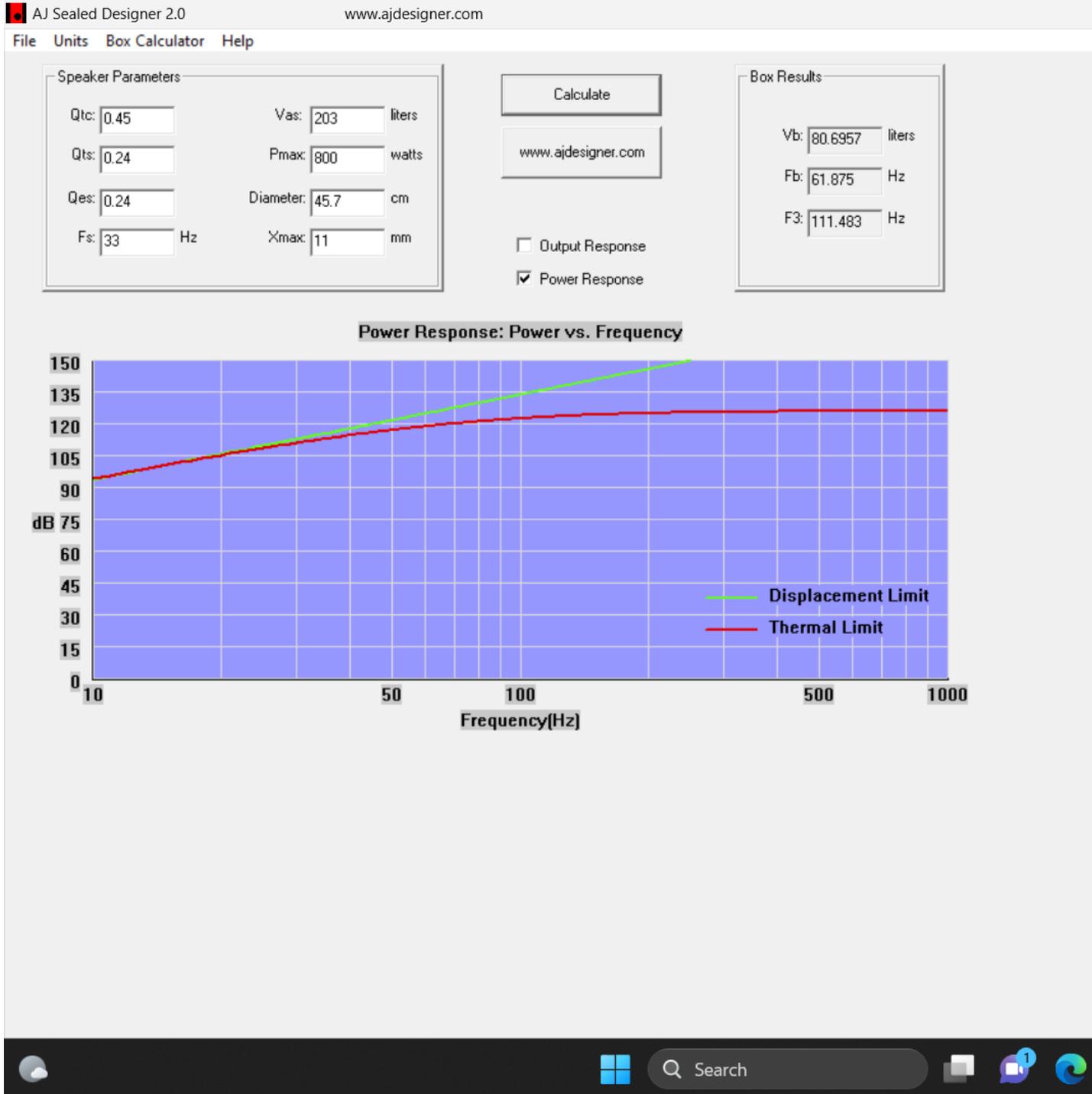
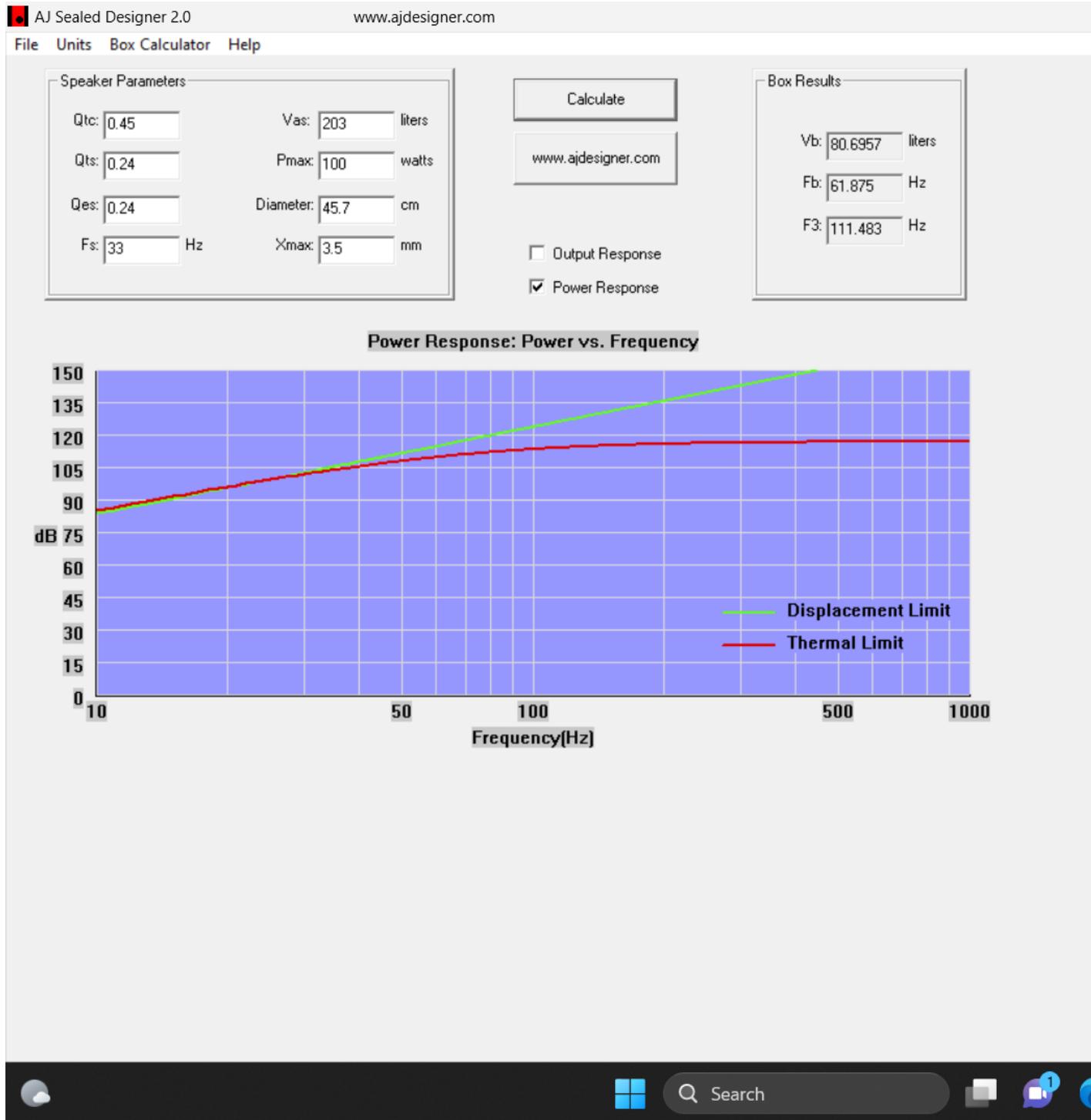


## Precision Devices and Beyma driver simulations in small sealed box designs

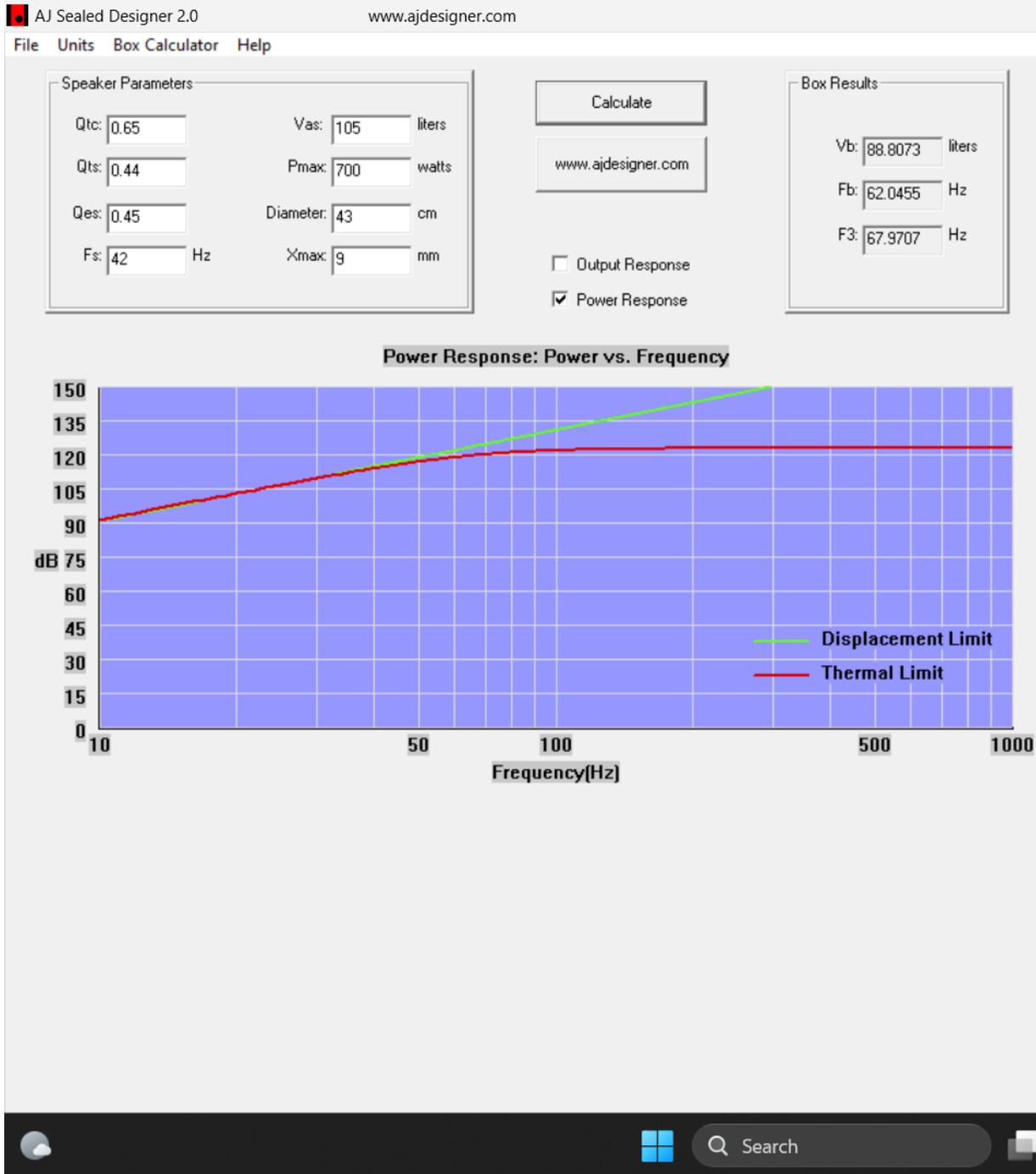
**PD 1850/3** - In low Q,(0.45) 80 liters - 800 watts continuous AES power handling with 3,200 watts peaks (!!!) with just 1.6 dB power compression at rated power (vented & massive, 5 inch voice coil with huge magnet/heat sink) is the lowest I have ever seen...One driver hits 106dB at 30Hz, two drivers hit 109dB then add 4dB for corner placement/room gain... OMG, your ears will run out of headroom before a pair of these bad boys!



**PD 1850/3** - In the real world even with just 100 watts (one eighth of their power handling and zero power compression) a single driver hits 103dB at 30Hz... A pair of these in room will exceed 110dB all day without ever exceeding 3.5mm cone travel (32% of Xmax) or even getting warm! If you can afford a pair of these, use them!!



**Beyma 15 LX60 Mk 2- Mid Q (0.65)** 88 liters - 700 watts continuous (1,400 peak) AES power handling, but this driver will have 4.5 dB to 5 dB power compression at rated power (dual layer 4 inch voice coil), but half the price (also half the weight!) of the PD 1850/3. On paper it hits 109dB at 30Hz, but the power compression at rated power results in a real world figure of around 104dB at 30 Hz... Still bloody loud!



**Beyma 15 LX60 Mk 2-** In the real world even with just 100 watts (one seventh of its power handling and with around 1.2 dB power compression) a single driver hits 102dB at 30Hz... A pair of these in room will exceed 105dB all day without ever exceeding 4.5mm cone travel which is 50% of Xmax.

AJ Sealed Designer 2.0 [www.ajdesigner.com](http://www.ajdesigner.com)

File Units Box Calculator Help

Speaker Parameters

Qtc:  Vas:  liters

Qts:  Pmax:  watts

Qes:  Diameter:  cm

Fs:  Hz Xmax:  mm

Calculate

[www.ajdesigner.com](http://www.ajdesigner.com)

Output Response

Power Response

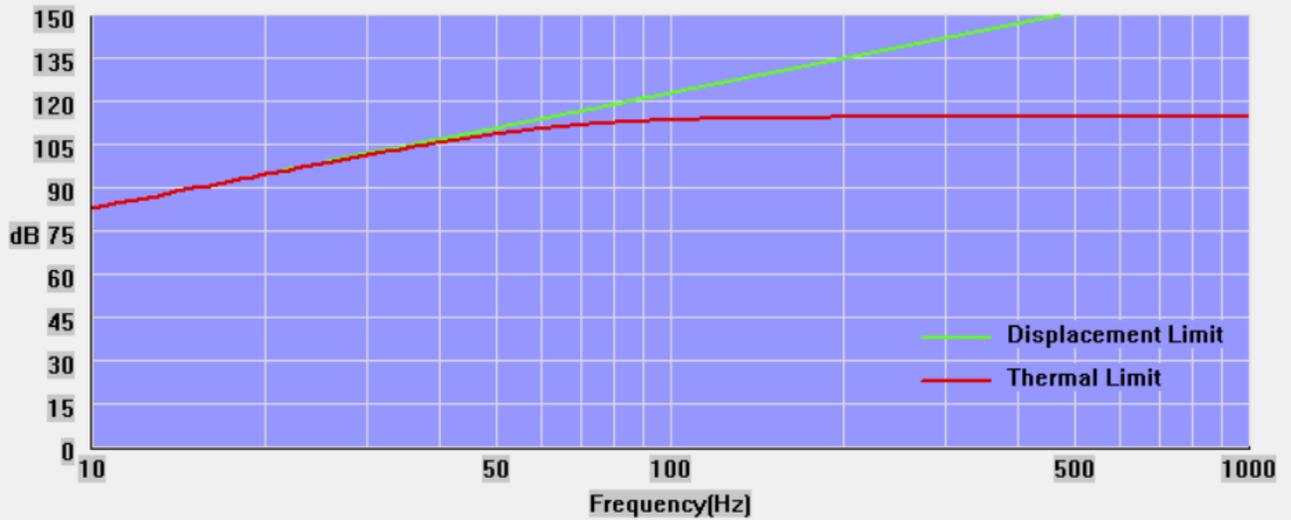
Box Results

Vb:  liters

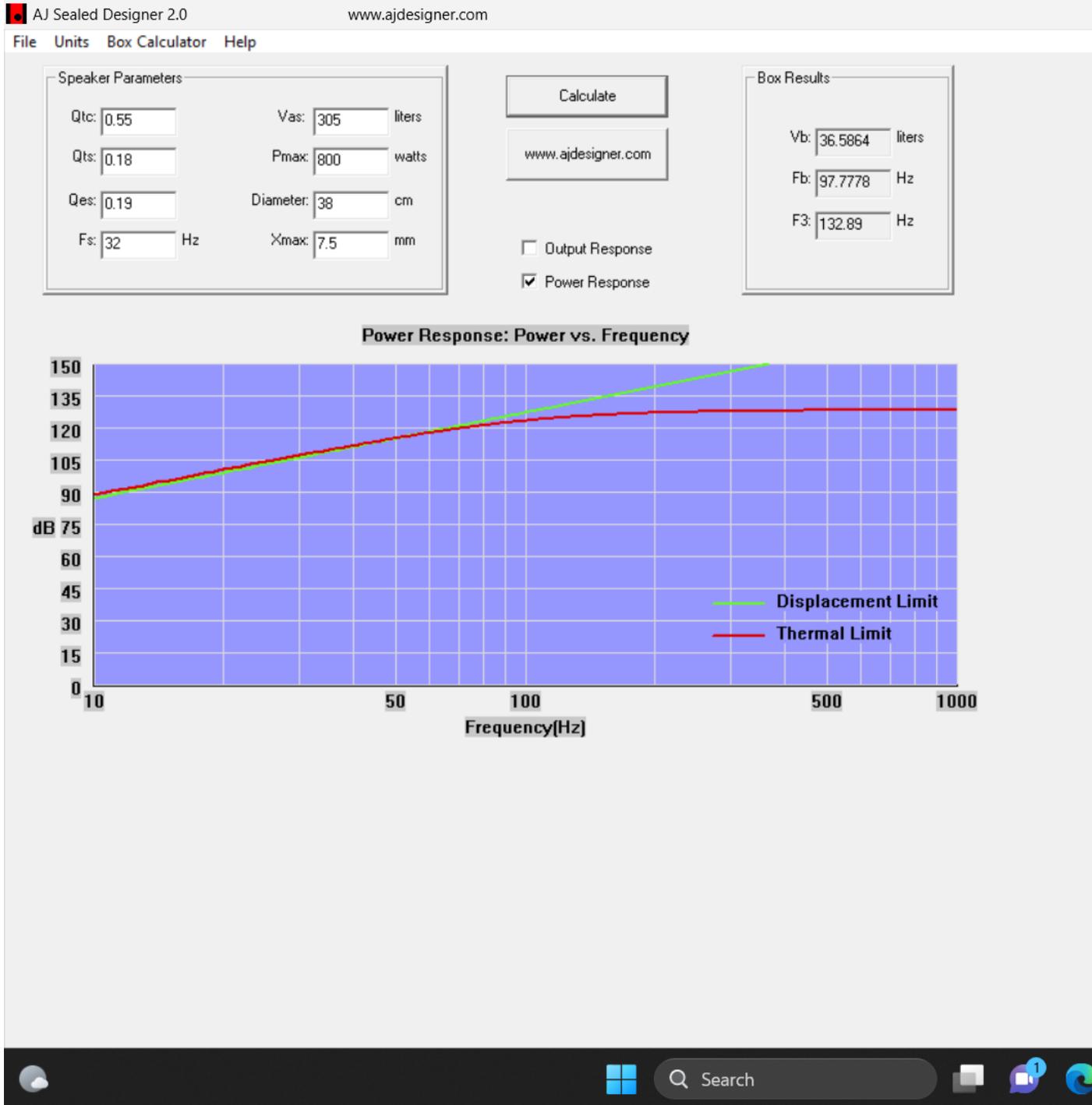
Fb:  Hz

F3:  Hz

Power Response: Power vs. Frequency



**Beyma 15 P80 Fe/N** - Low Q (0.55) 88 liters - 800 watts continuous (1,600 peak) AES power handling, but this driver will have 2.5 to 3.5 dB of power compression at rated power (vented 4 inch voice coil). Whilst this driver can do bass and low midrange, it really is perfectly designed for dedicated low midrange and has a superb low Mms (88g) and reasonably high BI (22.1) resulting in a "fast" ratio of just 3.98. Used above 80Hz a single driver hits 121dB!



**Beyma 15 P80 Fe/N** - Used above 80 Hz in a small sealed box and 100 watts (one eighth of its power handling and with around 1dB power compression) a single driver hits 112dB at 80Hz, so a pair will hit 115dB using just 33% of their Xmax cone travel. Just astonishing all round performance used in the 80 Hz to 800 Hz region.

AJ Sealed Designer 2.0 [www.ajdesigner.com](http://www.ajdesigner.com)

File Units Box Calculator Help

Speaker Parameters

Qtc:  Vas:  liters

Qts:  Pmax:  watts

Qes:  Diameter:  cm

Fs:  Hz Xmax:  mm

Calculate

[www.ajdesigner.com](http://www.ajdesigner.com)

Output Response

Power Response

Box Results

Vb:  liters

Fb:  Hz

F3:  Hz

**Power Response: Power vs. Frequency**

Frequency (Hz)	Displacement Limit (dB)	Thermal Limit (dB)
10	80	80
50	105	105
100	120	120
500	145	120
1000	150	120

Windows taskbar: Search, task icons, system tray.

**Beyma 12 P80 Fe/V2** - Low Q (0.42) 20 liters - 700 watts continuous (1,600 peak) AES power handling, but this driver will have 2.5 to 3.5 dB of power compression at rated power (vented 4 inch voice coil). Whilst this driver can do bass and low midrange, it really is perfectly designed for dedicated low midrange and has a superb low Mms (76g) and reasonably high BI (23) resulting in a very fast 3.3 ratio and when used above 80Hz a single driver hits 117dB!

AJ Sealed Designer 2.0 www.ajdesigner.com

File Units Box Calculator Help

Speaker Parameters

Qtc:  Vas:  liters

Qts:  Pmax:  watts

Qes:  Diameter:  cm

Fs:  Hz Xmax:  mm

Calculate

www.ajdesigner.com

Output Response

Power Response

Box Results

Vb:  liters

Fb:  Hz

F3:  Hz

### Power Response: Power vs. Frequency

Frequency (Hz)	Displacement Limit (dB)	Thermal Limit (dB)
10	85	85
50	110	110
100	120	115
500	150	120
1000	-	125

**Beyma 12 P80 Fe/V2 - At** 100 watts (one seventh of its power handling) it will have below 1dB power compression and a single driver hits 107dB at 80Hz, so a pair will hit 110dB using just 2 mm or 27% of their Xmax cone travel and all in 20 liters! Also the low Mms (76g) and strong BI (23) gives a very fast ratio of 3.3. Overall a stunning driver which has a huge fan base. I have not used the Neo mag version but it will be great too. Best up to 1,000Hz, though some folks cross it a bit higher.

AJ Sealed Designer 2.0

www.ajdesigner.com

File Units Box Calculator Help

Speaker Parameters

Qtc:  Vas:  liters

Qts:  Pmax:  watts

Qes:  Diameter:  cm

Fs:  Hz Xmax:  mm

Calculate

www.ajdesigner.com

- Output Response
- Power Response

Box Results

Vb:  liters

Fb:  Hz

F3:  Hz

Power Response: Power vs. Frequency

