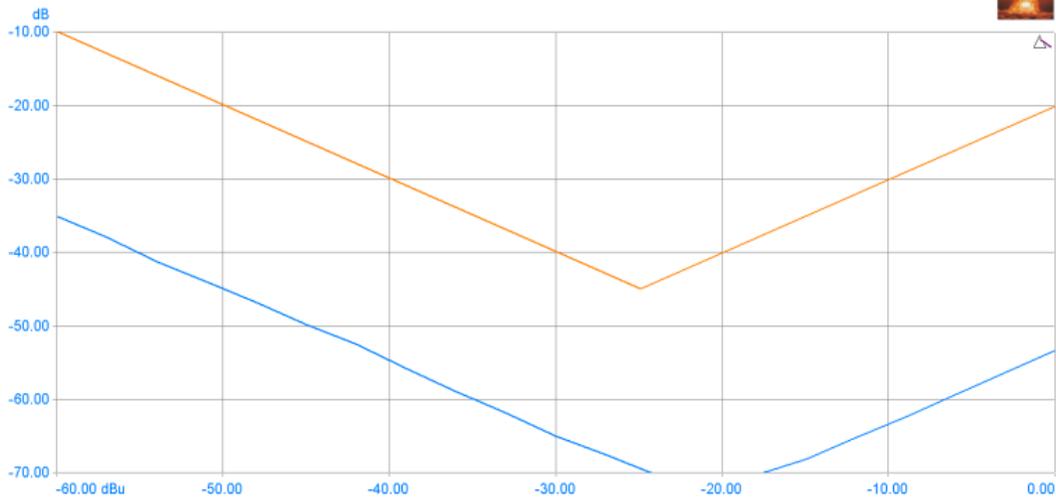
A06 THD+N vs Ampl: PASSED

Measured at 11/20/2020 12:10:15 PM

Generator Settings

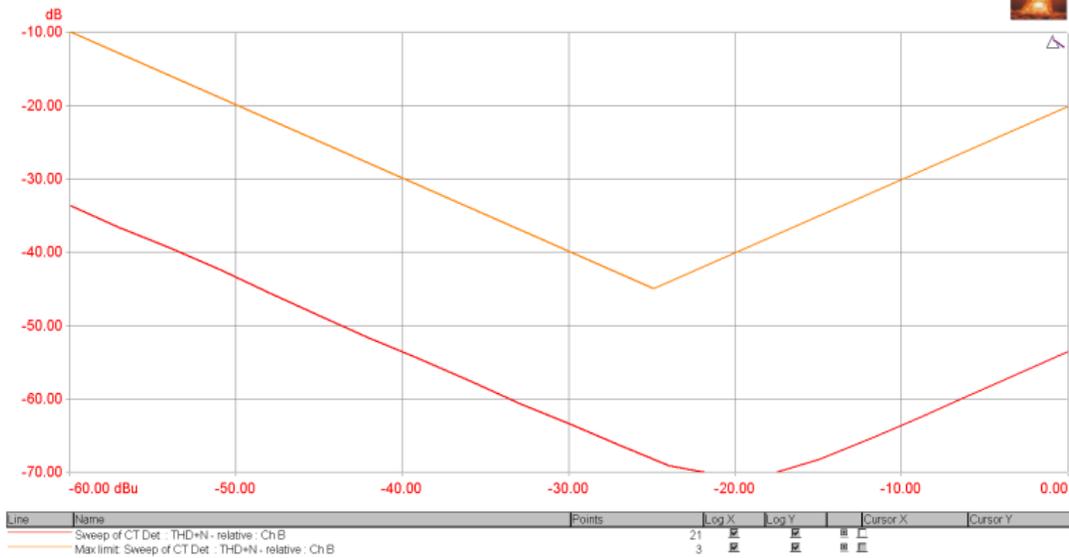
Channel A:	sine, 0 dBu at 1000 Hz
Channel B:	sine, 0 dBu at 1000 Hz

THD+N vs Amplitude



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
1	Sweep of CT Det : THD+N - relative : Ch A	21	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Max limit: Sweep of CT Det : THD+N - relative : Ch A	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

THD+N vs Amplitude



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A07 Noise, SNR: PASSED

Measured at 11/20/2020 12:10:24 PM

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)	-112.152 dBr	< 200 dBr > -200 dBr
Noise (unweighted) (Channel B)	-111.518 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)	-112.265 dBr	< 200 dBr > -200 dBr
SNR (Channel B)	-111.682 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 11/20/2020 12:10:26 PM

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)	-81.892 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 11/20/2020 12:10:29 PM

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

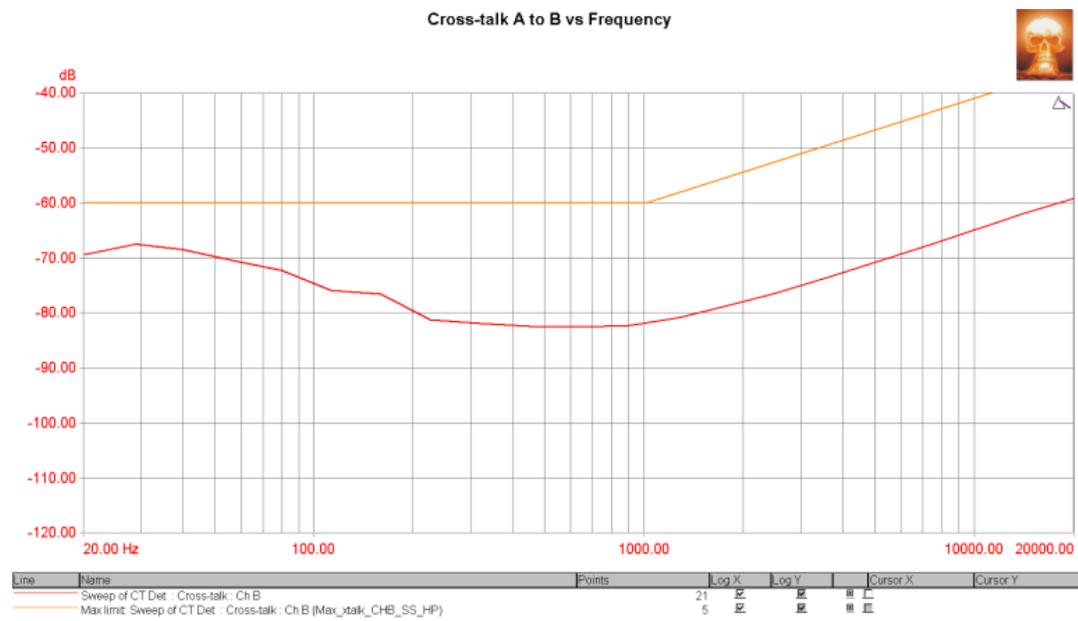
CTA Readings		
Cross-talk (Channel A RMS)	-77.433 dB	< -45 dB
Settings: Channel relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the opposite channel generator frequency		

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A10 Crosstalk A to B vs Freq: PASSED

Measured at 11/20/2020 12:10:31 PM

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

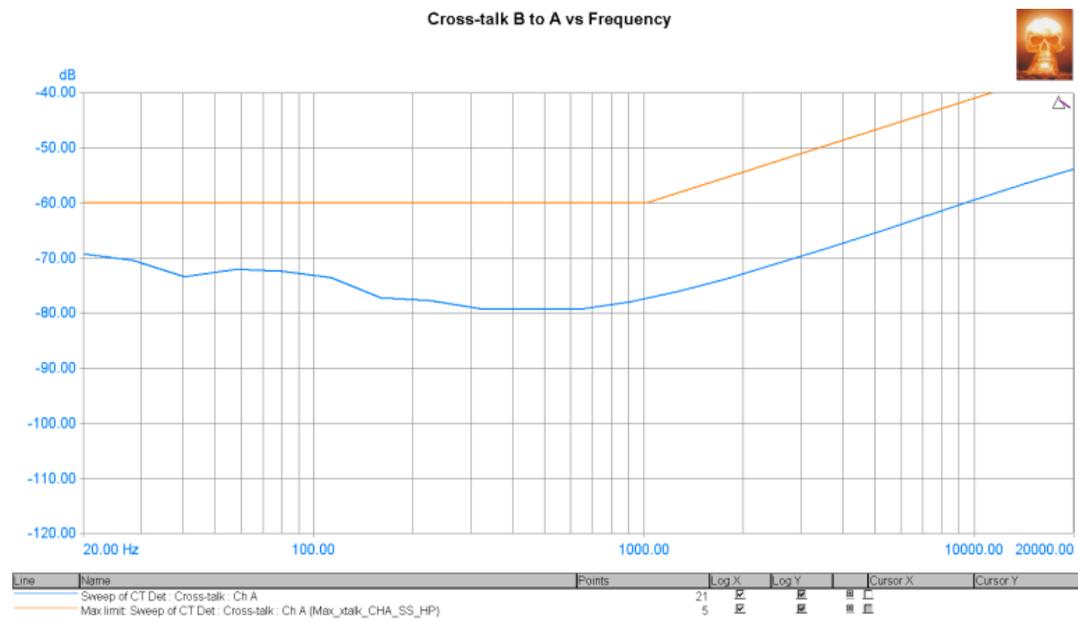


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A11 Crosstalk B to A vs Freq: PASSED

Measured at 11/20/2020 12:10:38 PM

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



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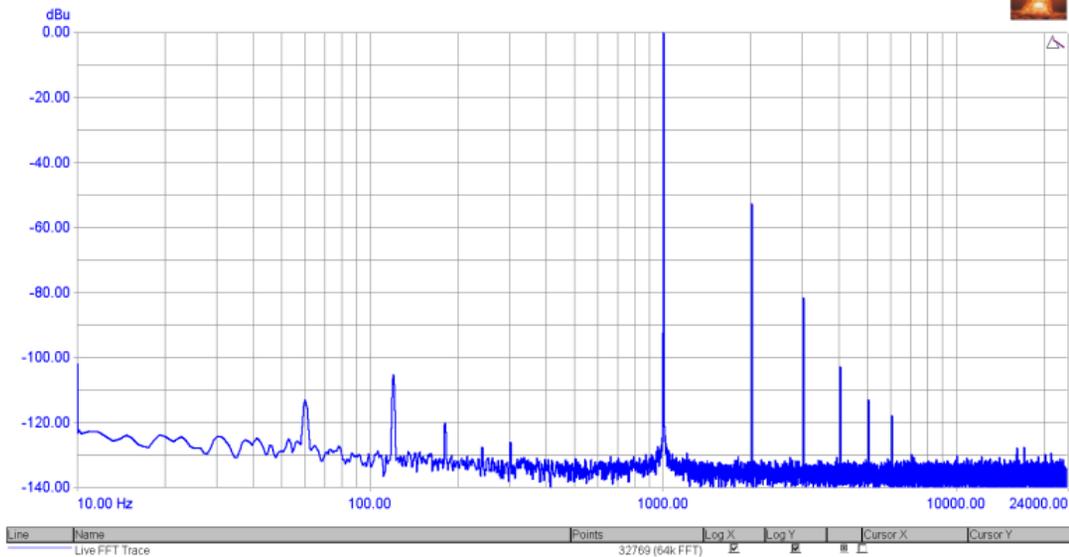
A12 FFT 1000 Hz THD+N: PASSED

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

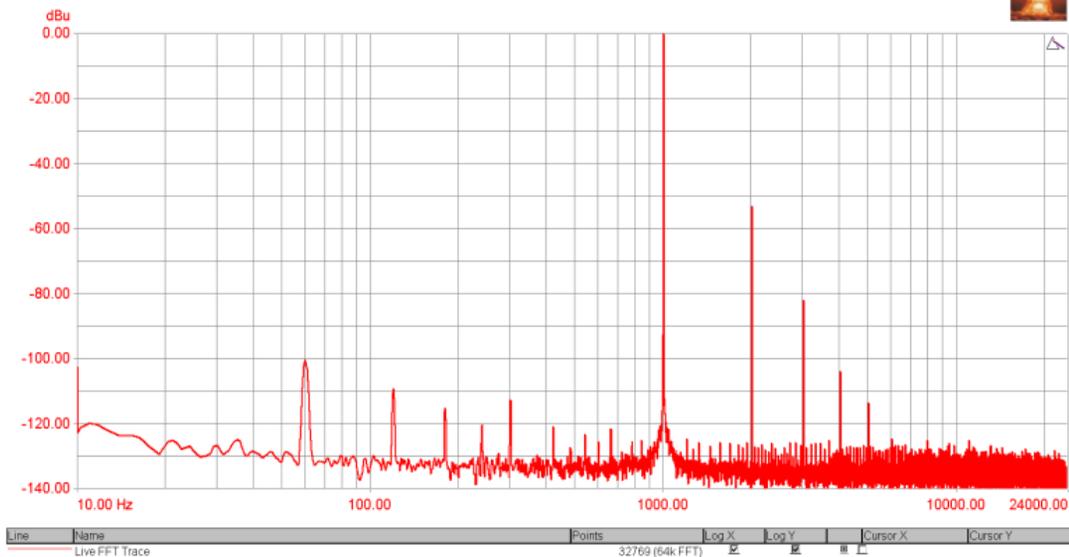
Signal Analyzer Readings		
RMS amplitude (Selected : Ch A)	0.063 dBu	Not limit checked.
RMS amplitude (Non-selected : Ch A)	-0.072 dBu	Not limit checked.

CTA Readings		
THD+N - relative (Selected : Ch ARMS)	0.21625 %	< 5 % > 0 %
THD+N - relative (Non-selected : Ch ARMS)	0.21057 %	< 5 % > 0 %
Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-reject filter at the input frequency		

FFT 1000 Hz THD+N



FFT 1000 Hz THD+N



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A13 FFT 50+7000Hz: PASSED

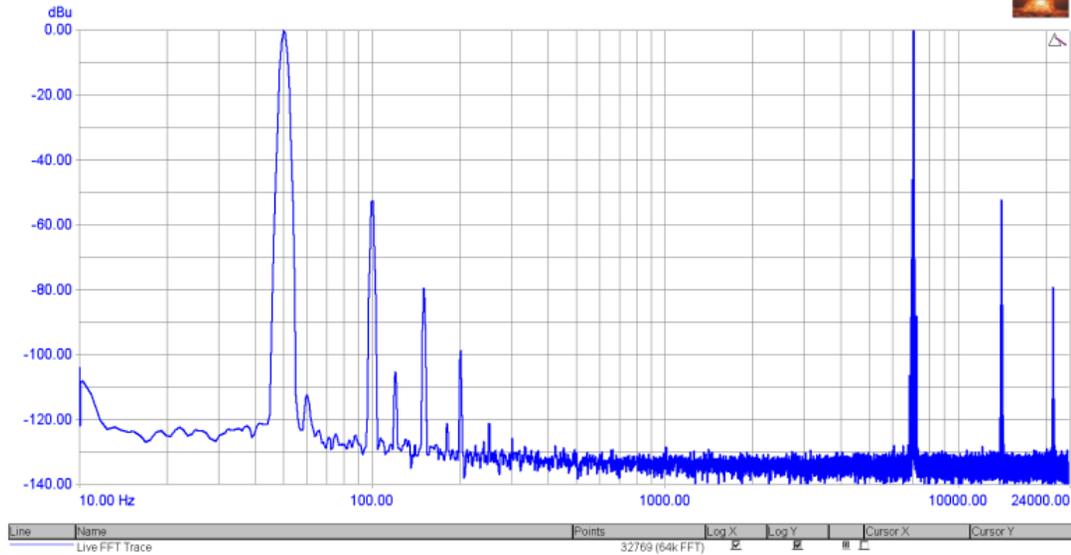
Generator Settings

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

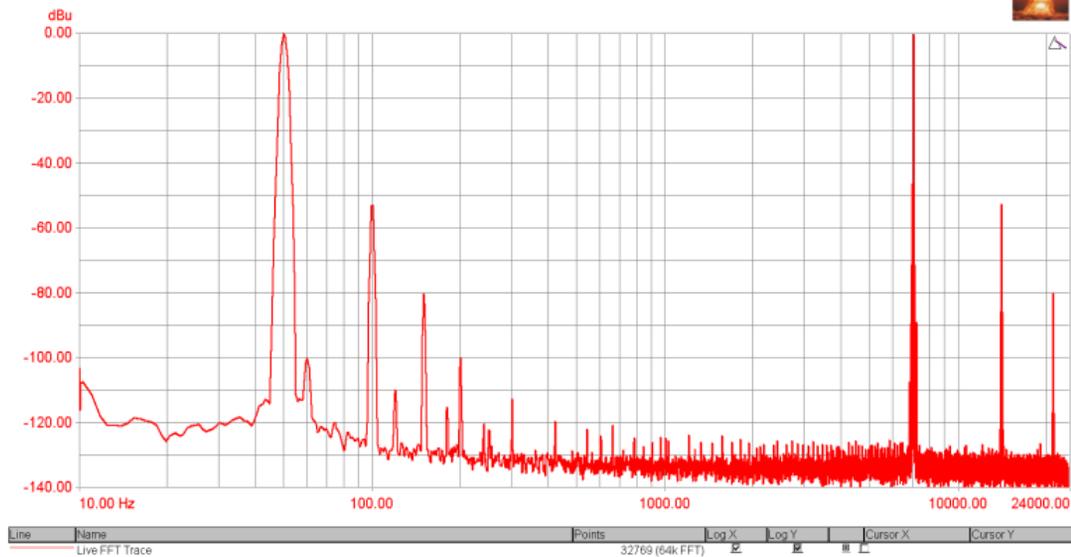
Signal Analyzer Readings

RMS amplitude (Channel A) **3.066 dBu** Not limit checked.
 RMS amplitude (Channel B) **2.923 dBu** Not limit checked.

FFT 50 + 7000 Hz



FFT 50 + 7000 Hz



FFT Detector Readings

IMD SMPTE-DIN (Channel A) **0.48123 %** < 7 %
 IMD SMPTE-DIN (Channel B) **0.46727 %** > 0 %

FFT 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with intermodulation notch band reject

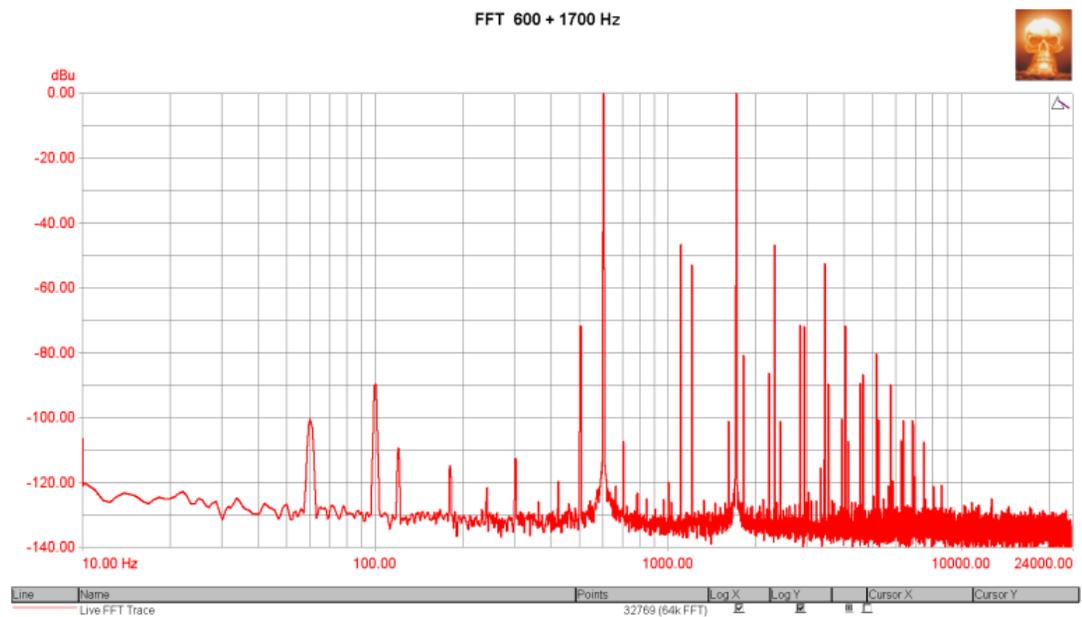
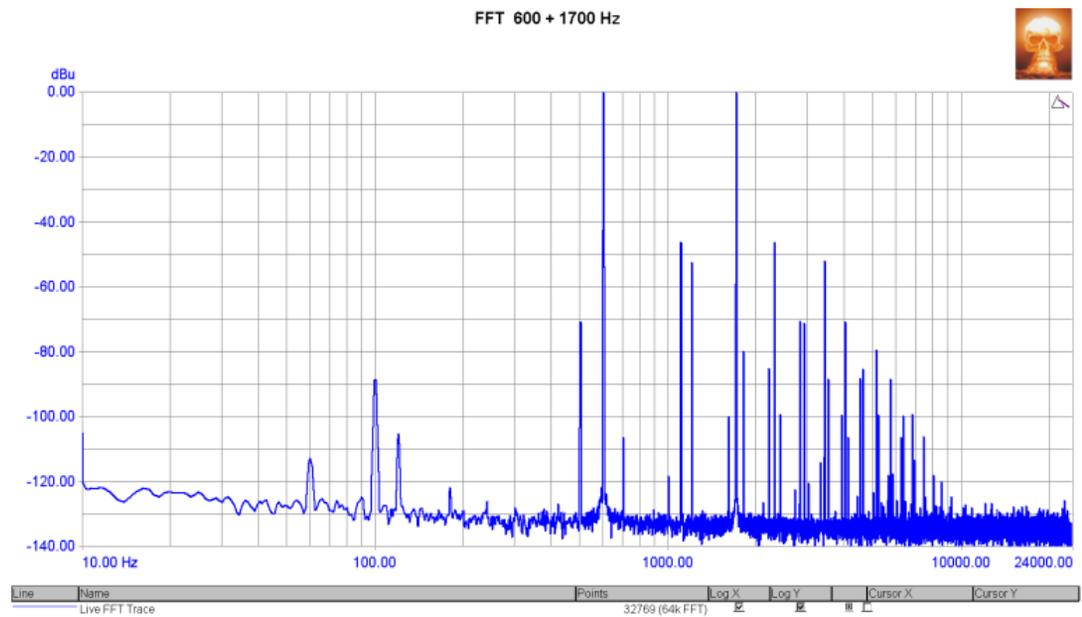
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A14 FFT 600+1700 Hz: PASSED

Measured at 11/20/2020 12:11:31 PM

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)	3.052 dBu	Not limit checked.
RMS amplitude (Channel B)	2.930 dBu	Not limit checked.



FFT Detector Readings		
IMD SMPTE-DIN (Channel A)	0.50646 %	< 7 % > 0 %
IMD SMPTE-DIN (Channel B)	0.49172 %	< 7 % > 0 %
FFT1 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 11/20/2020 12:11:53 PM

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

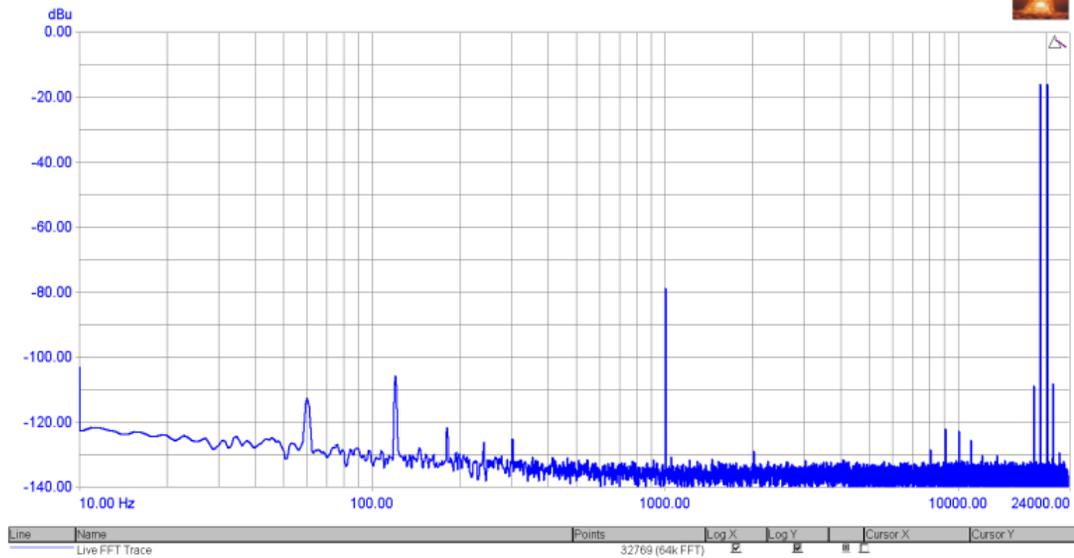
Signal Analyzer Readings

RMS amplitude (Channel A) **-12.988 dBu** Not limit checked.
 RMS amplitude (Channel B) **-13.135 dBu** Not limit checked.

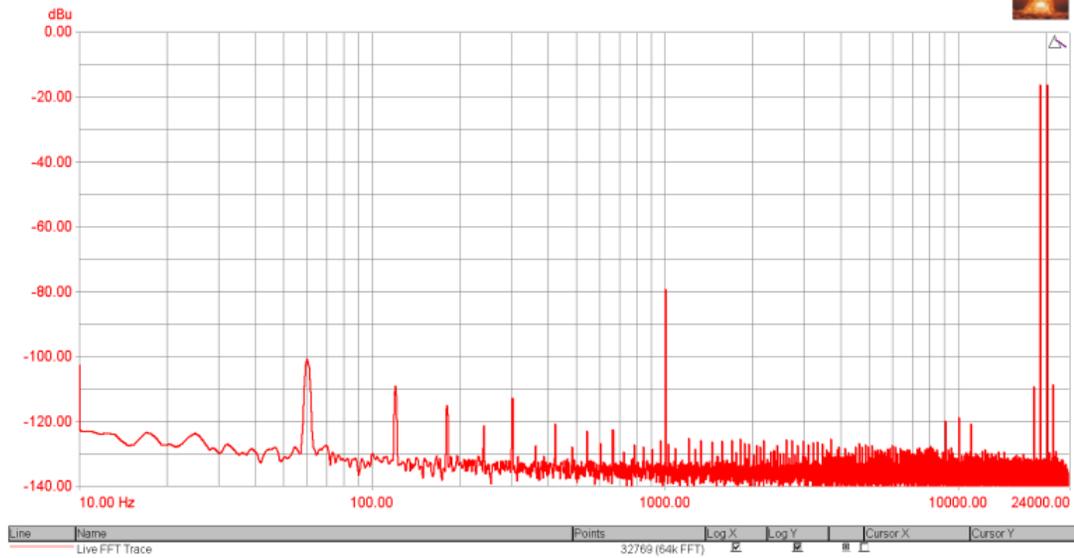
CTA Readings

IMD CCIF (Channel A RMS) **0.05237 %** < 1 %
 IMD CCIF (Channel B RMS) **0.05053 %** < 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) **0.05194 %** < 1 %
 IMD CCIF (Channel B) **0.05045 %** < 1 %
 FFT 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-pass filter at the intermodulation difference frequency

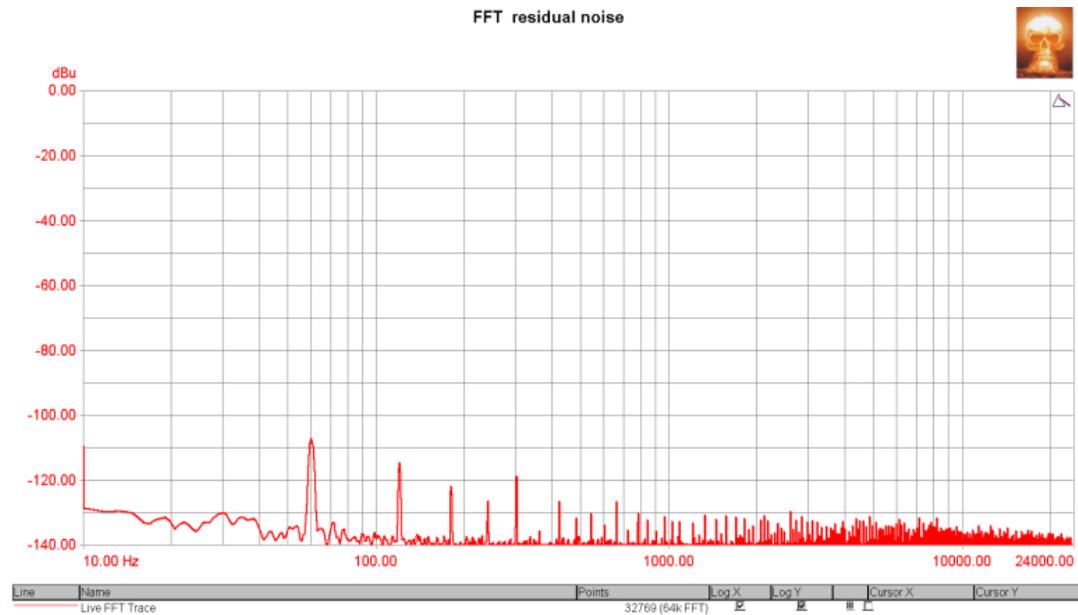
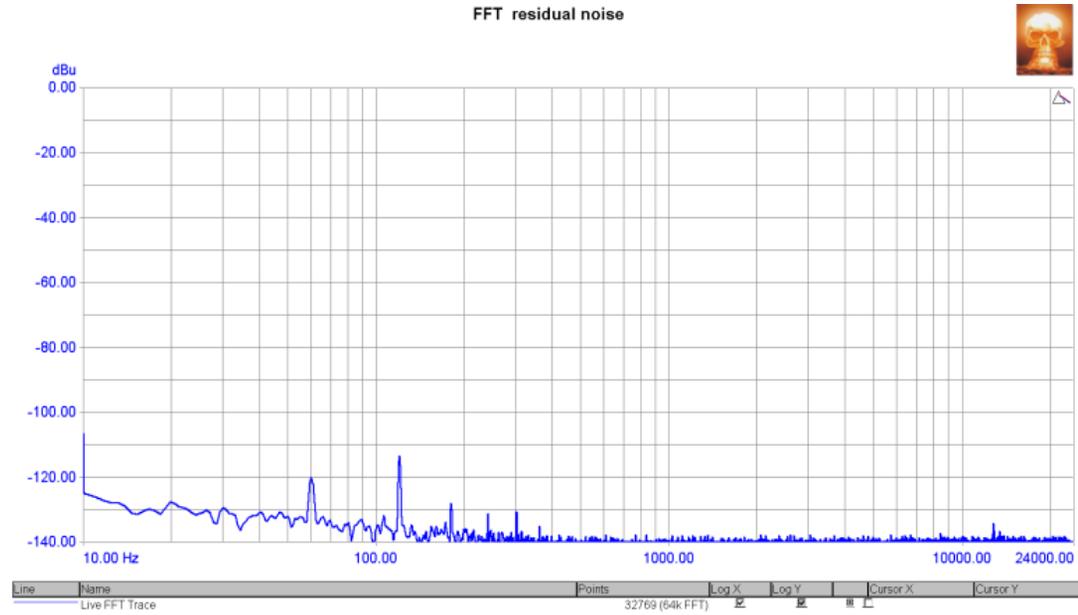
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A16 FFT residual noise: PASSED

Measured at 11/20/2020 12:12:17 PM

Generator Settings	
Channel A:	Off
Channel B:	Off

Signal Analyzer Readings		
RMS amplitude (Channel A)	-93.774 dBu	Not limit checked.
RMS amplitude (Channel B)	-93.155 dBu	Not limit checked.



FFT Detector Readings		
Noise (residual) (Channel A)	-100.919 dBu	< -80 dBu > -140 dBu
Noise (residual) (Channel B)	-99.743 dBu	< -80 dBu > -140 dBu

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