The Technology of Amp Box S3

A brief overview:

- The class-D amplifier Amp Box S2 was built based on the chip Renesas R2A15108SP while the new Amp Box S3 is built on the chip TPA3221. The chip TPA3221 provides better audio parameters (efficiency > 90%)
- The PCB in the Amp Box S2 was 2-layer while the PCB in the Amp Box S3 is 4-layer. A precise PCB design with an emphasis on improving audio (crosstalk, THD+N, SNR) and EMC parameters
- The Amp Box S3 has improved voltage filtering from the power adapter
- The Amp Box S3 has improved cooling for class-D amplifier – single-cast aluminium profile with greater heat transfer
- The Amp Box S3 has better frequency transmission at 20kHz by 1.2dB
- THD+N is about 10 times better in Amp Box S3 than in Amp Box S2

Careful PCB layout increases audio performance

Improved voltage filtering section

Single-cast aluminium cooling profile, no cooling fins necessary due to high efficiency of TPA3221

TPA3221 poweramp chip

Top cooling plate acts as additional protection against interference

Improved voltage filtering section

4-layer PCB