

imPULSE D200

200W RMS CLASS D AUDIO AMPLIFIER

The imPULSE D200 is a Class D amplification module developed by Red Rocks Audio for self-amplified professional audio purposes.

This new technology is based in the use of high frequency switching power devices, which provides a very high performance and very low losses. With an amazing efficiency (more than 93%) the imPULSE D200 module transforms almost the total power supply energy into audio power, with minimum heat losses. This way, the heatsink could be smaller, saving space and materials.

The imPULSE D200 real power is 200W RMS at 8 Ω and 140W RMS at 16 Ω . It also works with 4 Ω loads, although its maximum power is limited to 200W by the included overcurrent protection.

The amplifier operation is constantly monitored through integrated protection circuits. In case of a short circuit in the audio output or a load abnormal behaviour, a high-speed circuit protects the power transistors in a silent manner. Another protection acts in case of an input voltage increasing or decreasing to dangerous values. At last, there's another protection that detects any offset or continuous voltage present in the audio output.

The imPULSE D200 modulation system uses a self-oscillating high frequency circuit that does not require an external clock. Also, the used feedback includes the reconstruction output filter in the loop. This way, the amplifier can correct load anomalies or defects at real time without using additional filters or zobel at the output, making the frequency response constant at any time, not influenced by load type or impedance. This means that we can turn the module on without any load and the input signal frequency won't affect the amplifier operation. Other implementations need to waste a lot of energy through a zobel in the output when the input signal goes up to 10kHz and it's constant, and even shuts down to prevent the damage of the output transistors.

Because its small size and low heat losses, this module is ideal for compression HF drivers and active boxes where space is important.

Applications:

- Active speakers system for touring (line-arrays, monitors, side-fills, etc.)
- Self-amplified studio monitors
- Loudspeaker systems for public address, concert systems, etc.
- Self-amplified mixers, amplified racks, etc.

Specifications:

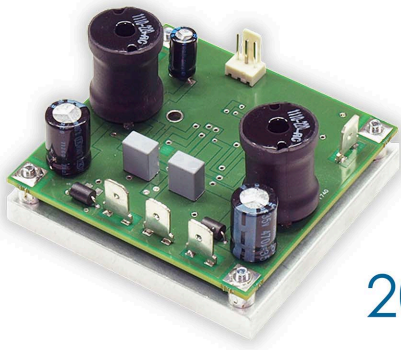
- Size: 63mm (W) x 65mm (L) x 36mm (H) including heatsink
- Weight: 300gr
- Supply voltage: +/- 30V
- Maximum current: 12A - Idle current: 0.01A
- Frequency response: 10Hz-40kHz + /-0.3dB
- Supply Ripple Reject: 65dB
- Efficiency: 94%
- Idle losses: 3W
- Recommended load: 8 Ω
- Minimum load: 4 Ω
- Input impedance: 10K Ω
- Protection modes: Over-current, output short-circuit, overvoltage, undervoltage, DC on output, soft-start
- Assembled using lead-free SMD components (ROHS regulation)



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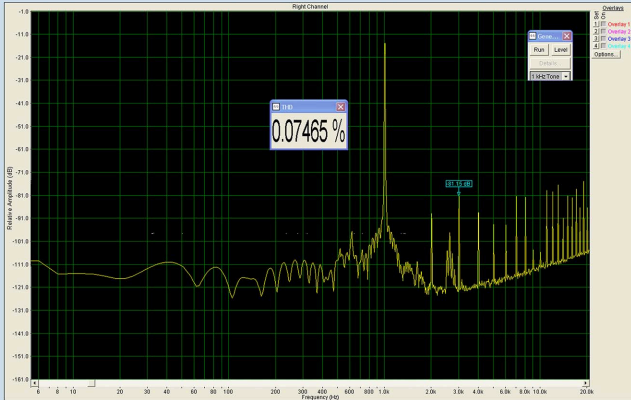
<http://www.redrocksaudio.es>

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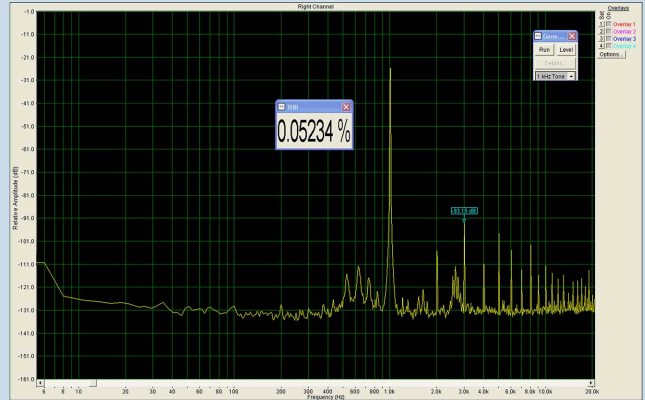


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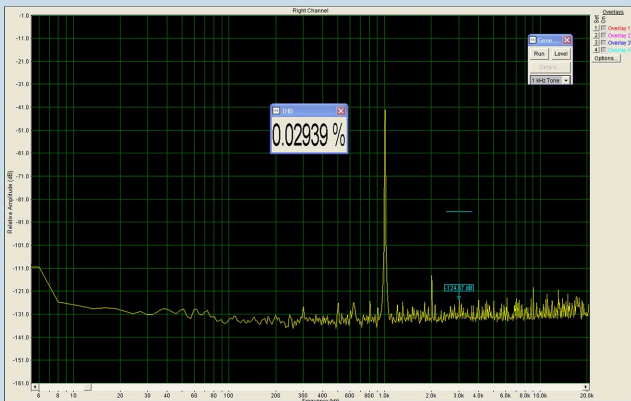
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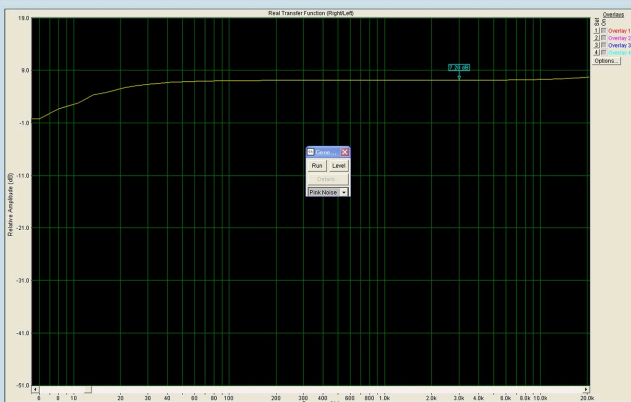
Harmonic Distortion full power 8 Ω



Harmonic Distortion half power 8 Ω



Harmonic Distortion 1W 8 Ω



Transfer Function



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