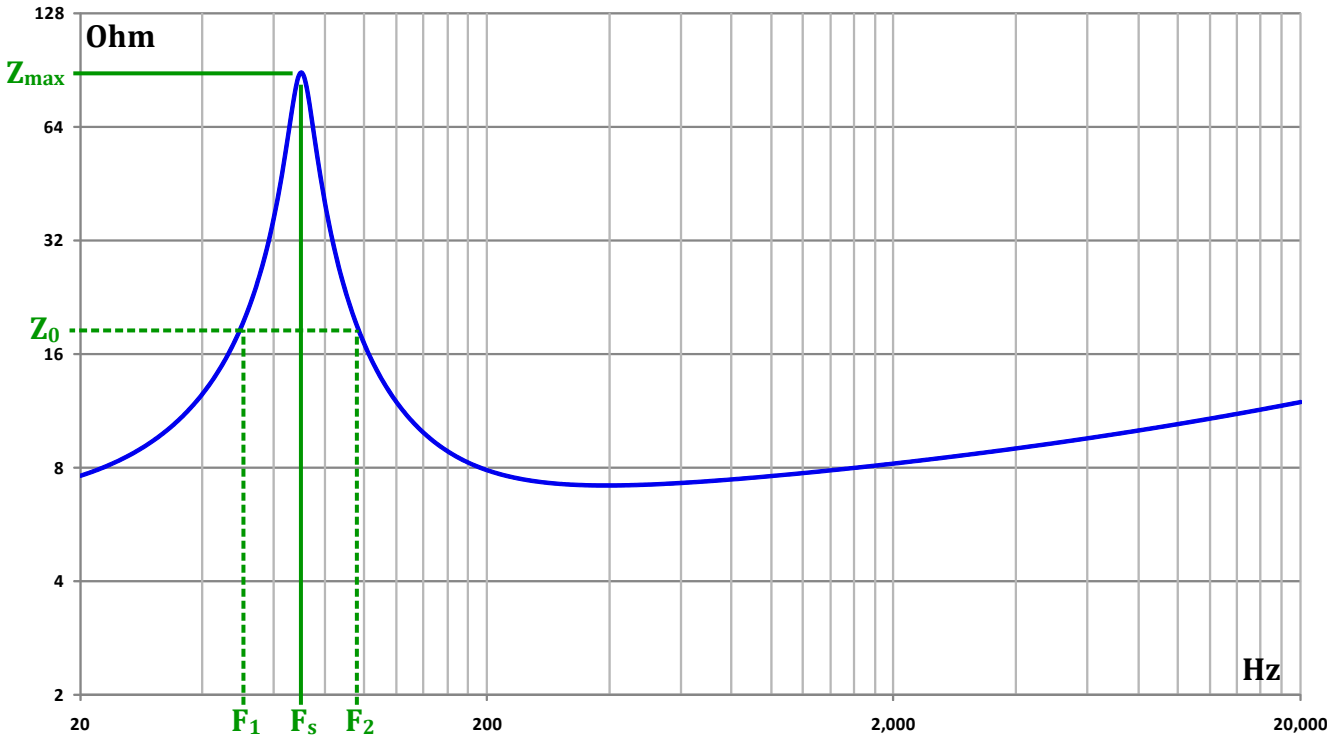
Measuring/calculating driver Q values using the impedance curve

R_e	DC resistance of driver
F_s	Resonance frequency of driver
Z_{max}	Impedance at F_s
Z_0	Calculated impedance level for reading F_1 and F_2
F_1	Lower frequency where $Z=Z_0$
F_2	Upper frequency where $Z=Z_0$
Q_{ms}	Mechanical Q of driver
Q_{es}	Electricaal Q of driver
Q_{ts}	Total Q of driver



Qms

Step 1. Measure R_e of the driver

Step 2. Read the values F_s and Z_{max} from the impedance curve

Step 3. Calculate Z_0 as $Z_0 = \sqrt{R_e \times Z_{max}}$

Step 4. Read the values F_1 and F_2 from the impedance curve

Step 5. Calculate Q_{ms} as $Q_{ms} = \frac{F_s}{(F2-F1)} \times \sqrt{\frac{Z_{max}}{R_e}}$

Qes

Calculate Q_{es} as $Q_{es} = \frac{Q_{ms}}{\frac{Z_{max}}{R_e} - 1}$

Qts

Calculate Q_{ts} as $Q_{ts} = \frac{Q_{ms} \times Q_{es}}{Q_{ms} + Q_{es}}$