



Starkrimson® 150W GaN Amplifier Module



Highlights

- Flat, full load-independent frequency response
- High Damping Factor
- Extremely low, frequency-independent total harmonic distortion (THD)
- Extremely low noise
- A completely passive control loop
- A consistent top performer in listening trials.

Features

- Fully balanced input to output
- 2Ω capable
- Pop free start and stop
- Weight: 150g

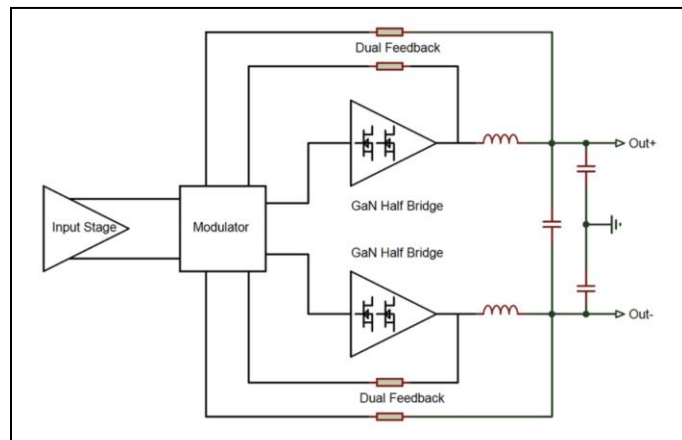
Applications

- Active loudspeakers
- Audiophile power amplifiers for professional and consumer use
- Monitor loudspeakers for recording and mastering studios

Description

Starkrimson amps are state-of-the-art (SOTA) hi-fi audio power amplifiers that were conceptualized to provide the listener with a truly life-like musical experience, presented with every significant detail intact.

Not only does this module offer a way for audiophile music reproduction to continue in an ever-energy-conscious world, but its measurements and sonic performance also raise the bar for audio amplifiers.





Absolute Maximum Ratings

Item	Rating	Unit	Notes
Power Supply Voltage	58.8V	V _{DC}	
Peak Output Current	8.66	A	Current must be limited external to the module
XLR Input Voltage	5.25V	V _{RMS}	
Air Temperature	40	°C	

Recommended Operating Conditions

Item	Min	Typical	Max	Unit	Notes
Power Supply Voltage	36	54	56	V _{DC}	
Load Impedance	2		16	Ω	
Source Impedance			4.4	kΩ	

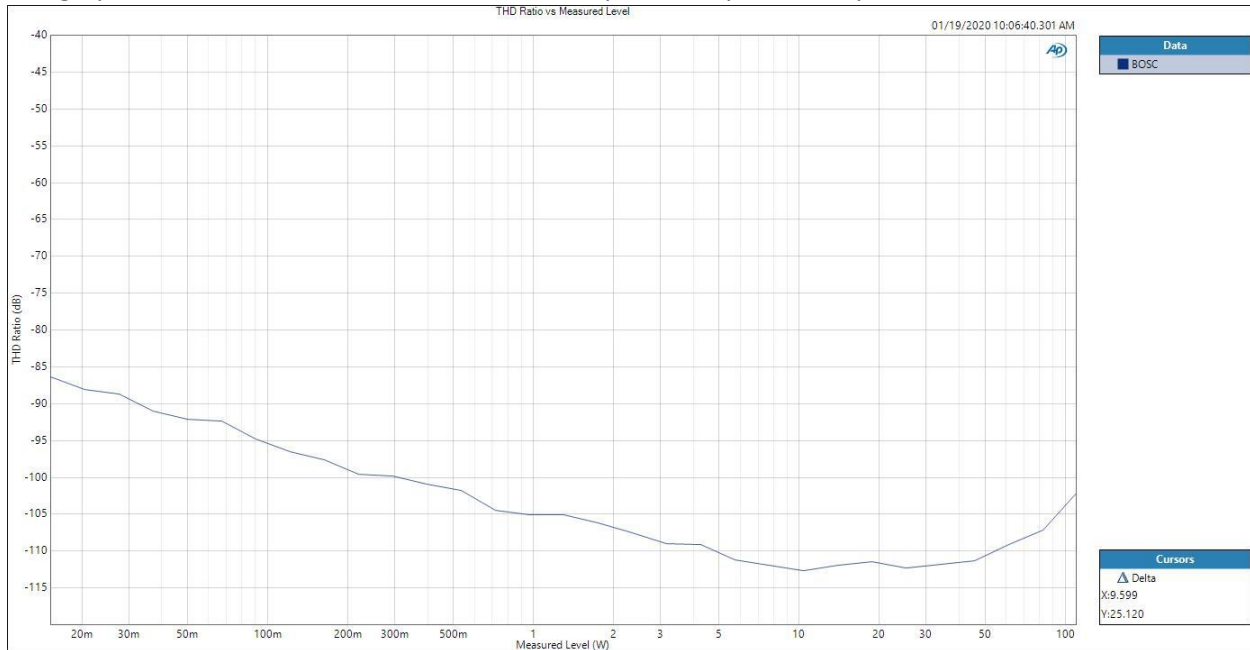
Specifications

Item	Min	Typical	Max	Unit	Notes
Power Supply Input Capacitance	480	600	720	μF	
Input Impedance		44		kΩ	
Output Power into 4Ω			150	W _{RMS}	300W _{PEAK}
Output Power into 8Ω			150	W _{RMS}	300W _{PEAK}
Output Noise		32		μV	A-wt, 20Hz-20kHz
Output Impedance		14.54		mΩ	f<1kHz
Voltage Gain		16.8		dB	
Required Input level for 150W/8Ω		5		V _{RMS}	Appropriate supply voltage assumed
Required Input level for 150W/4Ω		3.535		V _{RMS}	Appropriate supply voltage assumed
Efficiency 8Ω Load		93.2		%	
Standby Current		70		mA	
Signal-to-Noise Ratio (SNR)		121		dB	8Ω load
		118		dB	4Ω load
Total Harmonic Distortion (THD)		0.015		%	20Hz<f<20kHz 150W _{RMS}
Total Harmonic Distortion (THD)		0.0013		%	20Hz<f<20kHz 10W _{RMS}

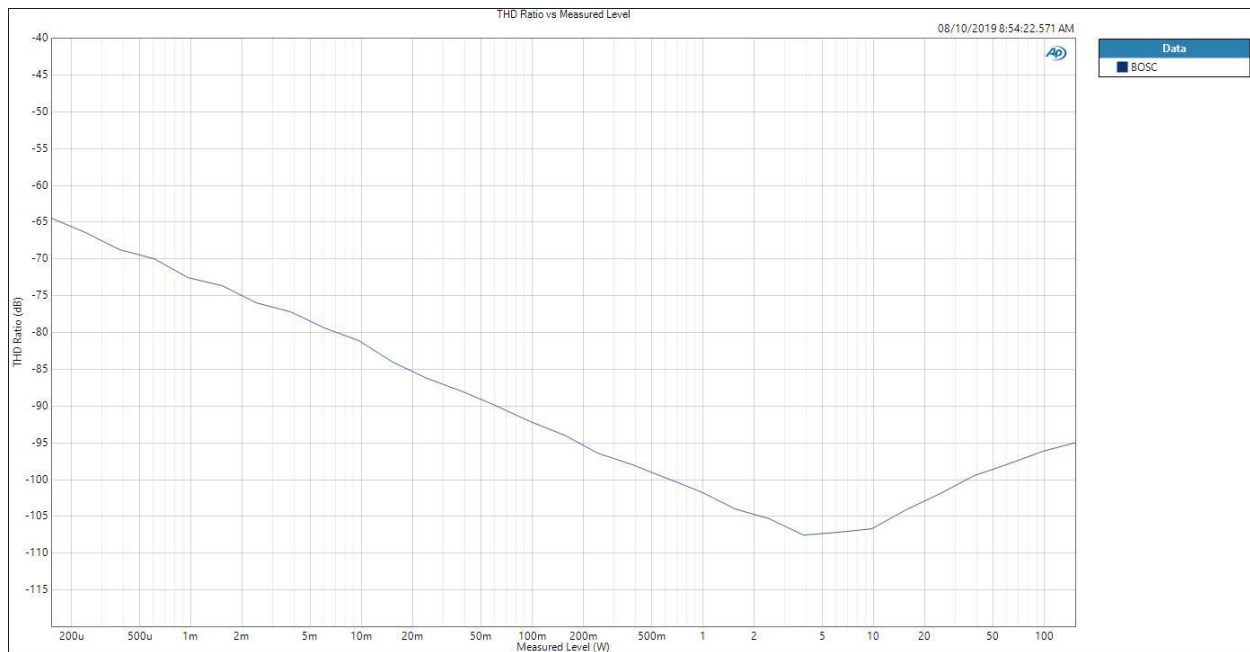


Typical Performance Graphs

The graphs were taken on a stock Starkrimson Amp Module powered by a CUI / SDI250-56-U2-P219.

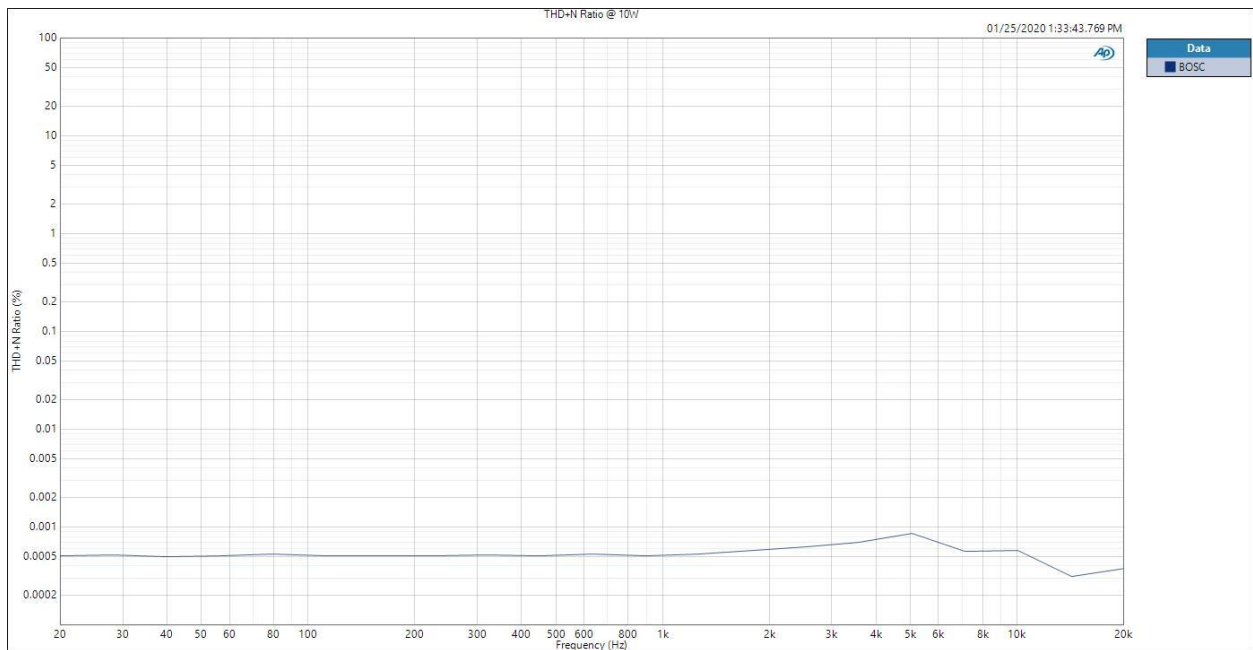


Total Harmonic Distortion (THD) vs Output Power, 1kHz 8Ω load

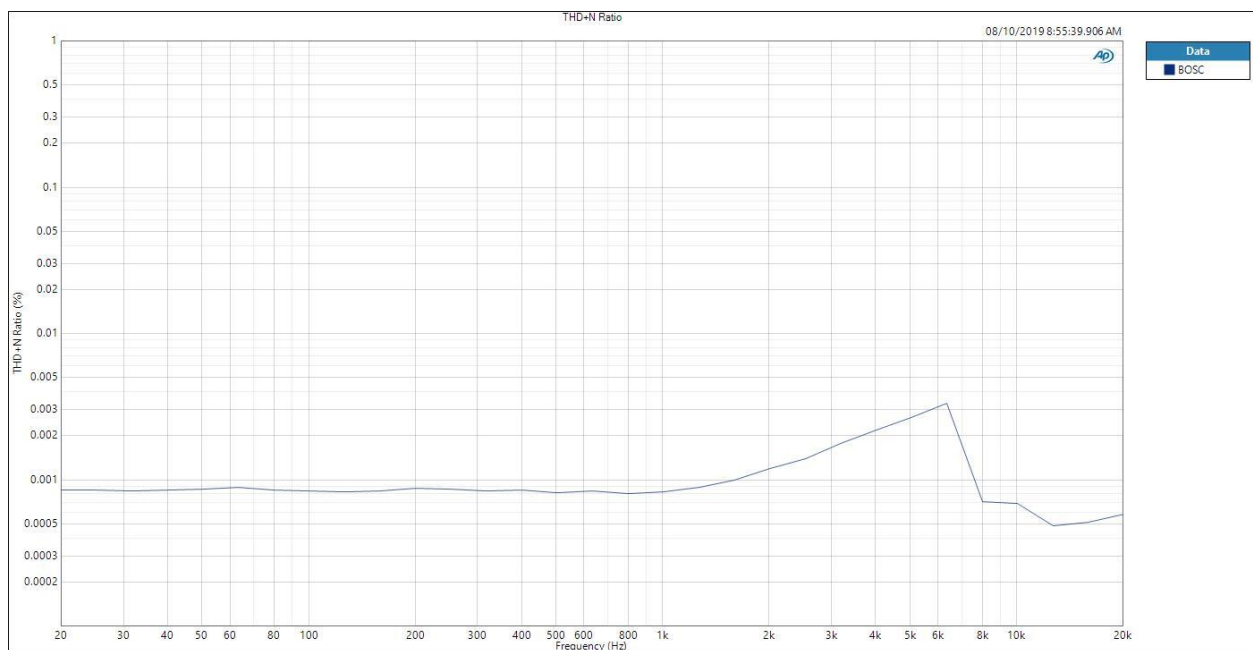


Total Harmonic Distortion (THD) vs Output Power, 1kHz 4Ω load

Orchard Audio LLC
32 Pleasant Hill Road
Succasunna, NJ 07876
Tel +1 (504) 233-3444
e-mail leo@orchardaudio.com

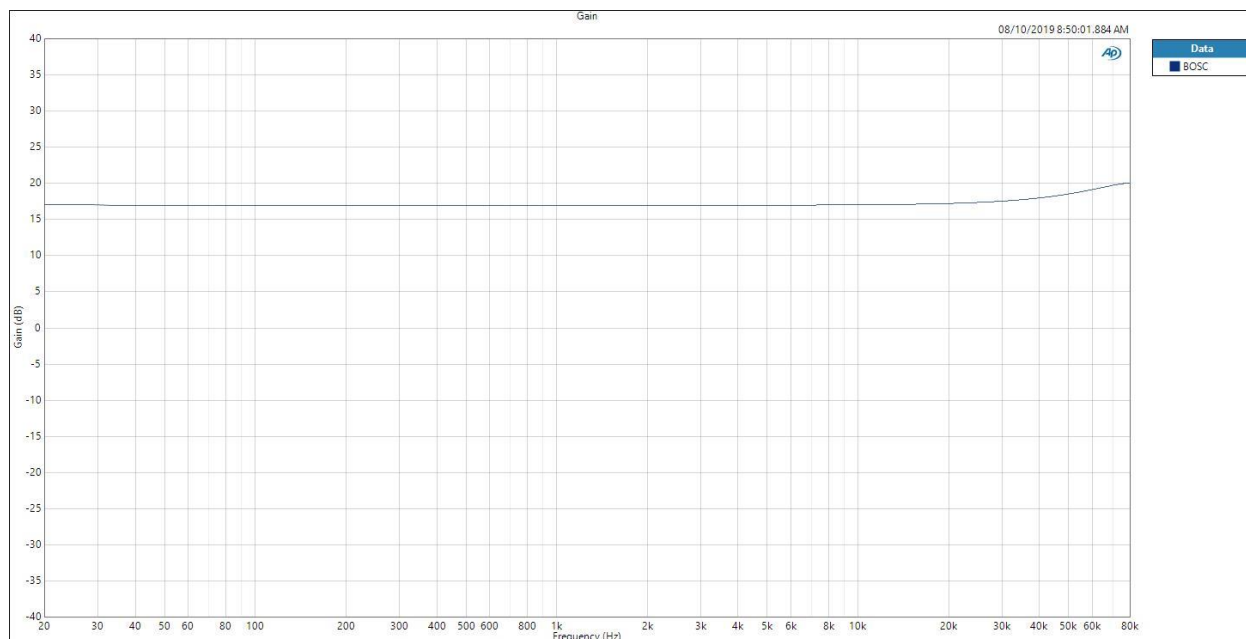


THD+N Ratio vs Frequency at 10W output Power, 22.4kHz BW, 8Ω Load

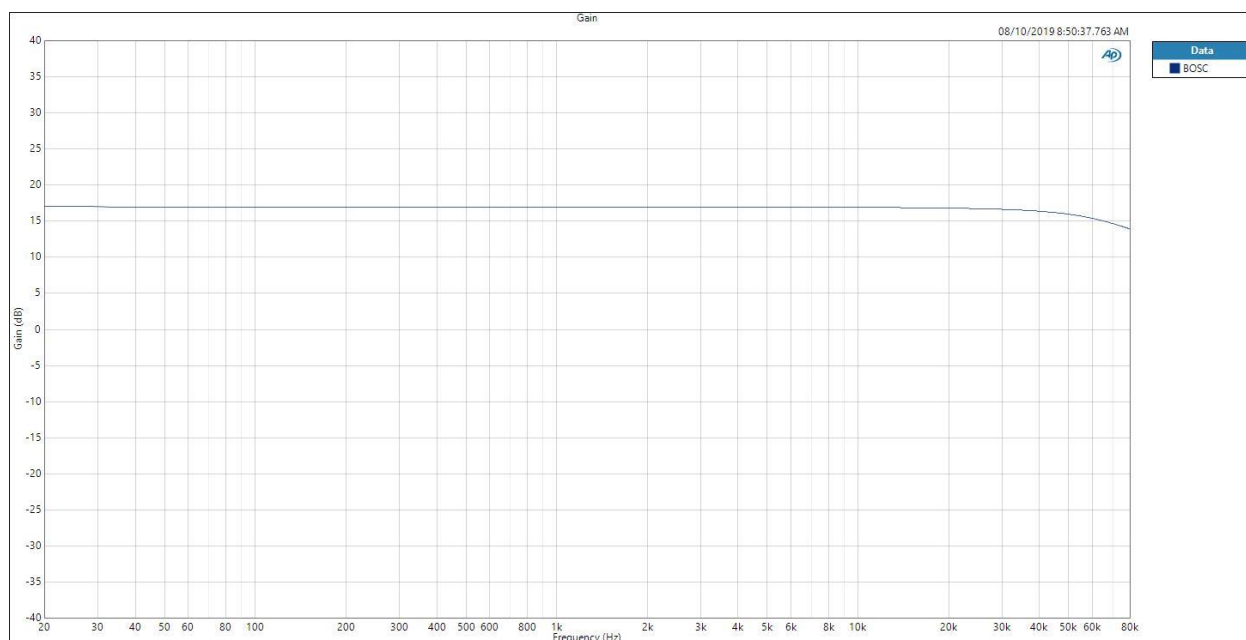


THD+N Ratio vs Frequency at 10W output Power, 22.4kHz BW, 4Ω Load

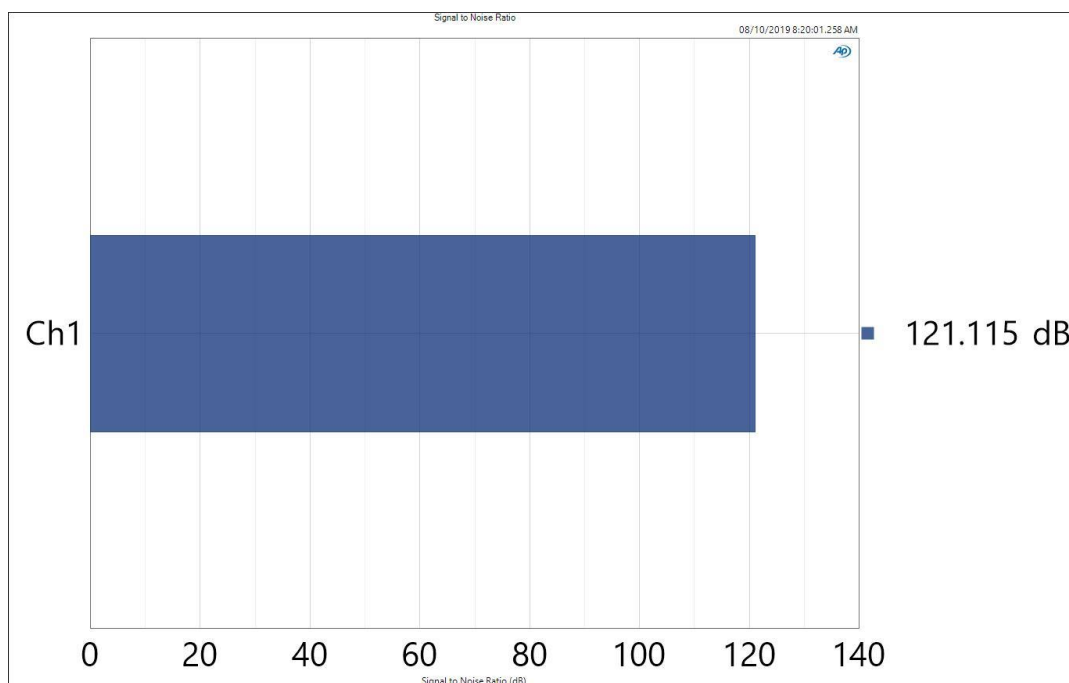
Orchard Audio LLC
32 Pleasant Hill Road
Succasunna, NJ 07876
Tel +1 (504) 233-3444
e-mail leo@orchardaudio.com



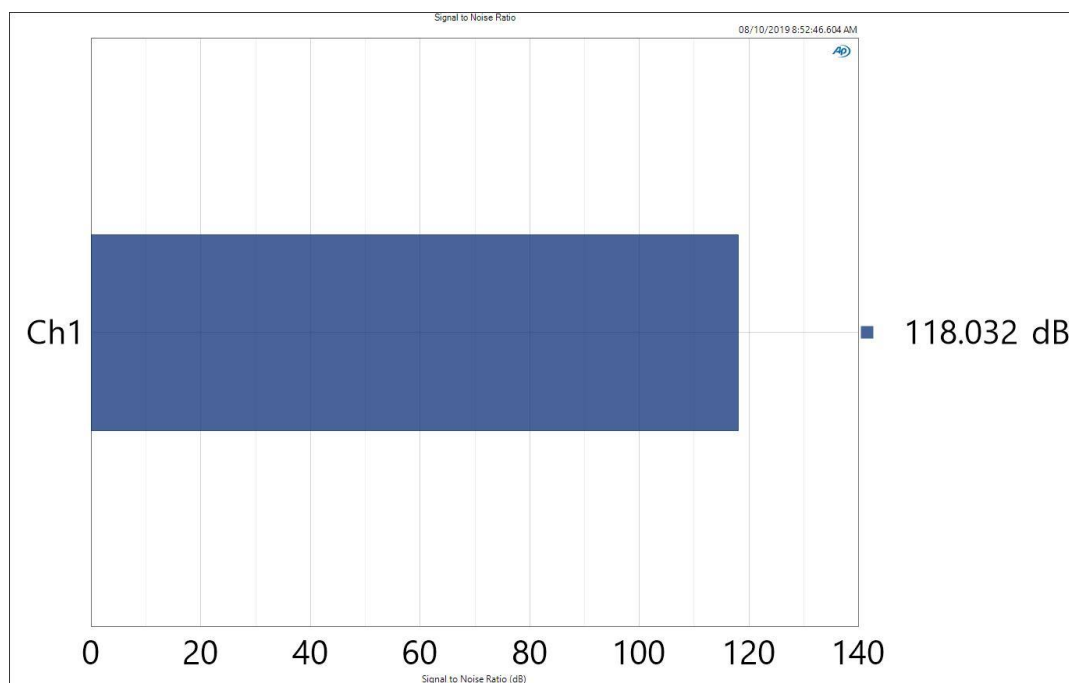
Frequency Response, 8Ω Load



Frequency Response, 4Ω Load



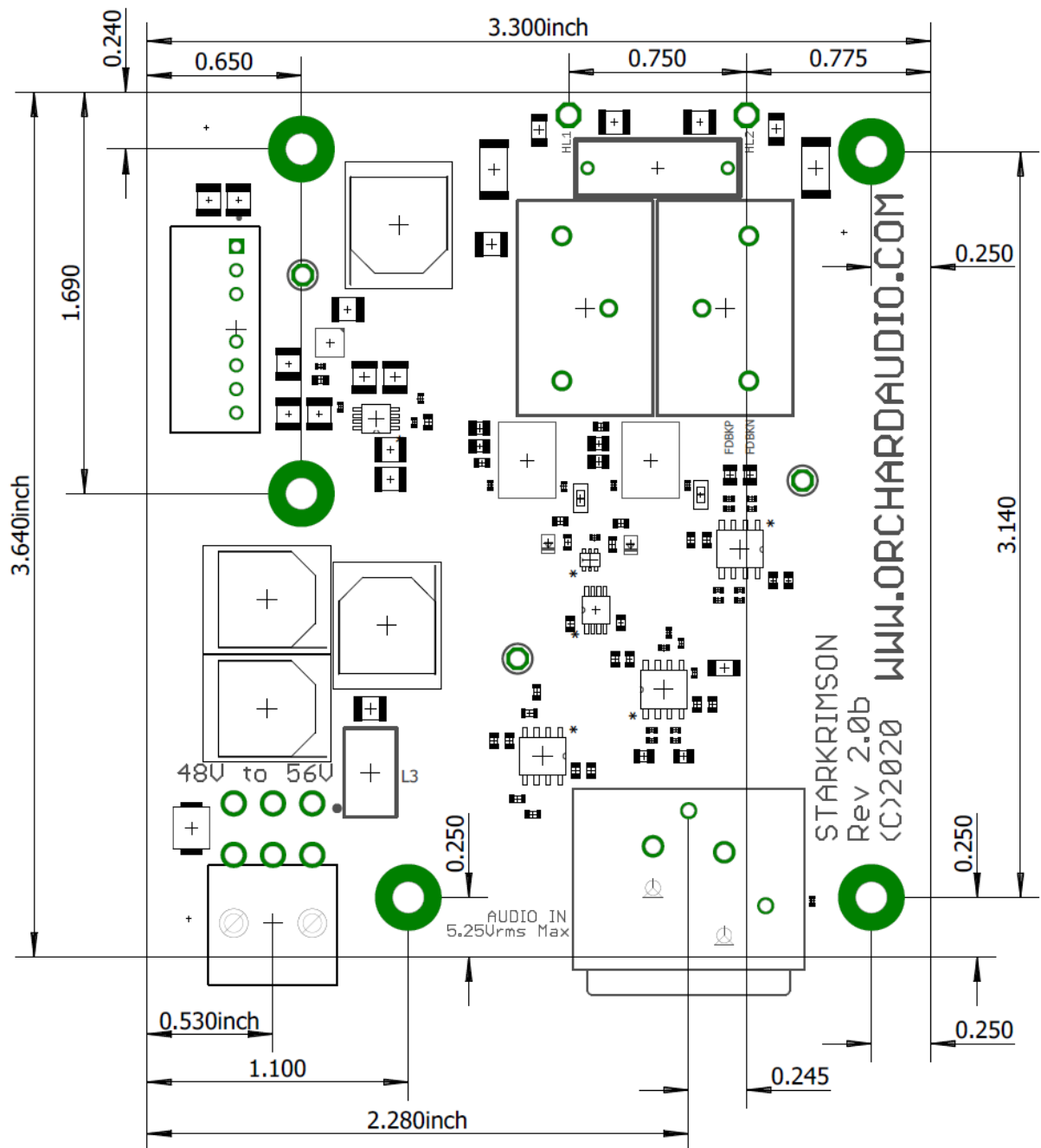
Signal-to-Noise Ratio (SNR), 8 Ω Load, A-weighted



Signal-to-Noise Ratio (SNR), 4 Ω Load, A-weighted



Starkrimson Module Dimensions



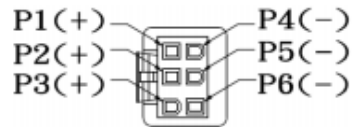
Orchard Audio LLC
32 Pleasant Hill Road
Succasunna, NJ 07876
Tel +1 (504) 233-3444
e-mail leo@orchardaudio.com



Connectors

Power Supply Mating Connector: Molex / 39-01-2060

Power Supply Mating Connector Pinout:



Amplifier Output: HL1 (+) and HL2 (-)

- Both outputs are hot (differential output),
 - Do not connect either of the outputs to ground

Amplifier Input: Neutrik / NC3FAH2

- Pin 1 – GND
- Pin 2 – Positive
- Pin 3 – Negative