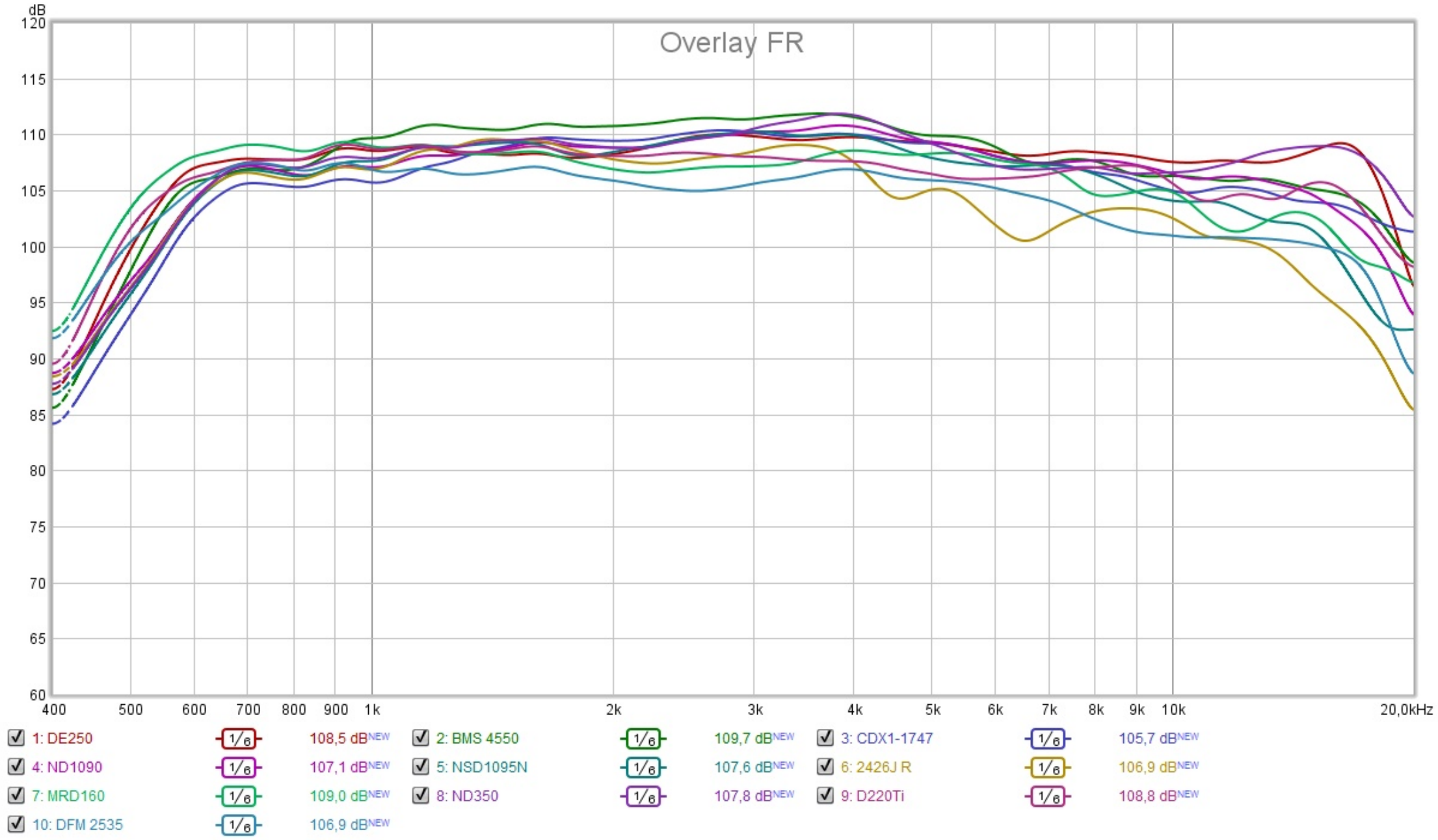
Frequency response

The compressions were therefore measured coupled to the Dayton H812 pavilion, placed on an enclosure of the same width, at a distance of 80cm in the axis in order to limit the influence of the room and without being too close. The distance still represents almost 4 times its depth and height and 2.5 times its width which should already give a good idea of the “loaded” frequency response.

The display has been calibrated to display the SPL level at 2.8v / 1m. The absolute level can vary within +/- 1 to 2db but the relative levels are correct.

NB: The Technysound MO65X posed problems during the test, the levels of distortions were abnormally high and in plateau with a suspicious noise on the sweep evoking a bad centering of the diaphragm. It will therefore no longer appear for the rest.

Let's start with a superposition of all the frequency responses.

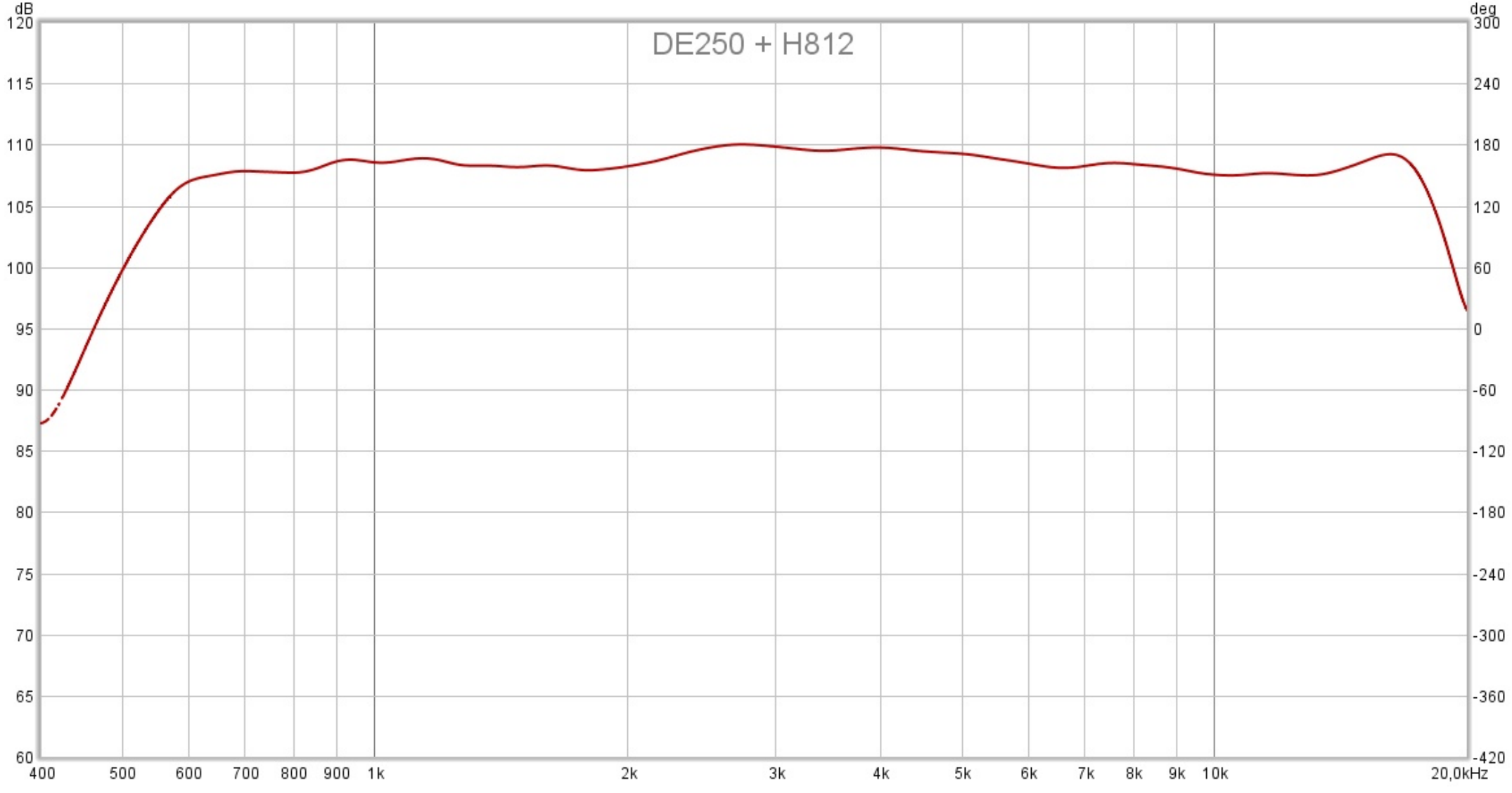


Of course this image does not allow reading anything for each compression.

It nevertheless allows us to see certain trends:

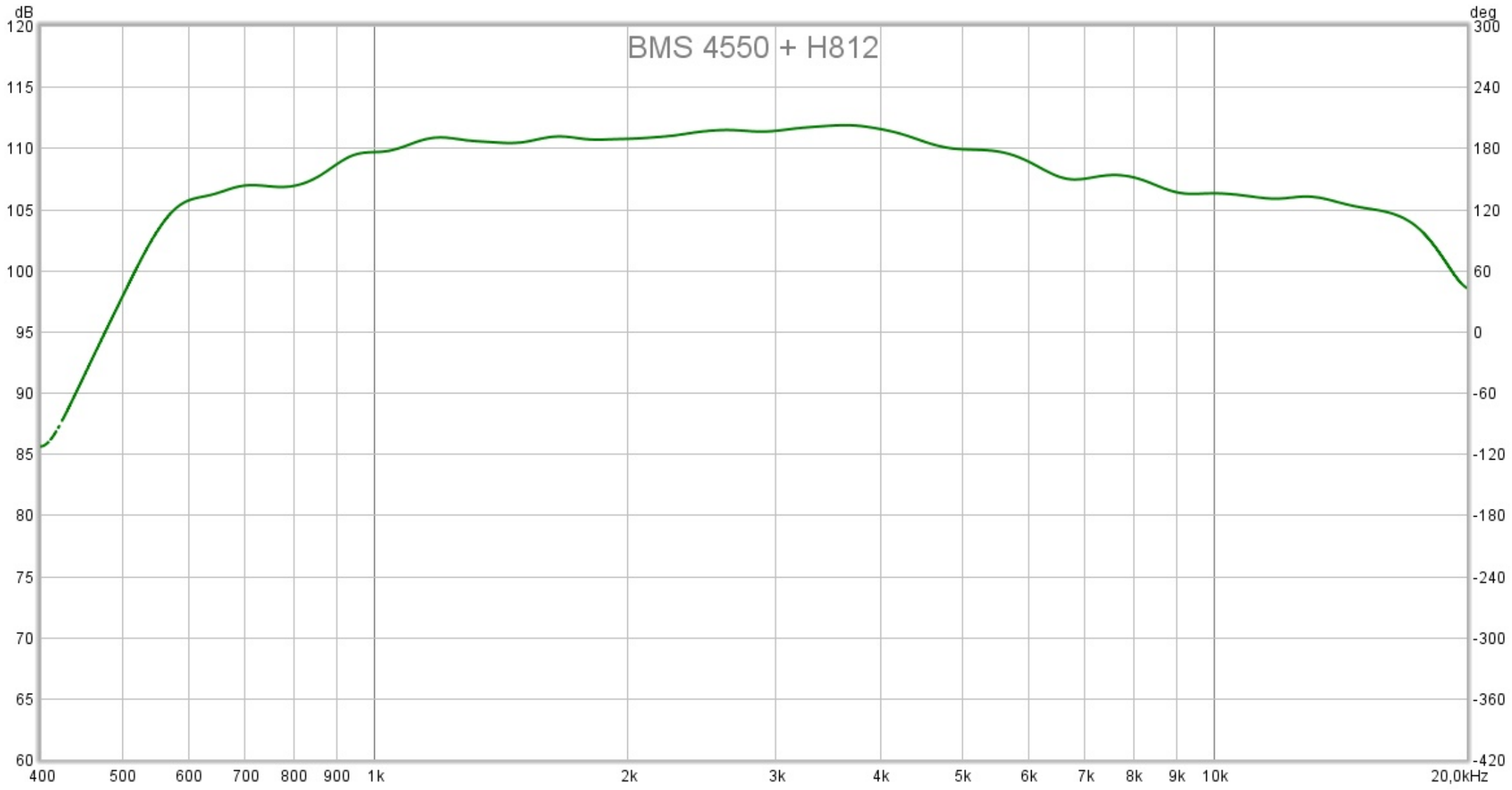
- The sensitivity ranges between 105 and 110db approximately
- The pavilion cut off estimated at 550 Hz is reached for certain compressions. The average will rather be around 600Hz.
- It is often admitted that the flag prints its paw on the frequency response but these still seem rather different from one compression to another.

B&C DE250

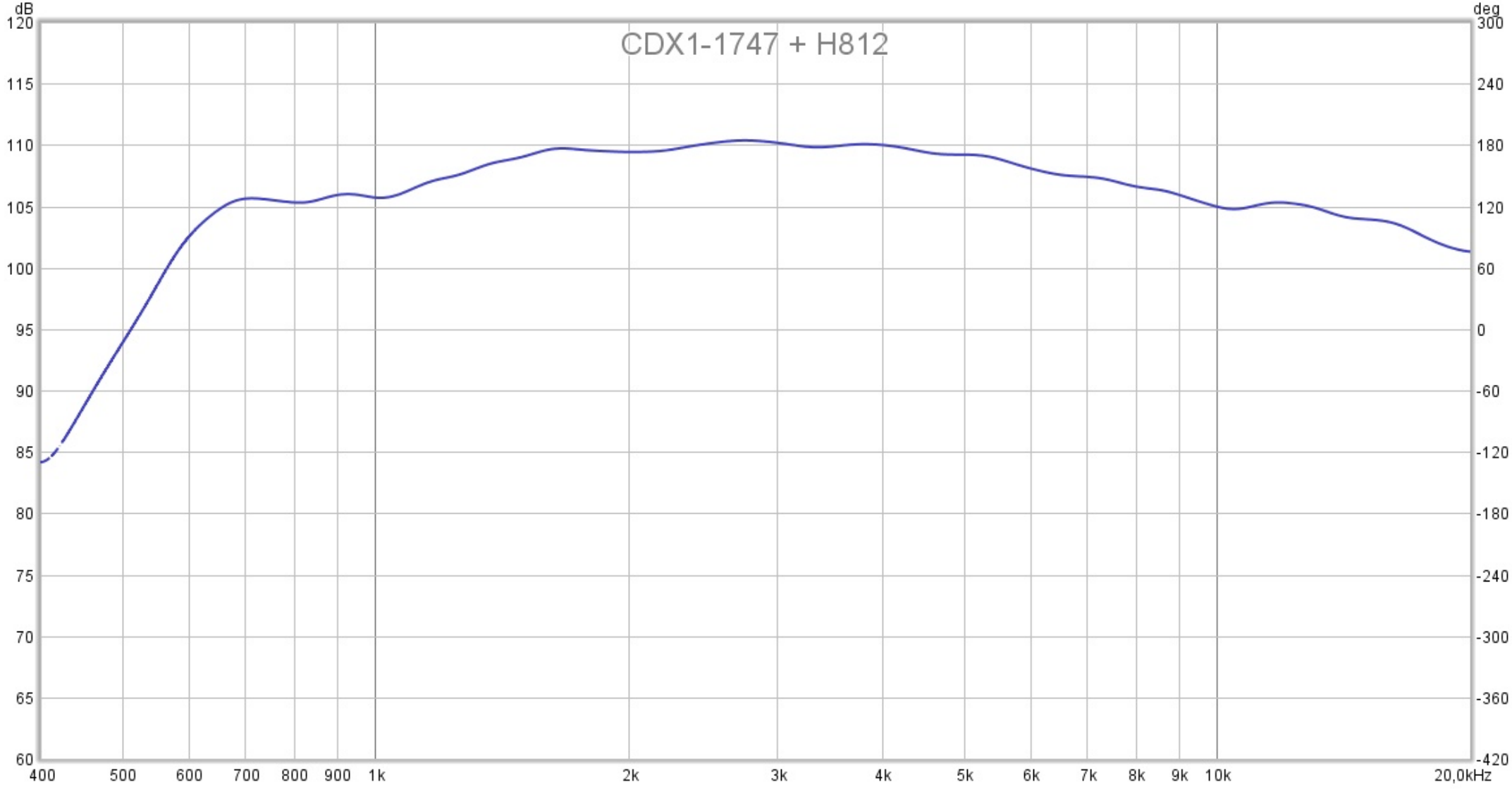


It is the most linear in this pavilion.

BMS 4550

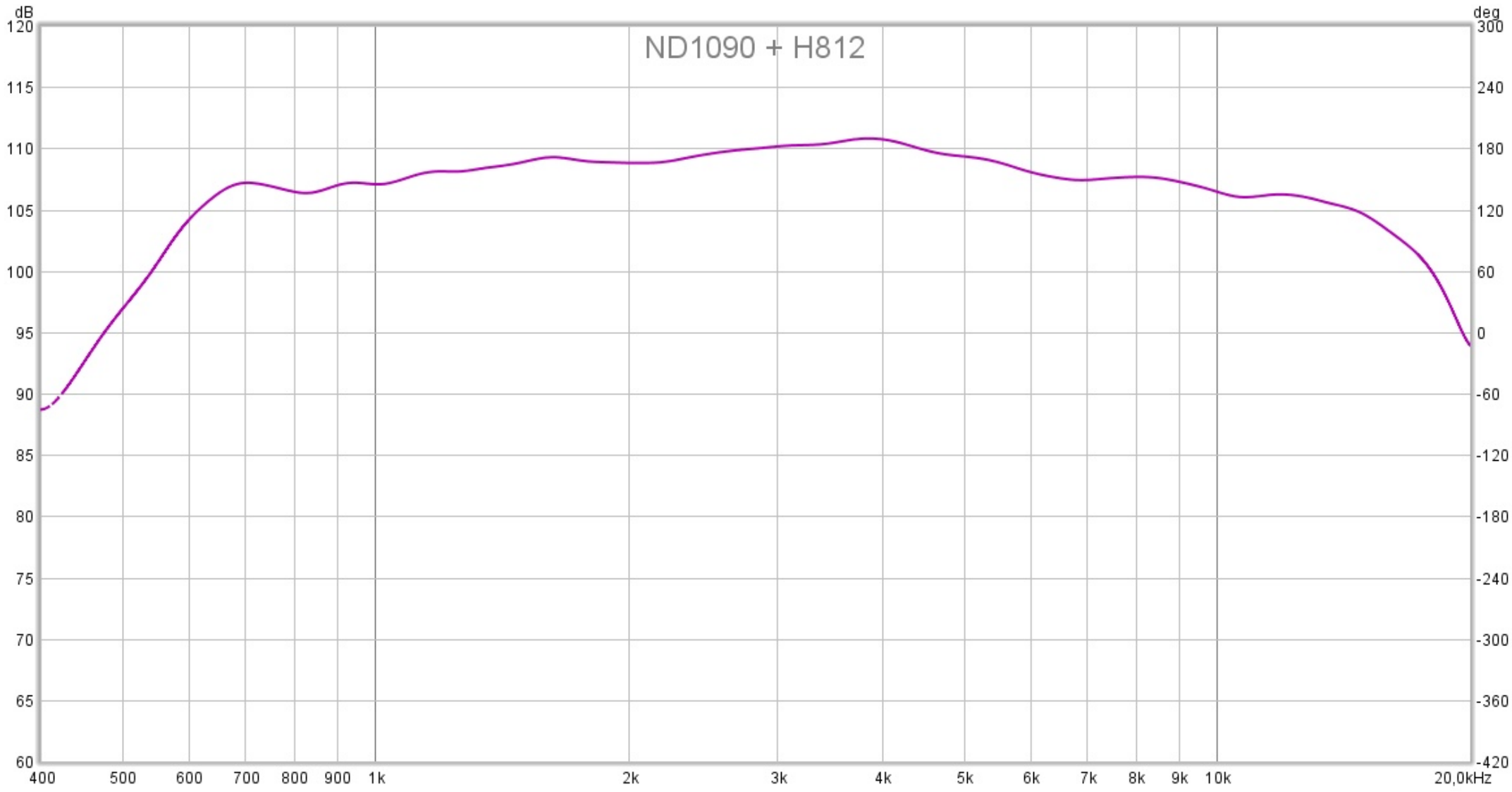


Celestion CDX1-1747



It's the shortest at the bottom.

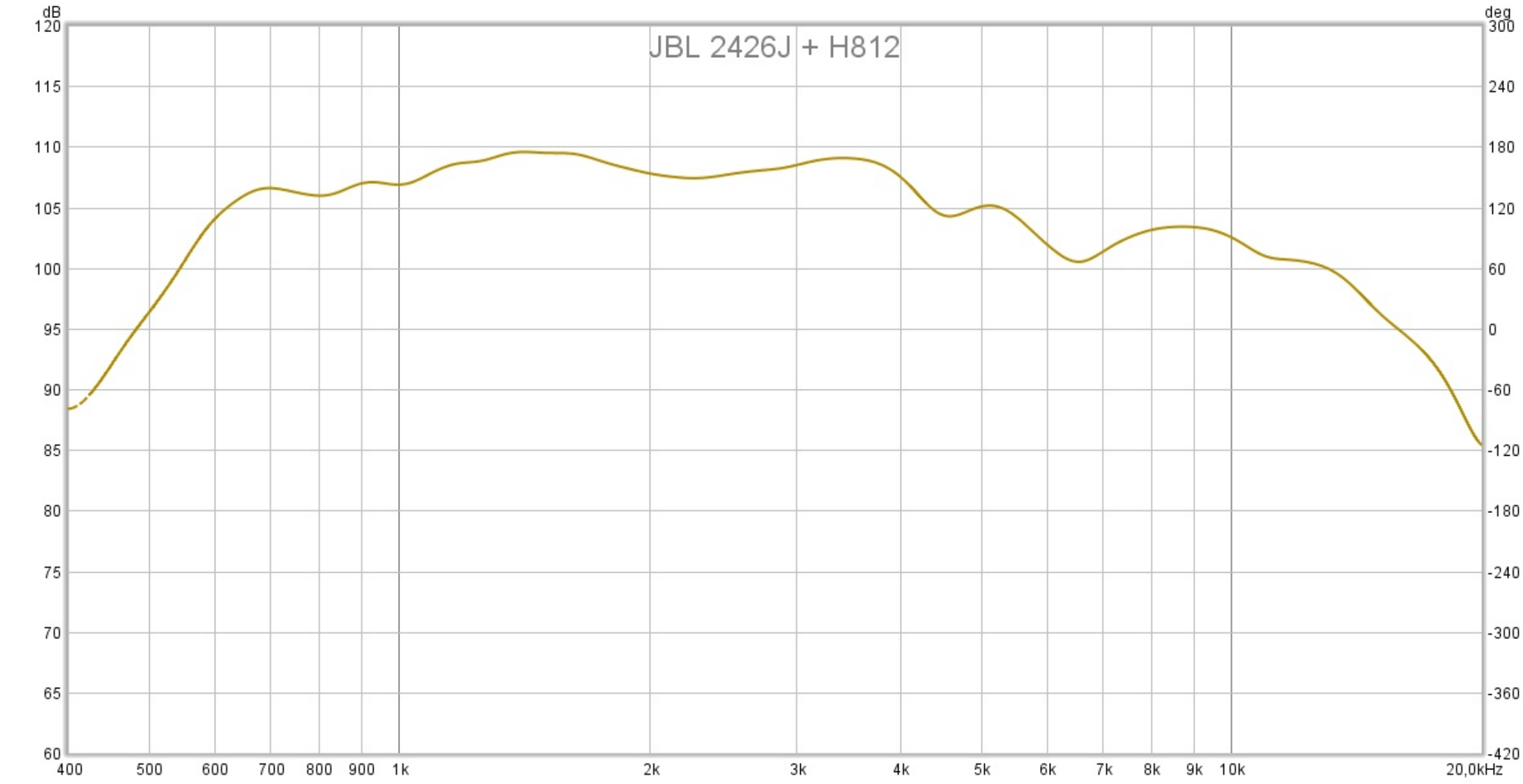
Eighteensound ND1090



Eighteensound NSD1095N

This NSD1095N drops faster in the treble than its sister ND1090, probably due to the specific treatment of the membrane. It will take a serious EQ to recover a bit of extreme treble.

JBL 2426J

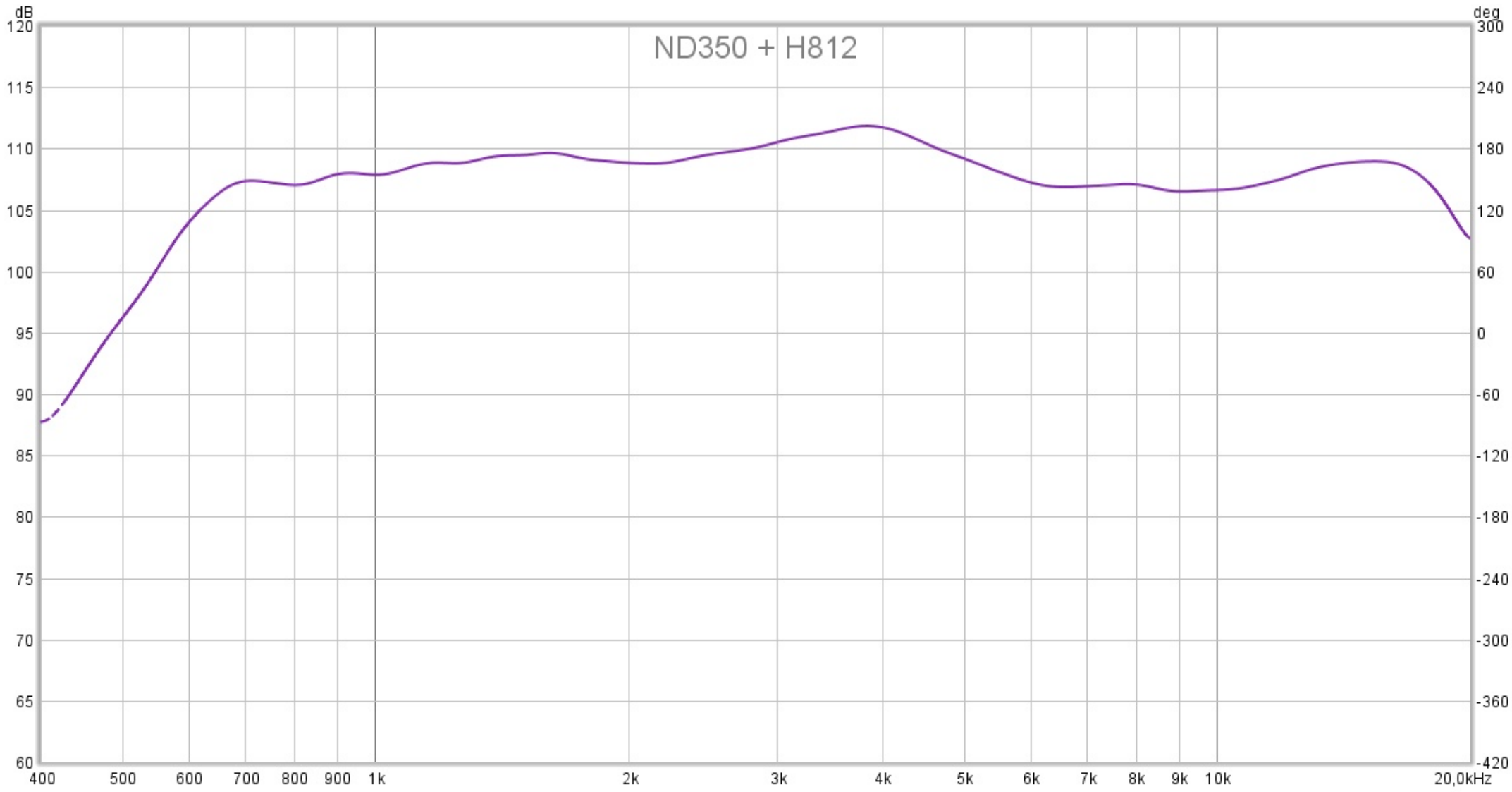


This JBL is the least linear of the group in this pavilion, like the NSD1095N it drops very quickly in the extreme treble. Again, EQ should be used.

Monacor MRD160

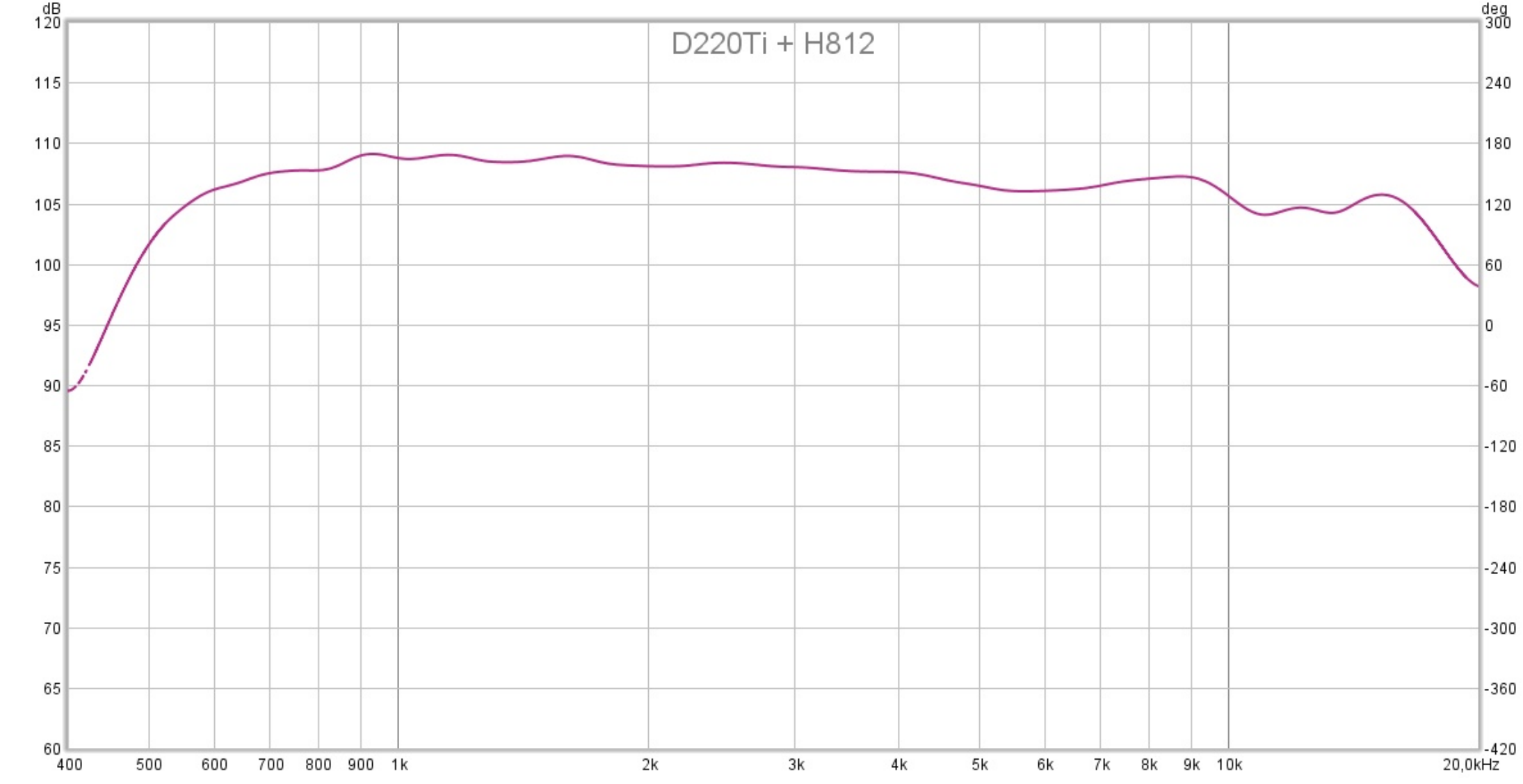
It is the one that is best loaded by the horn in the bass, but the shape of the curve in the treble does not reassure any more than its impedance curve.

RCF ND350



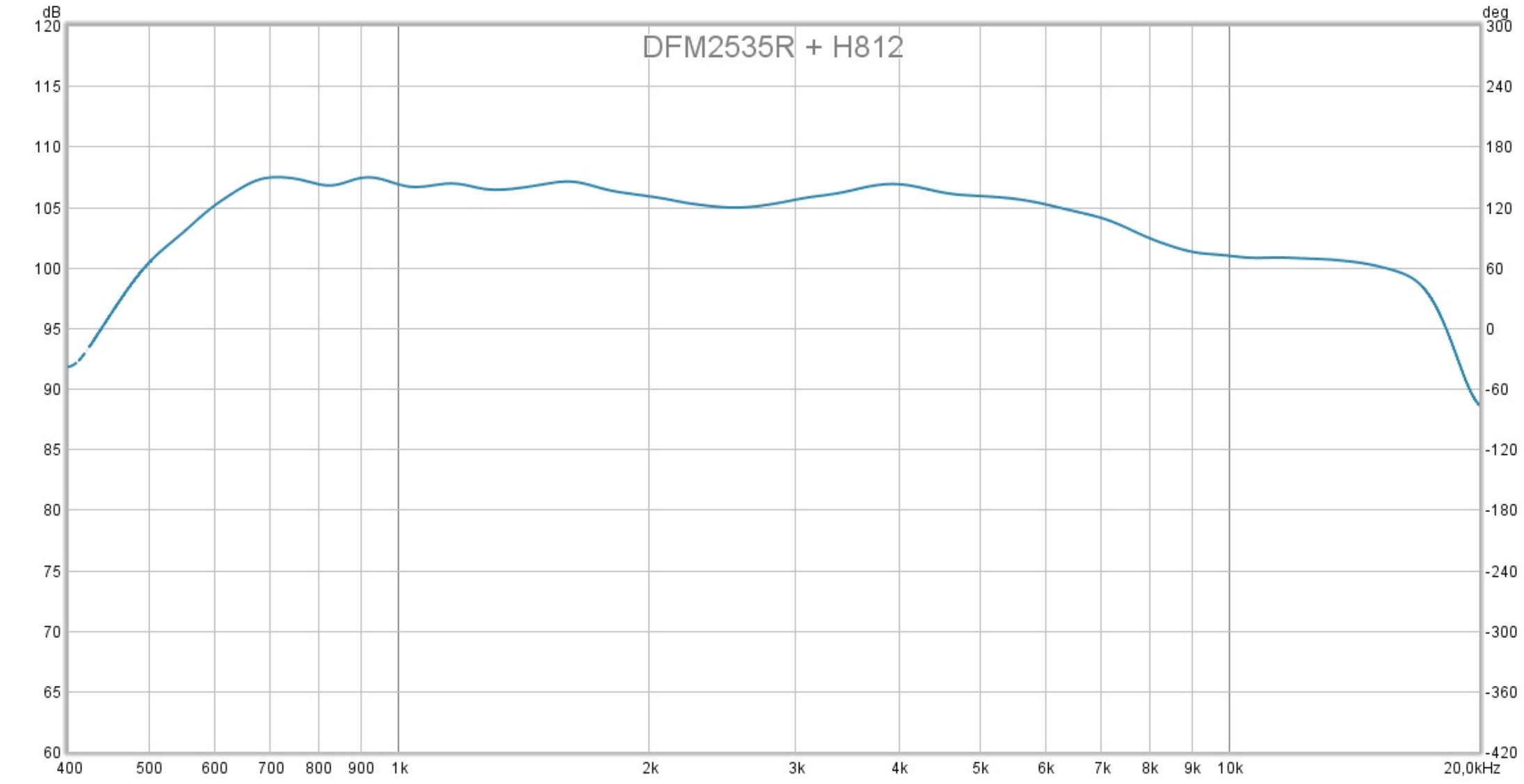
It is one of the shorter ones at the bottom with a band end going up suggesting a little splitting.

Selenium D220Ti



Same comment or almost as for the MRD160.

Tympahny DFM2535R



It is the least sensitive of the group and it does not load very low, it is probably due to its small diaphragm. (35mm against 44mm for all the others).

Frequency Response Ranking

I will not rank for this part. Linearity would be an important criterion in passive filtering, less in active with EQ. The differences in extension in the bass would not change much for the different applications possible here. It would then be necessary to judge the behavior at the end of the band but between the impedance curve and the temporal behavior this criterion will be widely noted elsewhere.