

SW51+ 300R low Z 0dBu 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, [✓] = Test passes but is not required, [✗] = Test fails but is not required, ? = Test is required but has not been run.
- = Test is not required.

[Back to top](#)

A01 Ampl, Phase, Gain: PASSED

Measured at 9/29/2019 8:17:13 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)	-0.234 dBu	< 3 dBu > -3 dBu
RMS amplitude (Channel B)	0.226 dBu	< 3 dBu > -3 dBu
Inter-channel phase	-0.11 °	< 10 ° > -10 °

CTA Readings		
Gain (Channel A RMS)	-0.234 dB	< 3 dB > -3 dB
Gain (Channel B RMS)	0.225 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		

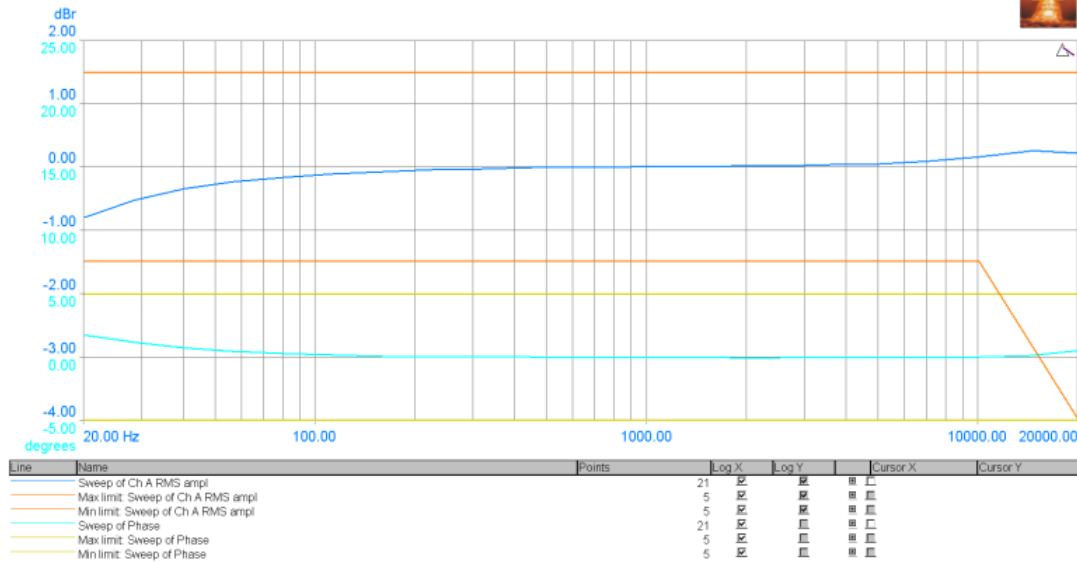
[Back to top](#)

A02 Ampl, Phase vs Freq: PASSED

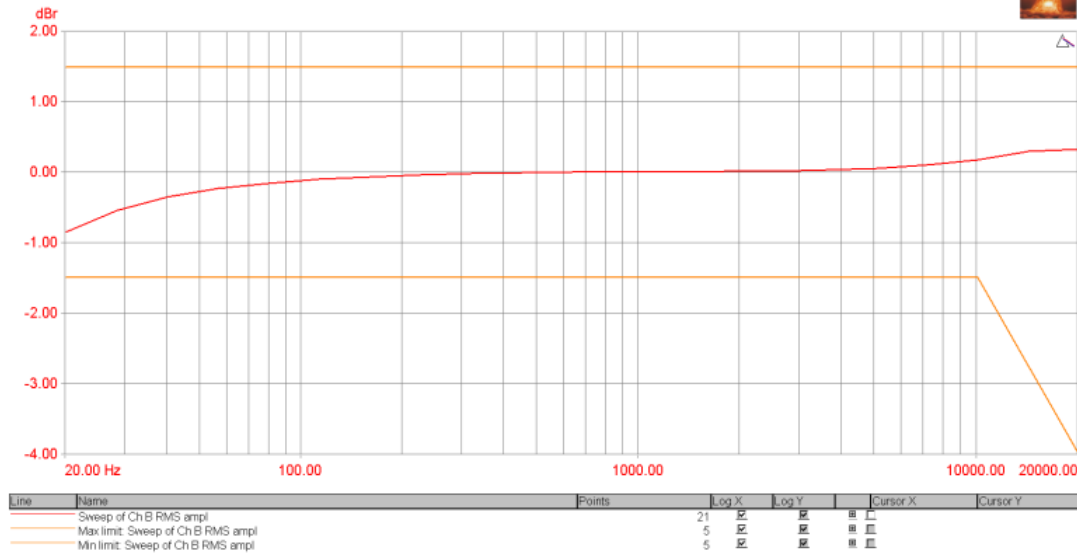
Measured at 9/29/2019 8:17:15 PM

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



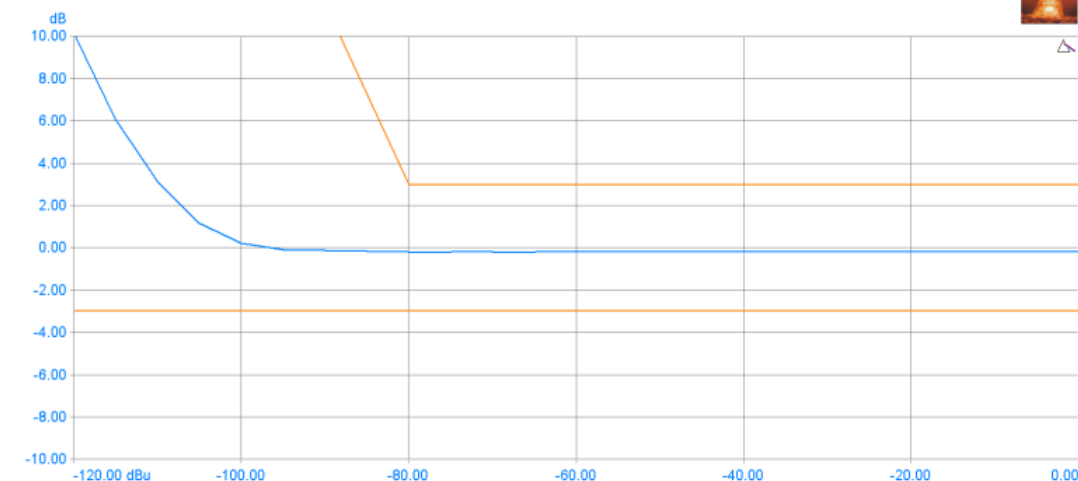
[Back to top](#)

A03 Gain vs Ampl: **PASSED**

Measured at 9/29/2019 8:17:23 PM

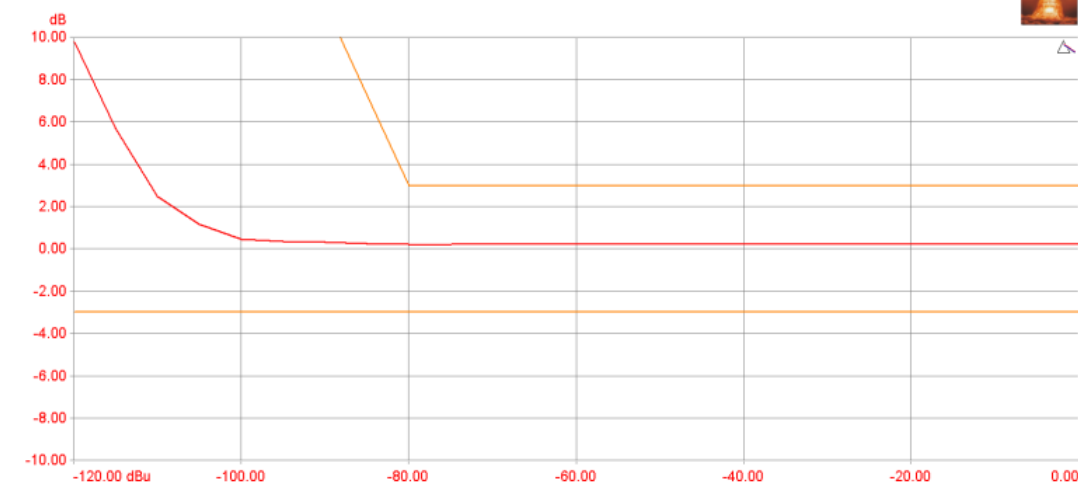
Generator Settings	
Channel A:	sine, 0 dBu at 1000 Hz
Channel B:	sine, 0 dBu at 1000 Hz

Gain vs Amplitude



Line	Name	Points	Log X	Log Y	Cursor X	Cursor Y
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
1	Sweep of CT Det.: Gain: Ch B	25	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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"/>

[Back to top](#)

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

Measured at 9/29/2019 8:17:31 PM

Generator Settings

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

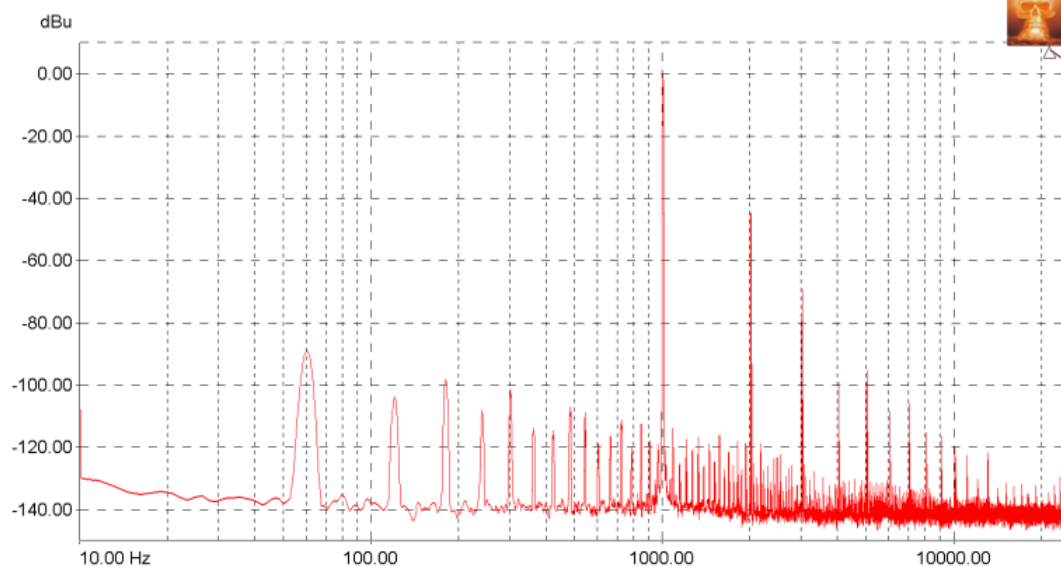
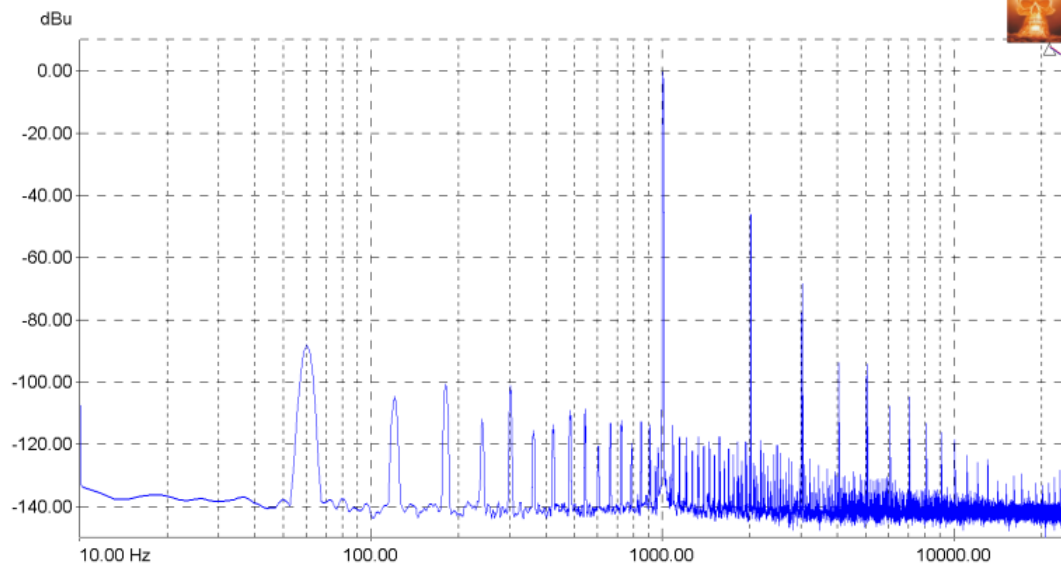
Signal Analyzer Readings

RMS amplitude (Channel A)	-0.231 dBu	Not limit checked.
RMS amplitude (Channel B)	0.229 dBu	Not limit checked.

CTA Readings

THD+N - relative (Channel A RMS)	0.46015 %	< 200 % > 0 %
THD+N - relative (Channel B RMS)	0.52502 %	< 200 % > 0 %

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



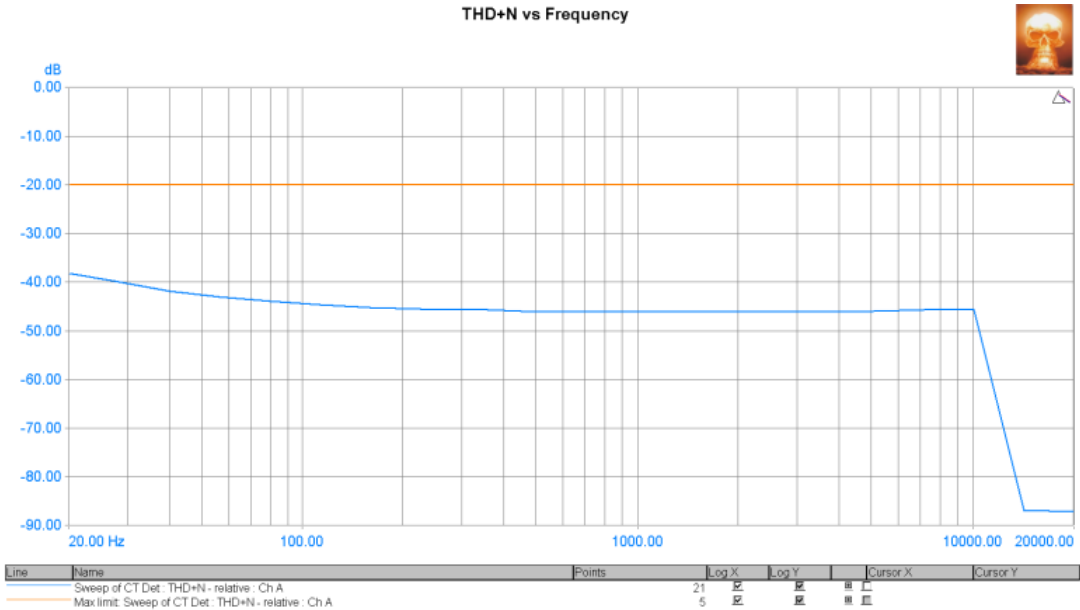
FFT Detector Readings		
THD (Channel A)	0.50719 %	< 200 % > 0 %
THD (Channel B)	0.57078 %	< 200 % > 0 %
FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-pass notch filters from the 2nd to 10th harmonics		
2nd Harmonic Distortion (Channel A)	0.50572 %	< 200 % > 0 %
2nd Harmonic Distortion (Channel B)	0.56984 %	< 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)	0.03840 %	< 200 % > 0 %
3rd Harmonic Distortion (Channel B)	0.03273 %	< 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)	0.00208 %	Not limit checked.
4th Harmonic Distortion (Channel B)	0.00110 %	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)	0.00200 %	Not limit checked.
5th Harmonic Distortion (Channel B)	0.00163 %	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)	0.00525 %	< 0.05 % > 0 %
4+HD + N (Channel B)	0.00445 %	< 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)	0.00391 %	< 0.017783 % > 0 %
Hum (Channel B)	0.00342 %	< 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)	0.00431 %	< 0.017783 % > 0 %
Noise (residual) (Channel B)	0.00394 %	< 0.017783 % > 0 %
FFTD 8 Settings: Self relative, 22 Hz - 22 kHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic		

[Back to top](#)

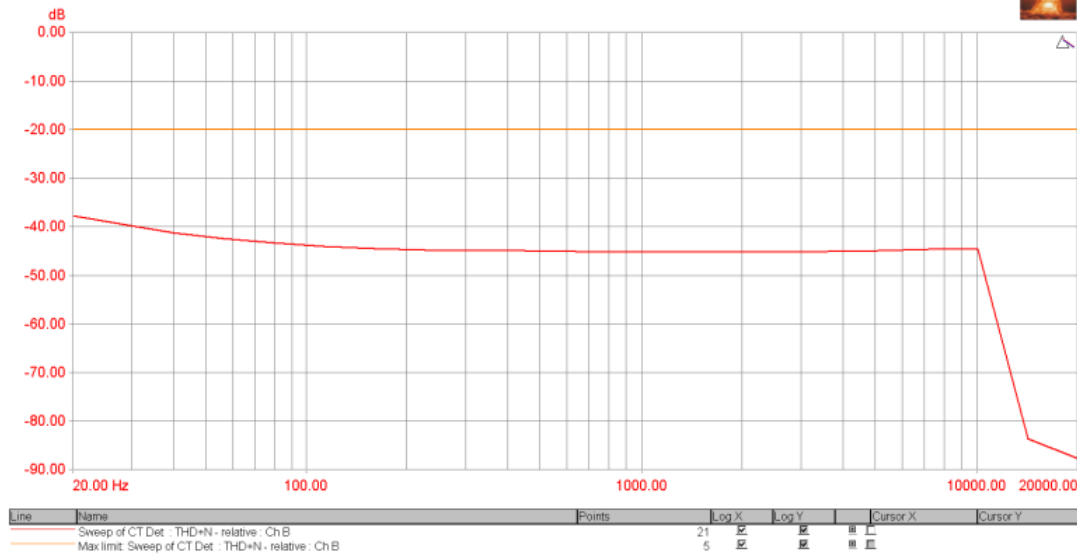
A05 THD+N vs Freq: PASSED

Measured at 9/29/2019 8:17:48 PM

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



THD+N vs Frequency



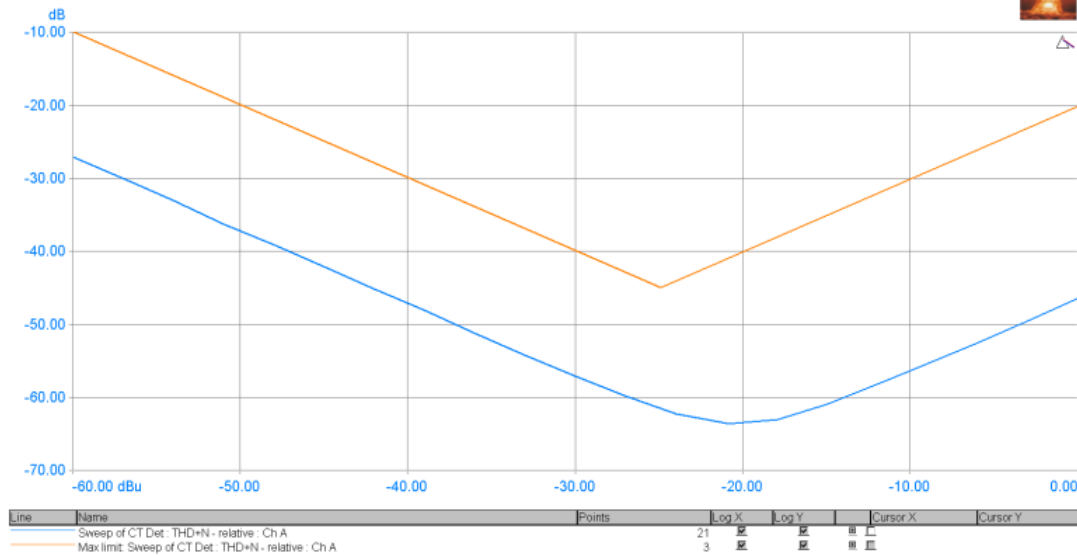
[Back to top](#)

A06 THD+N vs Ampl: PASSED

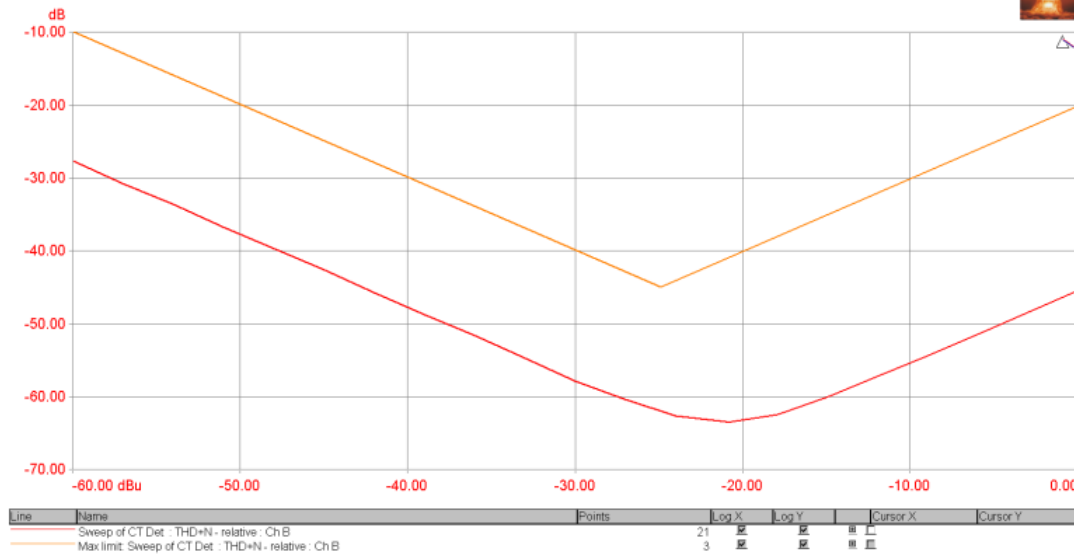
Measured at 9/29/2019 8:17:56 PM

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


[Back to top](#)

A07 Noise, SNR: PASSED

Measured at 9/29/2019 8:18:04 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)	-105.328 dBr	< 200 dBr > -200 dBr
Noise (unweighted) (Channel B)	-105.454 dBr	< 200 dBr > -200 dBr
FFT 1 Settings: 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-reject filter at the generator frequency		
SNR (Channel A)	-105.410 dBr	< 200 dBr > -200 dBr
SNR (Channel B)	-105.525 dBr	< 200 dBr > -200 dBr
FFT 2 Settings: 22 Hz - 22 kHz, unweighted with 1/3rd octave band-reject filter at the generator frequency		

[Back to top](#)

A08 Crosstalk A to B: PASSED

Measured at 9/29/2019 8:18:06 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)	-63.512 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		

[Back to top](#)

A09 Crosstalk B to A: PASSED

Measured at 9/29/2019 8:20:34 PM

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

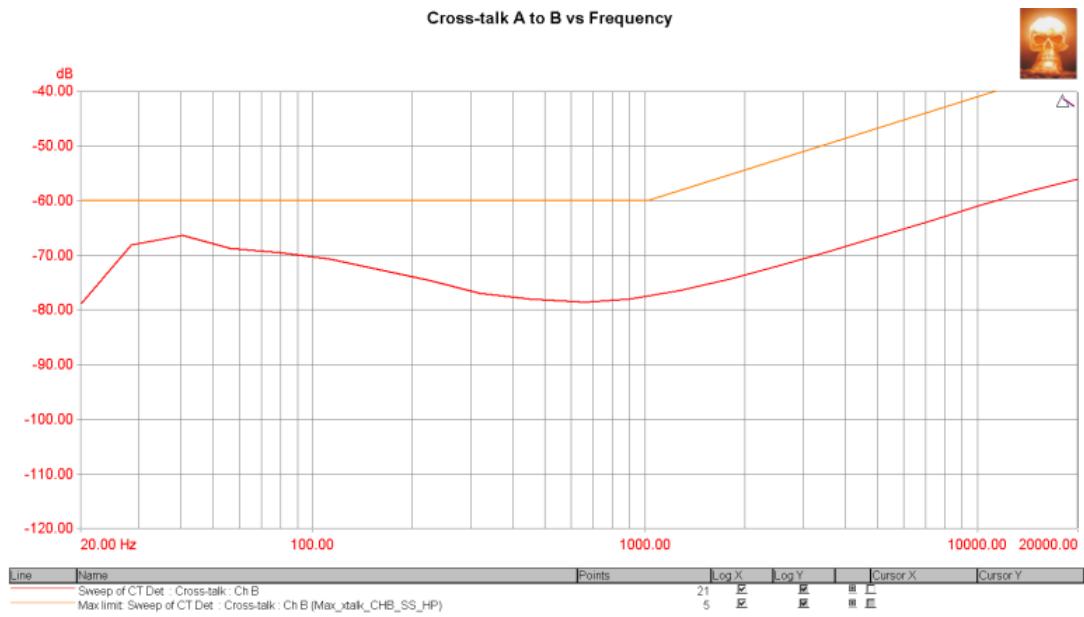
CTA Readings		
Cross-talk (Channel A RMS)	-77.932 dB	< -45 dB
Settings: Channel relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the opposite channel generator frequency		

[Back to top](#)

A10 Crosstalk A to B vs Freq: PASSED

Measured at 9/29/2019 8:20:51 PM

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

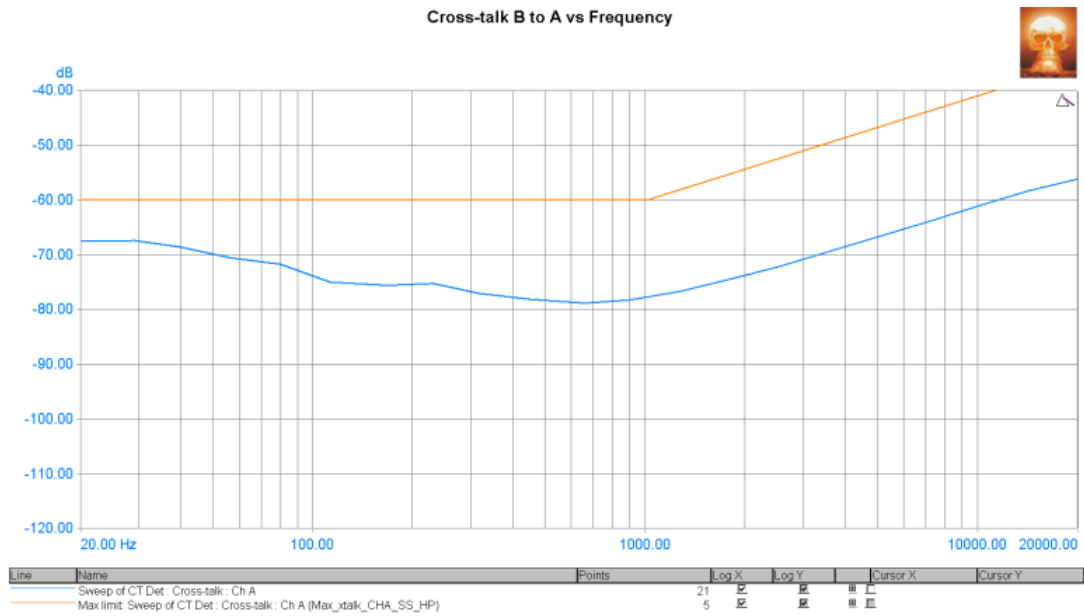


[Back to top](#)

A11 Crosstalk B to A vs Freq: PASSED

Measured at 9/29/2019 8:20:39 PM

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



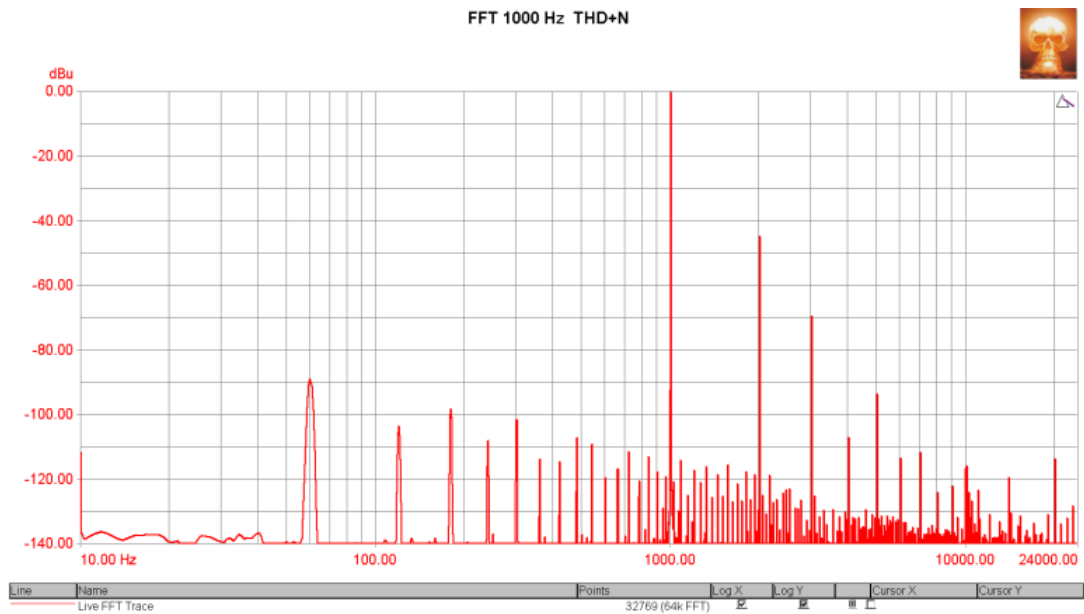
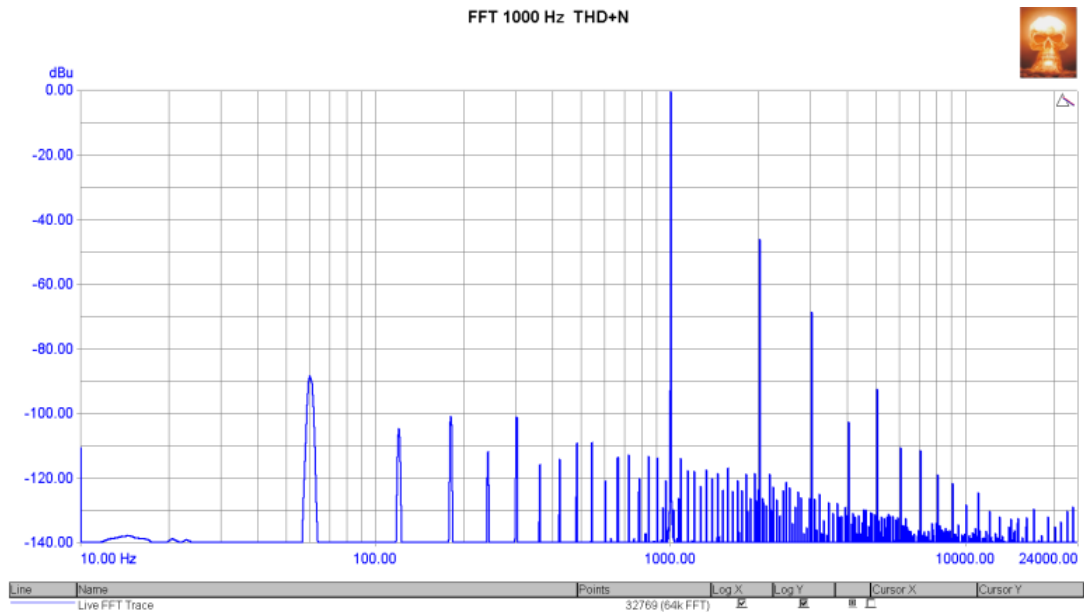
[Back to top](#)

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)	-0.230 dBu	Not limit checked.
RMS amplitude (Non-selected : Ch A)	0.230 dBu	Not limit checked.

CTA Readings		
THD+N - relative (Selected : Ch ARMS)	0.48242 %	< 5 %
THD+N - relative (Non-selected : Ch ARMS)	0.53984 %	> 0 %
Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/3rd octave band-reject filter at the input frequency		

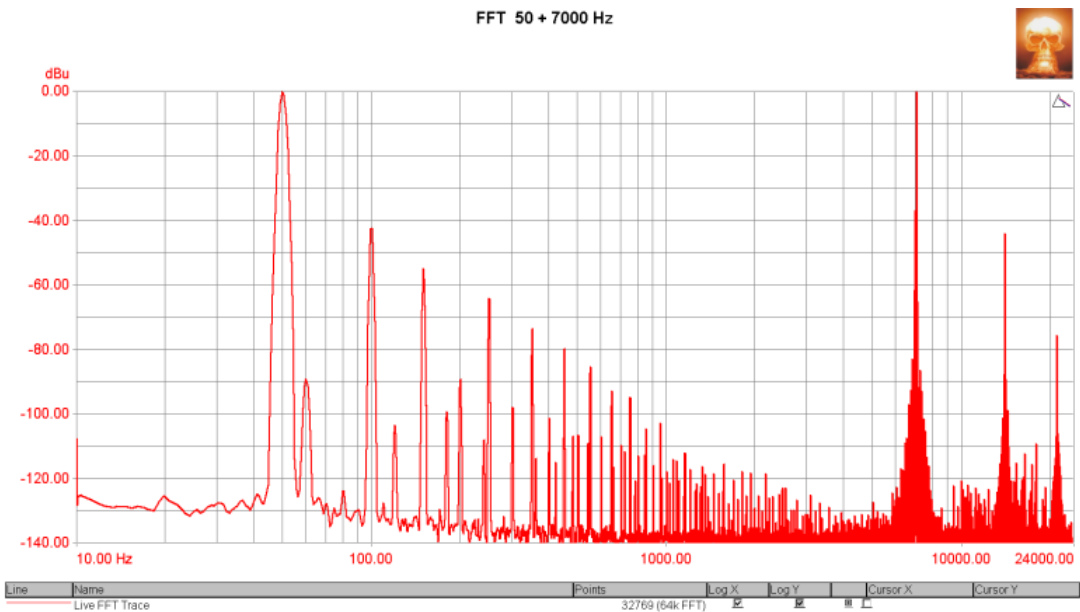
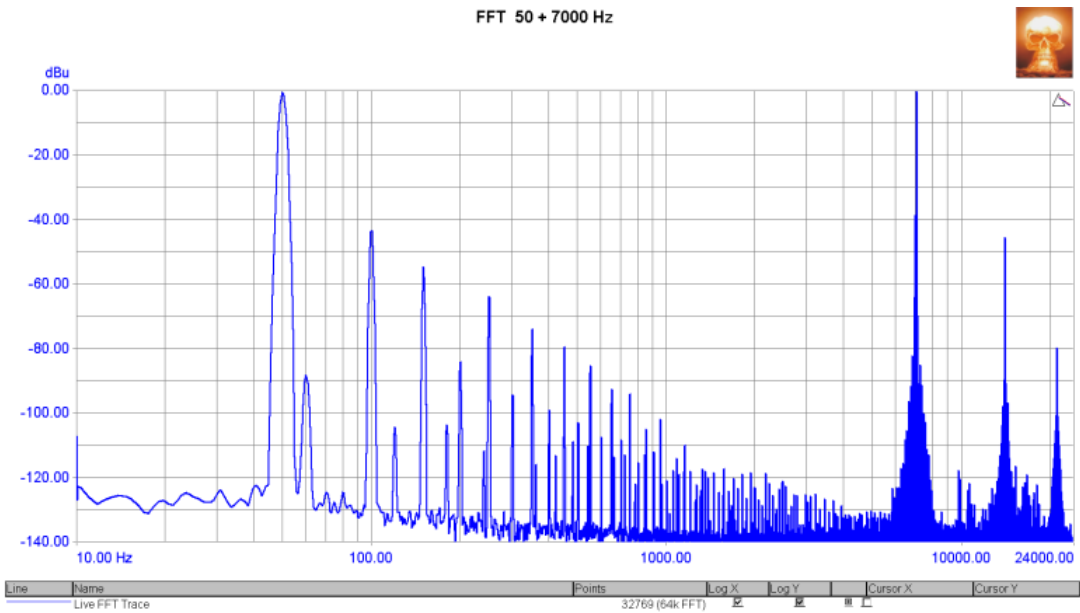


[Back to top](#)

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)	2.691 dBu	Not limit checked.
RMS amplitude (Channel B)	3.151 dBu	Not limit checked.



FFT Detector Readings		
IMD SMPTE-DIN (Channel A)	1.18604 %	< 7 % > 0 %
IMD SMPTE-DIN (Channel B)	1.35711 %	< 7 % > 0 %
FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with intermodulation notch band reject		

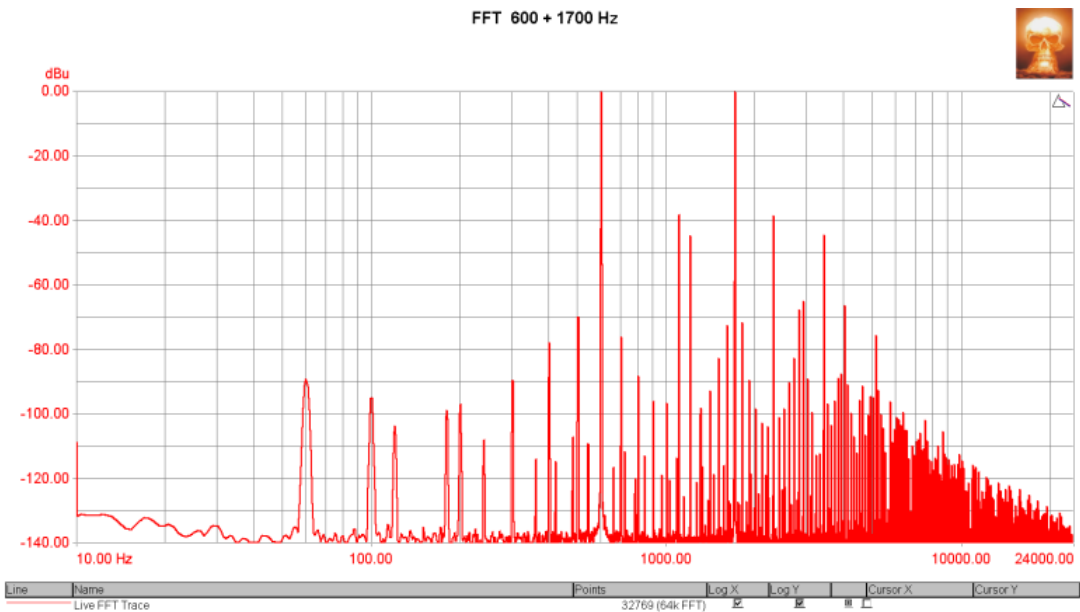
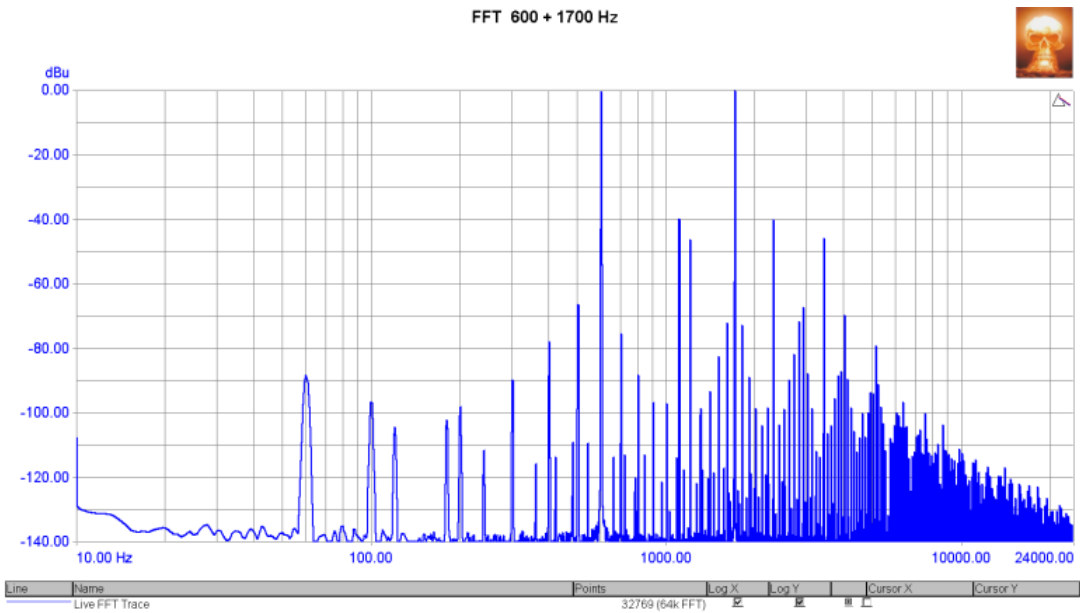
[Back to top](#)

A14 FFT 600+1700 Hz: PASSED

Measured at 9/29/2019 8:19:10 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)	2.761 dBu	Not limit checked.
RMS amplitude (Channel B)	3.228 dBu	Not limit checked.



FFT Detector Readings		
IMD SMPTE-DIN (Channel A)	1.09307 %	< 7 % > 0 %
IMD SMPTE-DIN (Channel B)	1.22915 %	< 7 % > 0 %
FFTD 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with intermodulation notch band reject		

[Back to top](#)

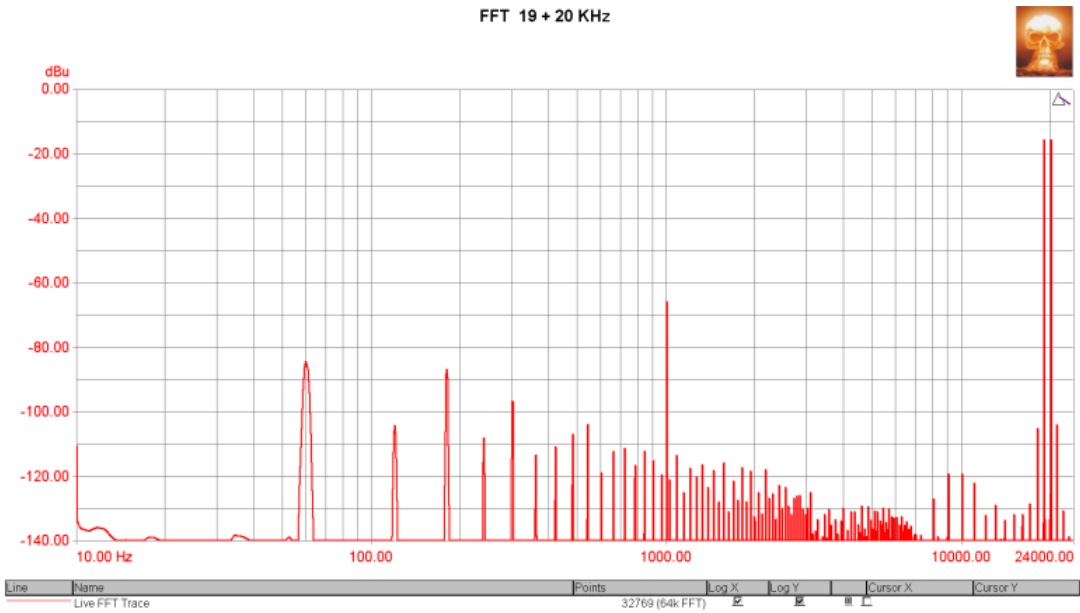
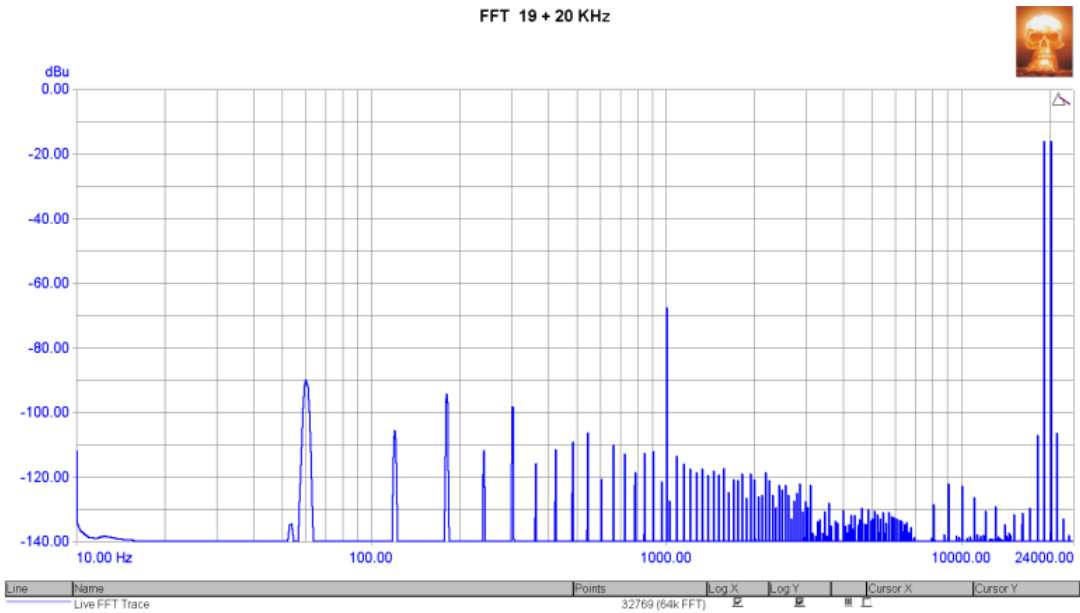
A15 FFT 19+20 KHz: PASSED

Measured at 10/7/2019 11:00:00 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)	-12.930 dBu	Not limit checked.
RMS amplitude (Channel B)	-12.373 dBu	Not limit checked.

CTA Readings		
IMD CCIF (Channel A RMS)	0.18951 %	< 1 %
IMD CCIF (Channel B RMS)	0.21735 %	< 1 %
Settings: Self relative, 22 Hz - 22 kHz, unweighted RMS with 1/24th octave band-pass filter at the intermodulation difference frequency		



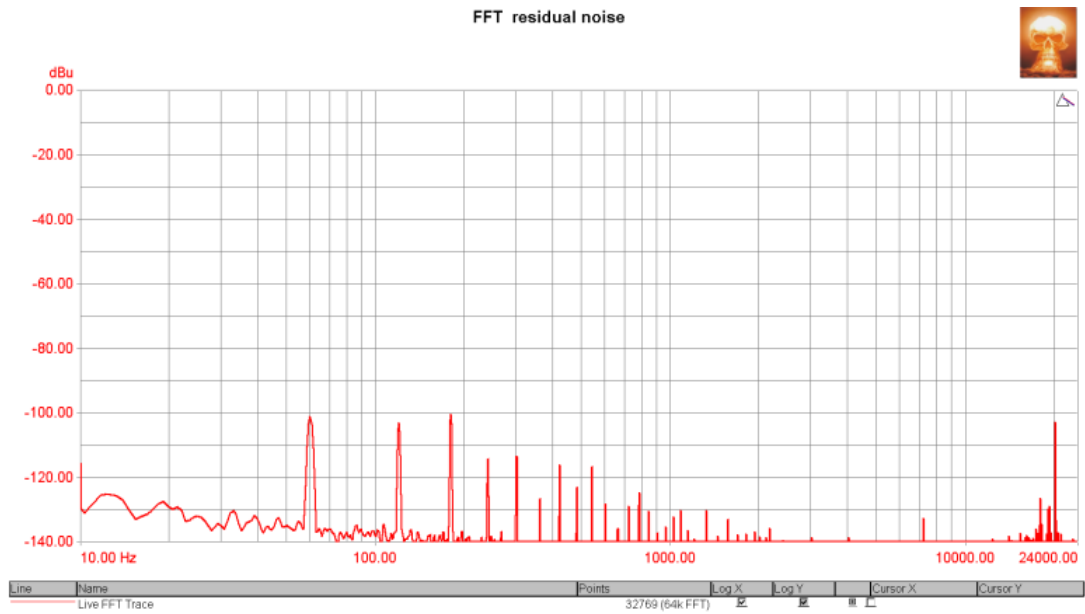
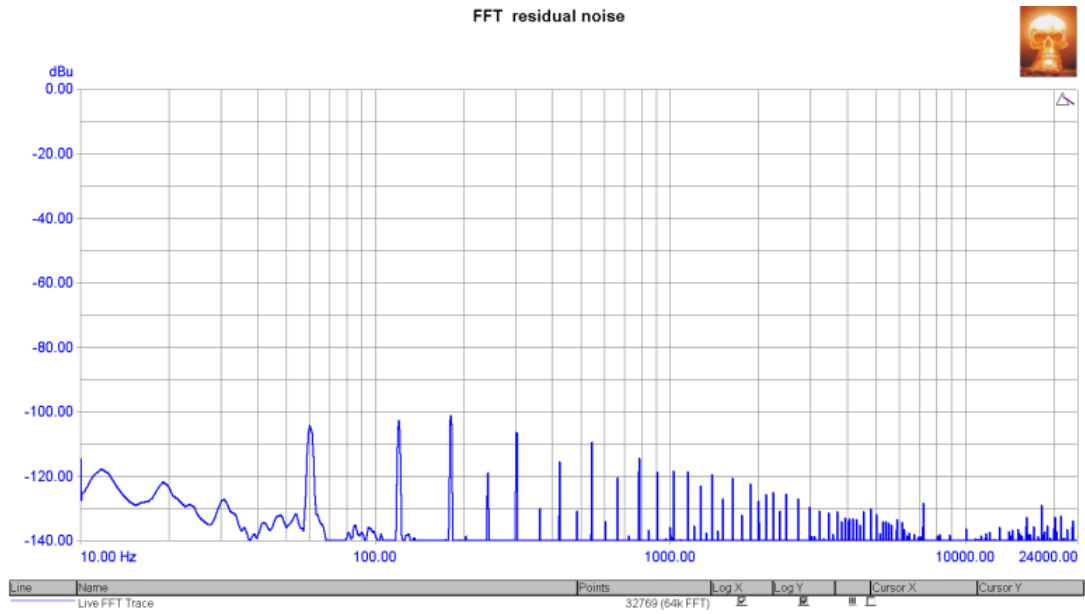
FFT Detector Readings		
IMD CCIF (Channel A)	0.18974 %	< 1 %
IMD CCIF (Channel B)	0.21611 %	< 1 %
FFT 1 Settings: Self relative, 22 Hz - 22 kHz, unweighted with window notch (14 bins) band-pass filter at the intermodulation difference frequency		

A16 FFT residual noise: PASSED

Measured at 9/29/2019 8:19:55 PM

Generator Settings		
Channel A:		Off
Channel B:		Off

Signal Analyzer Readings		
RMS amplitude (Channel A)	-95.348 dBu	Not limit checked.
RMS amplitude (Channel B)	-91.097 dBu	Not limit checked.



FFT Detector Readings		
Noise (residual) (Channel A)	-95.900 dBu	< -80 dBu > -140 dBu
Noise (residual) (Channel B)	-96.652 dBu	< -80 dBu > -140 dBu
FFTD 1 Settings: 22 Hz - 22 KHz, unweighted with band-reject notch filters, fundamental to the 10th harmonic		