

10.0" Extended Woofer

PURE SOUND

Long Stroke driver with
Ultra Low Distortion



PTT10.0X04-NAB-01 PREVIEW

KEY SPECIFICATIONS

- ⊙ Negligible Force Factor Modulation and Surround Radiation Distortion
- ⊙ Low Magnetic Hysteresis Distortion
- ⊙ "Real" long-stroke Performance: Distortion remains low over full Excursion
- ⊙ Uncompromised Midrange Performance
- ⊙ Designed and Manufactured in Denmark

Driver size	10"
DC resistance, R_{DC}	3.9 Ω
Resonance freq., f_s	20 Hz
Total Q factor, Q_{ts}	0.30
Effective piston area	360 cm ²
Equivalent volume, V_{as}	113 L
SPL@2.83V _{rms} /1m	87.5 dB
Linear X_{max}	+/- 14.75 mm
Mechanical X_{max}	+/- 25.0 mm
IEC Power handling	TBD
Cone material	Black Anodized Aluminum

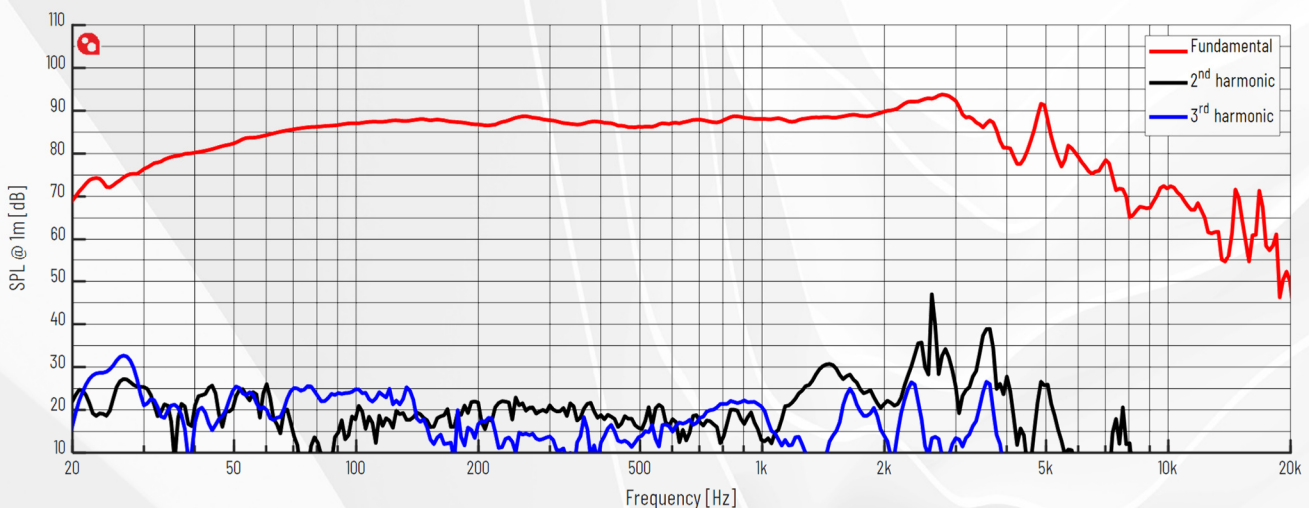


Figure 1 Frequency Response 2.83Vrms @1m

1 Specifications

1.1 Electrical & Acoustical Parameter

Parameter		Typ	Unit
Z_n	Nominal impedance	4	Ω
Z_{min}	Minimum impedance above resonance	4.6	Ω
f_{min}	Frequency for minimum impedance	150	Hz
Z_o	Maximum impedance	68	Ω
R_{DC}	DC resistance	3.9	Ω
L_e	Voice Coil inductance @ 1kHz 0mm	0.62	mH
SPL	SPL@2.83V _{rms} /1m, 300Hz-800Hz, ref. 20 μ Pa (infinite baffle / 2pi)	87.5	dB
	SPL@1W(Z_{min})/1m, 300Hz-800Hz, ref. 20 μ Pa (infinite baffle / 2pi)	85.1	dB

Table 1 Electrical & Acoustical Parameters

1.2 T/S & Lumped Parameters

Parameter		Typ	Unit
f_s	Resonance frequency	20	Hz
Q_{ms}	Mechanical Q factor	5.1	-
Q_{es}	Electrical Q factor	0.31	-
Q_{ts}	Total Q factor	0.30	-
V_{as}	Equivalent volume	113	L
S_d	Effective piston area	359.7	cm ²
D	Effective piston diameter	21.4	cm
Bl	Force factor	12.6	N/A
R_{ms}	Mechanical resistance	2.48	kg/s
M_{ms}	Moving mass	99.4	g
C_{ms}	Suspension compliance	0.62	mm/N

Table 2 T/S & Lumped Parameters

1.3 Mechanical Properties

Parameter		Typ	Unit
Excursion Properties			
X_{max}	Linear excursion = (Voice Coil length - Airgap height) / 2	+/-14.75	mm
	Mechanical excursion	+/-25.0	mm
Physical Dimensions			
	Basket diameter	269	mm
	Cutout diameter	242	mm
	Mounting hole pattern diameter	257.5	mm
	Mounting hole diameter	5.2	mm
	Magnet diameter	140	mm
	Outer flange height	5	mm
	Build-in depth	145	mm
	Weight	6.0	kg
Voice Coil Properties			
	Voice Coil diameter	52	mm
	Voice Coil length	34.5	mm
	Voice Coil layers	4	-
	Airgap height	5	mm
	Winding material	CCAW	-

Table 3 Mechanical Properties

1.4 Power Handling

Parameter		Typ	Unit
	Long term maximum power (IEC268-5 18.2)	TBD	W
	Rated noise power, 100h (IEC268-5 18.4)	TBD	W

Table 4 Power Handling



1.5 Typical Performance, Graphs

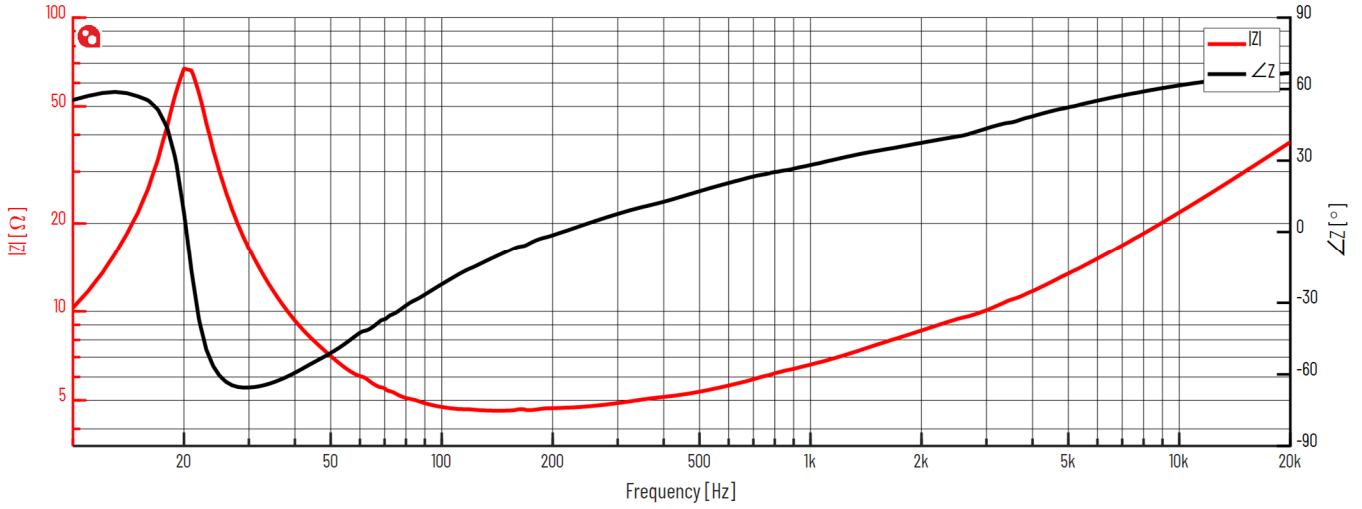


Figure 2 Impedance Response @ 2.83V

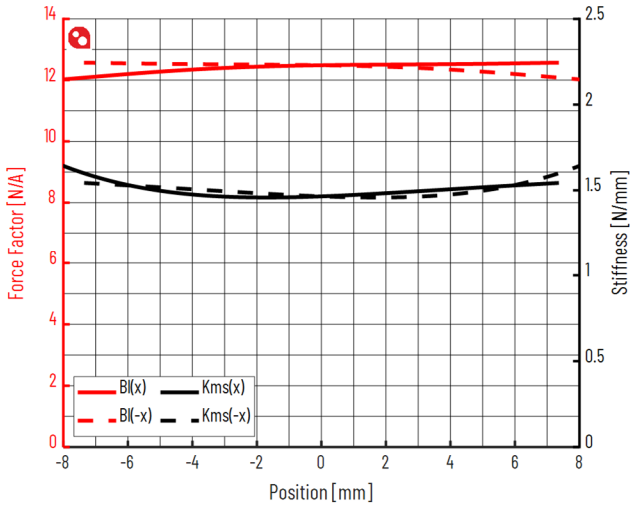


Figure 3 Force Factor and Stiffness vs Voice Coil Position

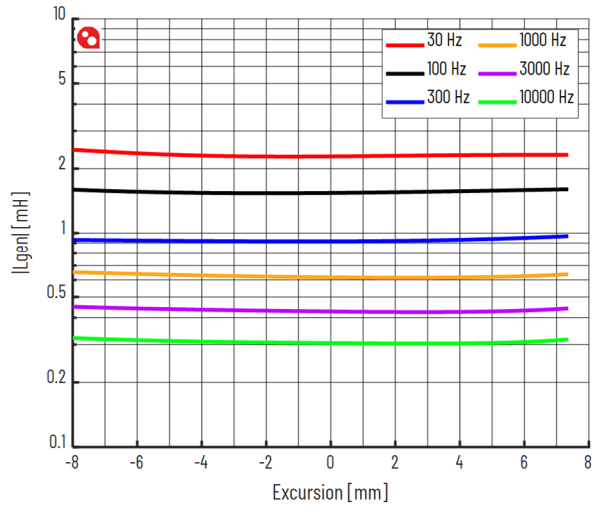


Figure 4 Inductance vs Voice Coil Position

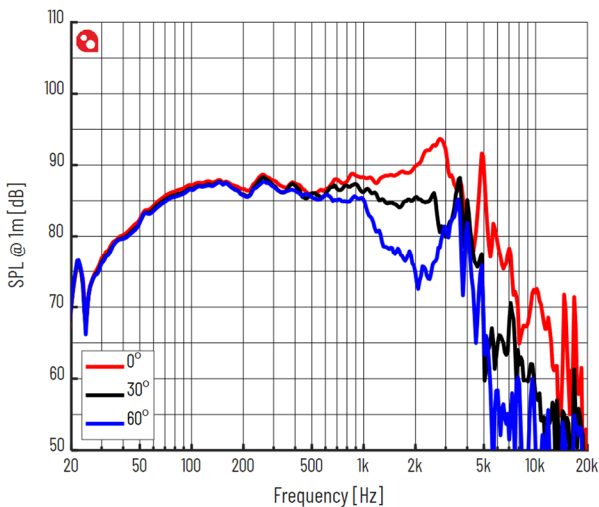


Figure 5 Axial Frequency Response @ 1m, 2.83Vrms

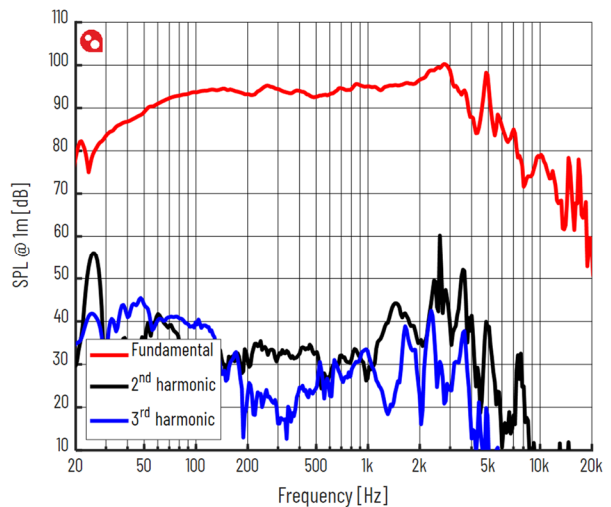


Figure 6 Frequency Response @ 1m, 94dB

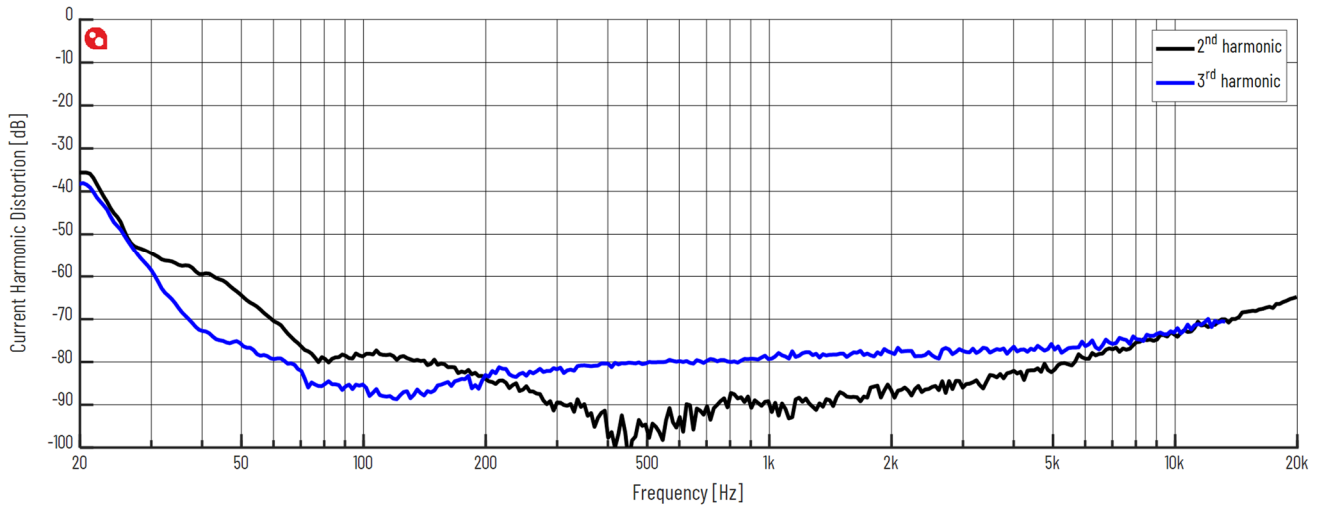


Figure 7 Current Harmonic Distortion @ 2.83Vrms

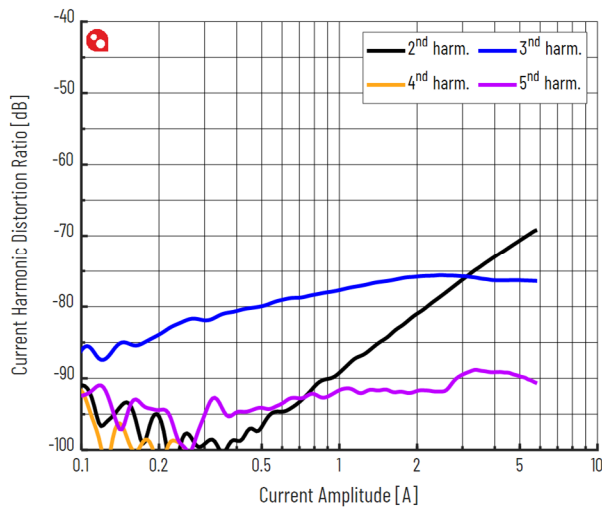


Figure 8 Current Harmonic Distortion @ 1kHz, 0-28.3Vrms

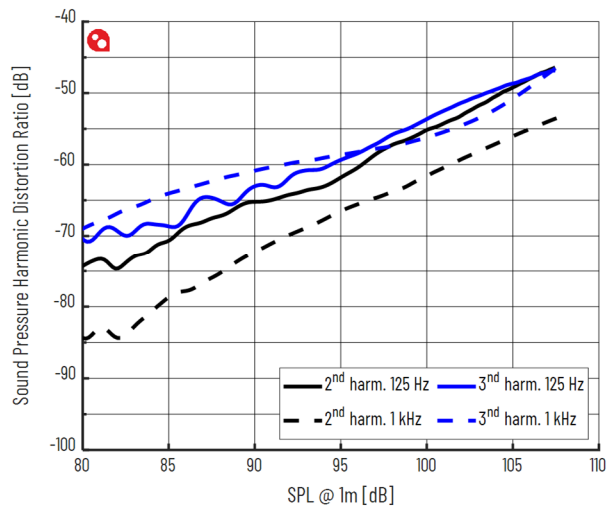


Figure 9 Sound Pressure Harmonic Distortion @ 1m, 0-28.3Vrms

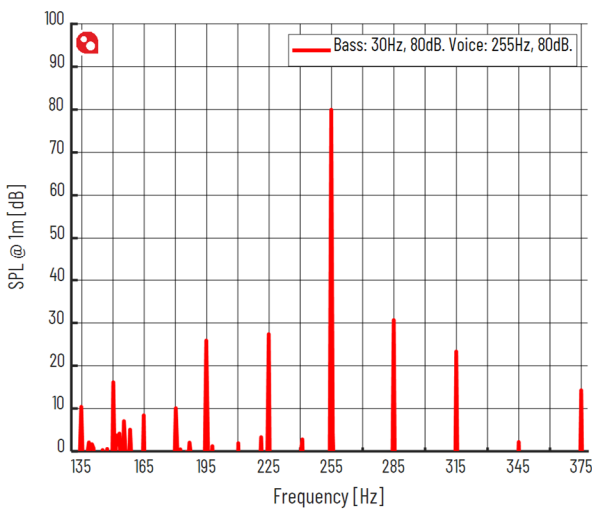


Figure 10 Intermodulation Distortion @ 30Hz 80dB, 255Hz 80dB

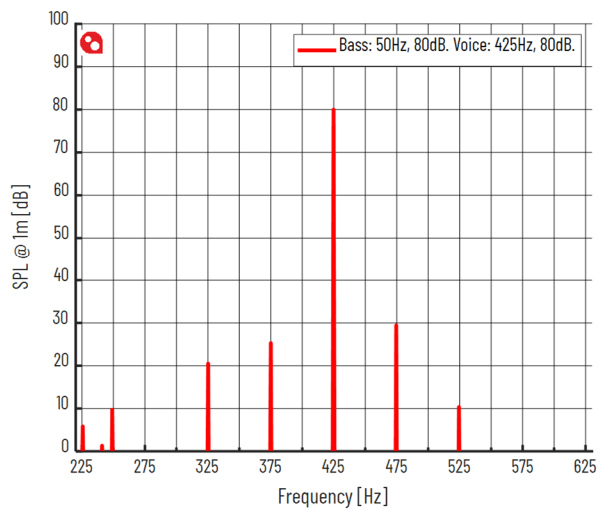
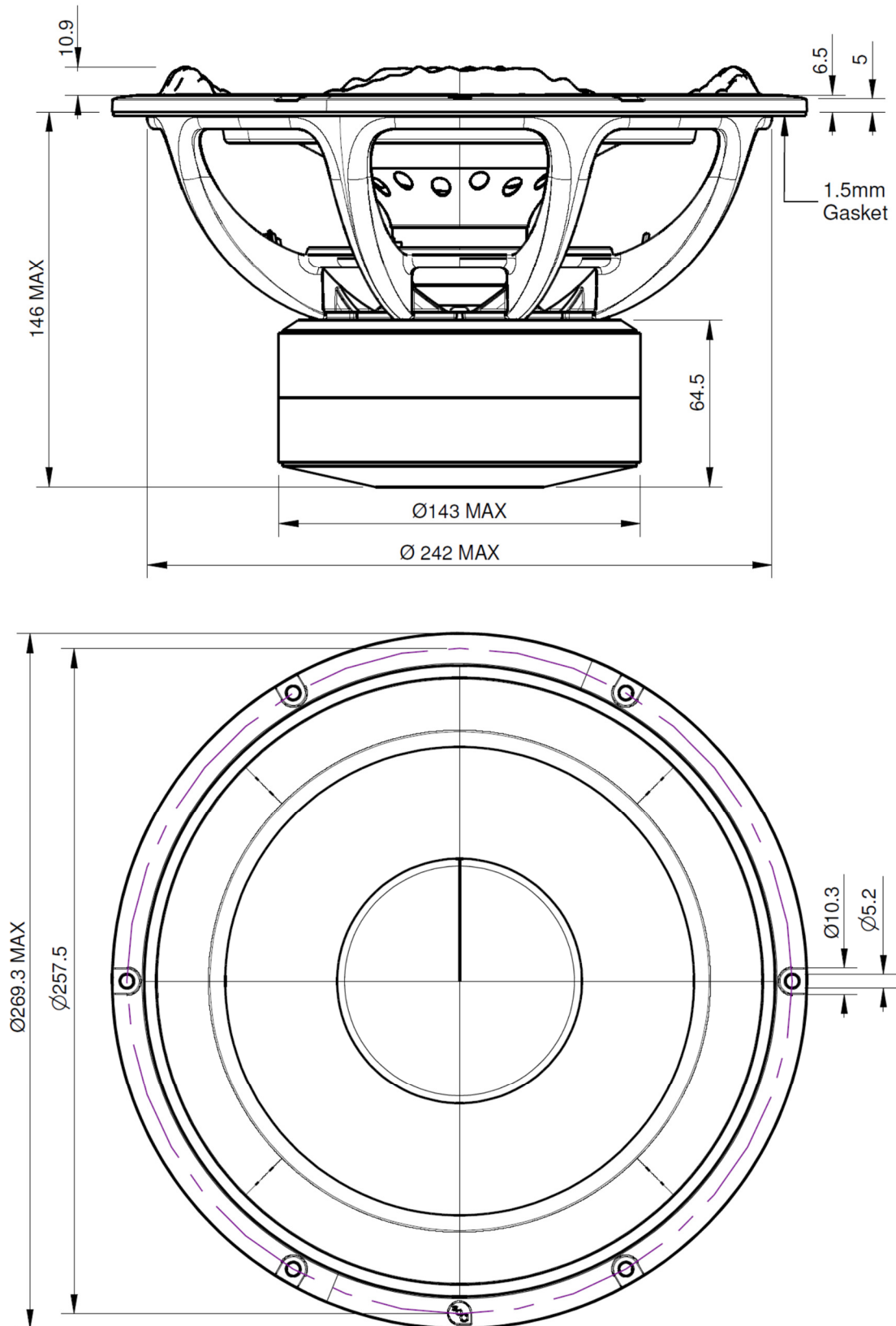


Figure 11 Intermodulation Distortion @ 50Hz 80dB, 425Hz 80dB

2 Drawings



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