

8.0" Extended Woofer

**PURE  
SOUND**

Long Stroke driver with  
Ultra Low Distortion



# PTT8.0X04-NAB-02 DATA SHEET

- ⊙ 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	8"
DC resistance, $R_{DC}$	3.5 $\Omega$
Resonance freq., $f_s$	26 Hz
Total Q factor, $Q_{ts}$	0.34
Effective piston area	235 cm <sup>2</sup>
Equivalent volume, $V_{as}$	66 L
SPL@2.83V <sub>rms</sub> /1m	90.0 dB
Linear $X_{max}$	+/- 9.3 mm
Mechanical $X_{max}$	+/- 15.0 mm
IEC Power handling	350 W
Cone material	Black Anodized Aluminum

## KEY SPECIFICATIONS

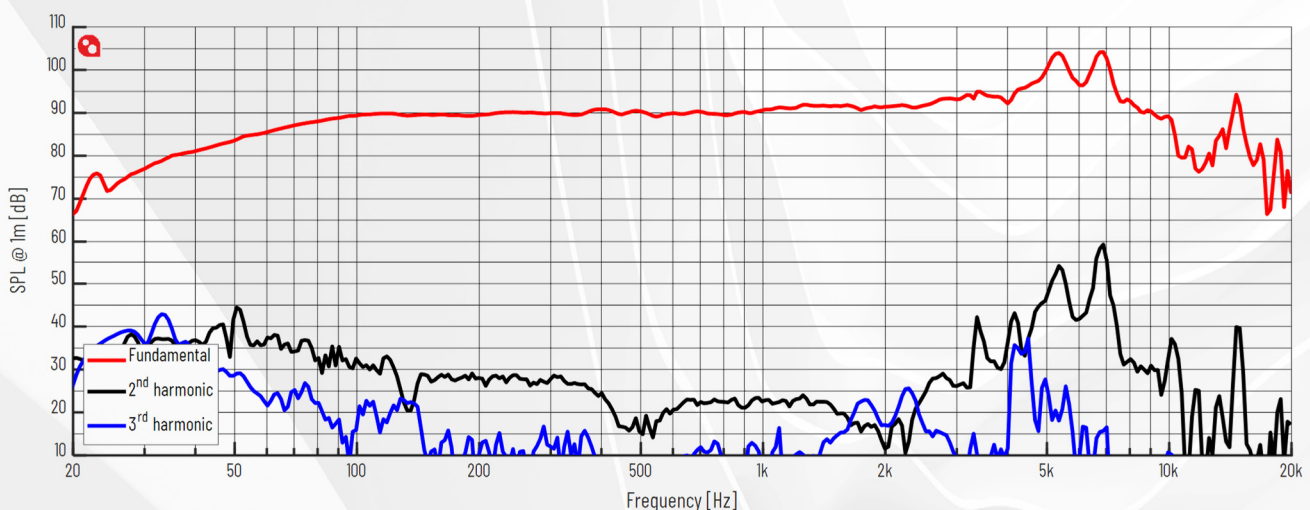


Figure 1 Frequency Response 2.84V<sub>rms</sub> @1m

# 1 Specifications

## 1.1 Electrical & Acoustical Parameter

Parameter		Typ	Unit
$Z_n$	Nominal impedance	4	$\Omega$
$Z_{min}$	Minimum impedance above resonance	3.8	$\Omega$
$f_{min}$	Frequency for minimum impedance	250	Hz
$Z_o$	Maximum impedance	61	$\Omega$
$R_{DC}$	DC resistance	3.5	$\Omega$
$L_e$	Voice Coil inductance @ 1kHz 0mm	0.18	mH
SPL	SPL@2.83V <sub>rms</sub> /1m, 300Hz-800Hz, ref. 20 $\mu$ Pa (infinte baffle / 2pi)	90.0	dB
	SPL@1W( $Z_{min}$ )/1m, 300Hz-800Hz, ref. 20 $\mu$ Pa (infinte baffle / 2pi)	86.8	dB

Table 1 Electrical &amp; Acoustical Parameters

## 1.2 T/S & Lumped Parameters

Parameter		Typ	Unit
$f_s$	Resonance frequency	26	Hz
$Q_{ms}$	Mechanical Q factor	5.9	-
$Q_{es}$	Electrical Q factor	0.36	-
$Q_{ts}$	Total Q factor	0.34	-
$V_{as}$	Equivalent volume	65.6	L
$S_d$	Effective piston area	235.1	cm <sup>2</sup>
$D$	Effective piston diameter	17.3	cm
$Bl$	Force factor	8.3	N/A
$R_{ms}$	Mechanical resistance	1.22	kg/s
$M_{ms}$	Moving mass	43.7	g
$C_{ms}$	Suspension compliance	0.84	mm/N

Table 2 T/S &amp; Lumped Parameters

## 1.3 Mechanical Properties

Parameter		Typ	Unit
<b>Excursion Properties</b>			
$X_{max}$	Linear excursion = (Voice Coil length - Airgap height) / 2	+/-9.3	mm
	Mechanical excursion	+/-15.0	mm
<b>Physical Dimensions</b>			
	Basket diameter	221	mm
	Cutout diameter	193	mm
	Mounting hole pattern diameter	210	mm
	Mounting hole diameter	5.2	mm
	Magnet diameter	140	mm
	Outer flange height	5	mm
	Build-in depth	102	mm
	Weight	3.7	kg
<b>Voice Coil Properties</b>			
	Voice Coil diameter	52	mm
	Voice Coil length	23.6	mm
	Voice Coil layers	2	-
	Airgap height	5	mm
	Winding material	CCA W	-

Table 3 Mechanical Properties

## 1.4 Power Handling

Parameter		Typ	Unit
	Long term maximum power (IEC268-5 18.2)	350	W
	Rated noise power, 100h (IEC268-5 18.4)	TBD	W

Table 4 Power Handling

### 1.5 Typical Performance, Graphs

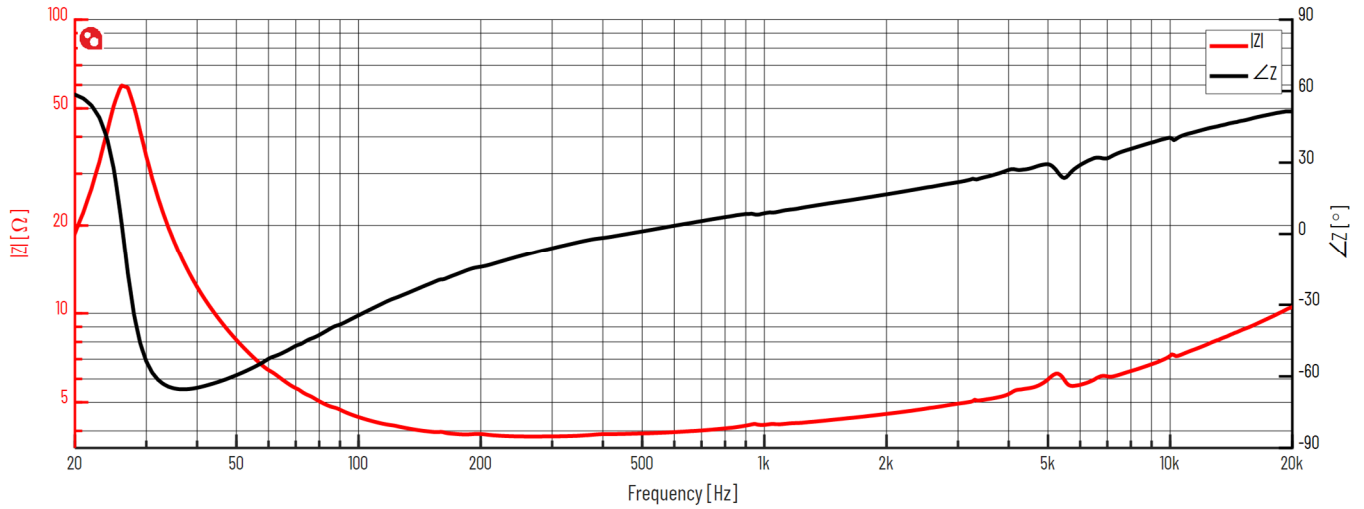


Figure 2 Impedance Response @ 2.83V

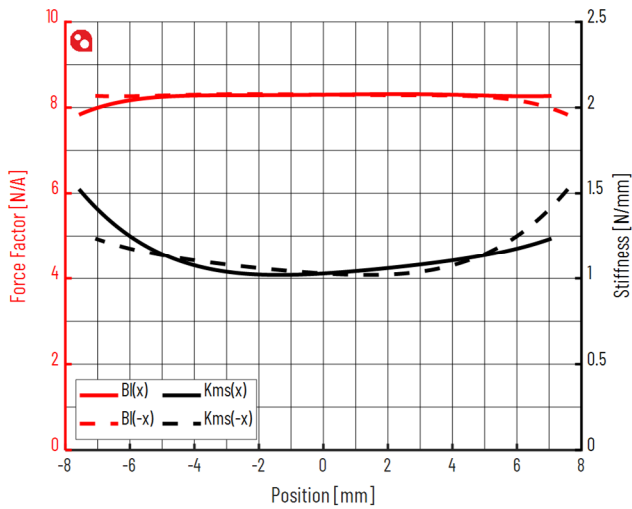


Figure 3 Force Factor and Stiffness vs Voice Coil Position

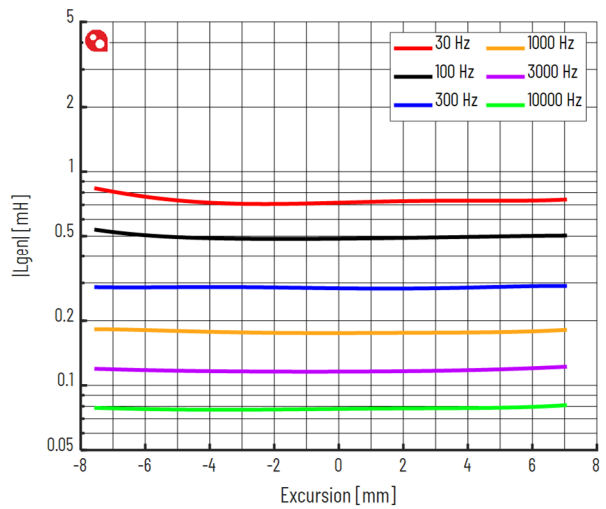


Figure 4 Inductance vs Voice Coil Position

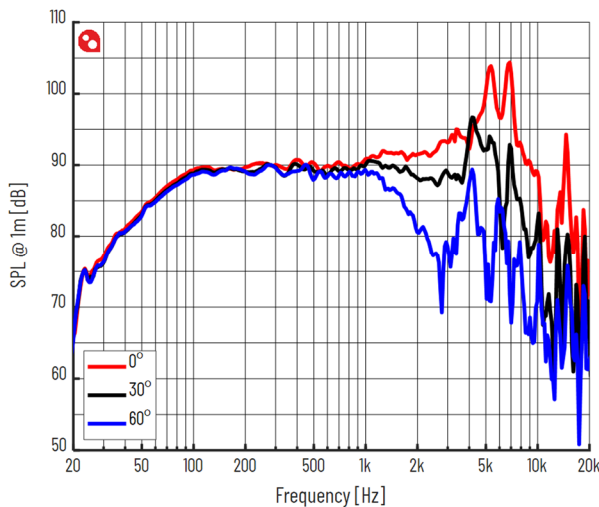


Figure 5 Axial Frequency Response @ 1m, 2.83Vrms

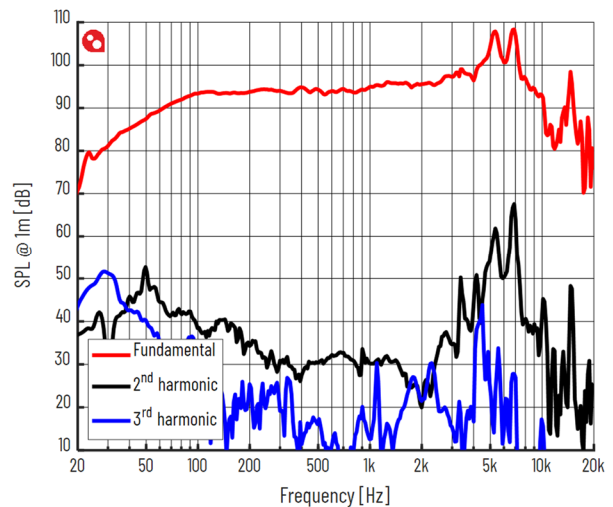


Figure 6 Frequency Response @ 1m, 94dB

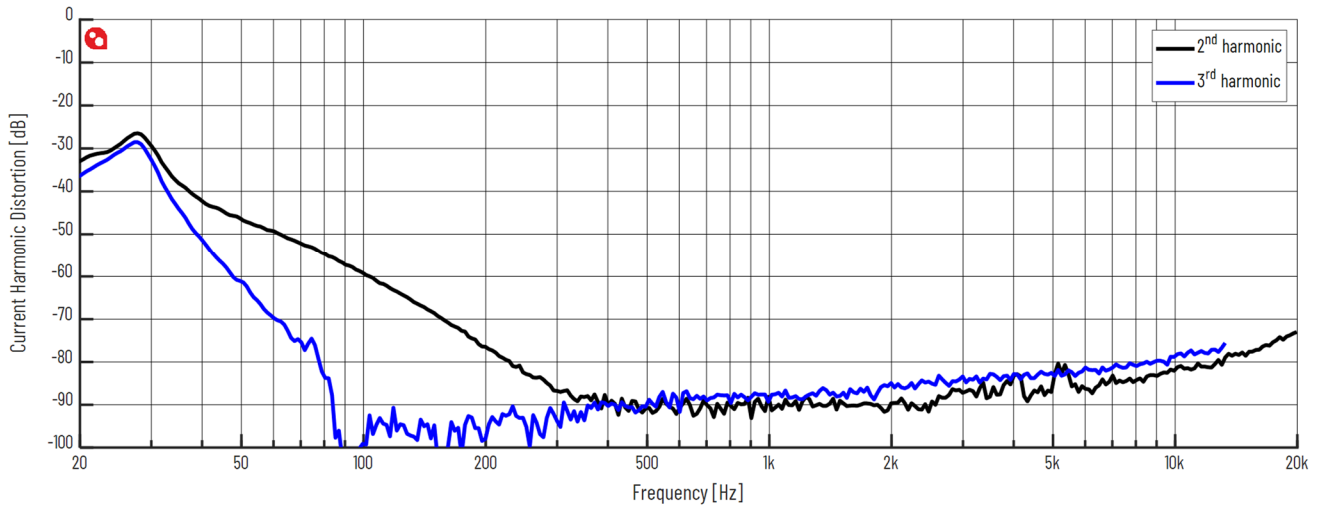


Figure 7 Current Harmonic Distortion @ 2.83Vrms

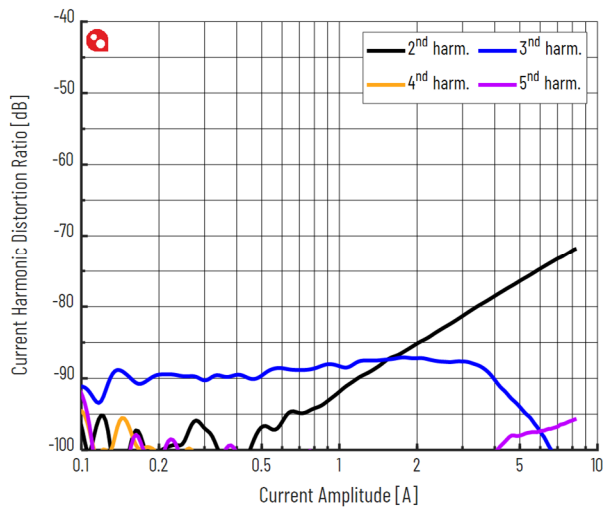


Figure 8 Current Harmonic Distortion @ 1kHz, 0-28.3Vrms

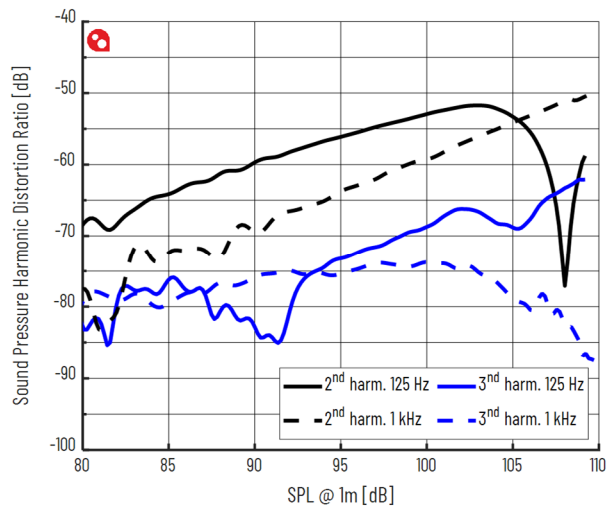


Figure 9 Sound Pressure Harmonic Distortion @ 1m, 0-28.3Vrms

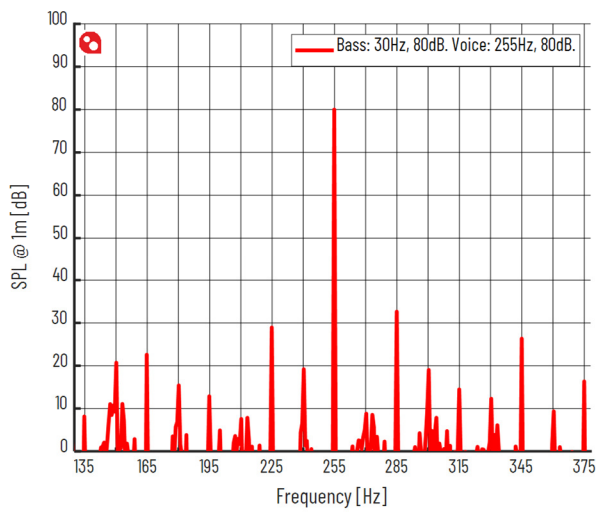


Figure 10 Intermodulation Distortion @ 30Hz 80dB, 255Hz 80dB

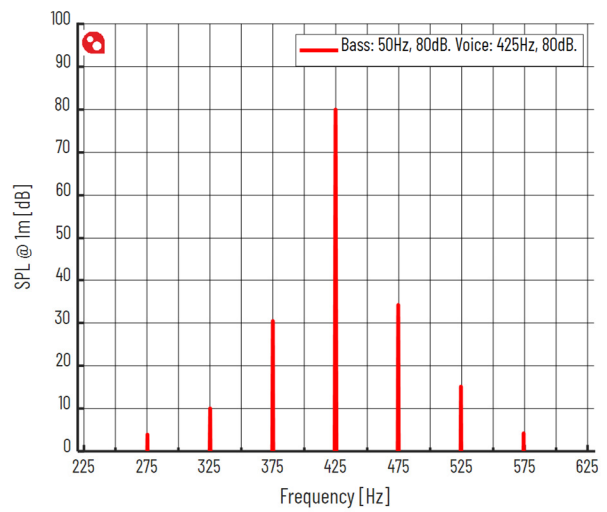
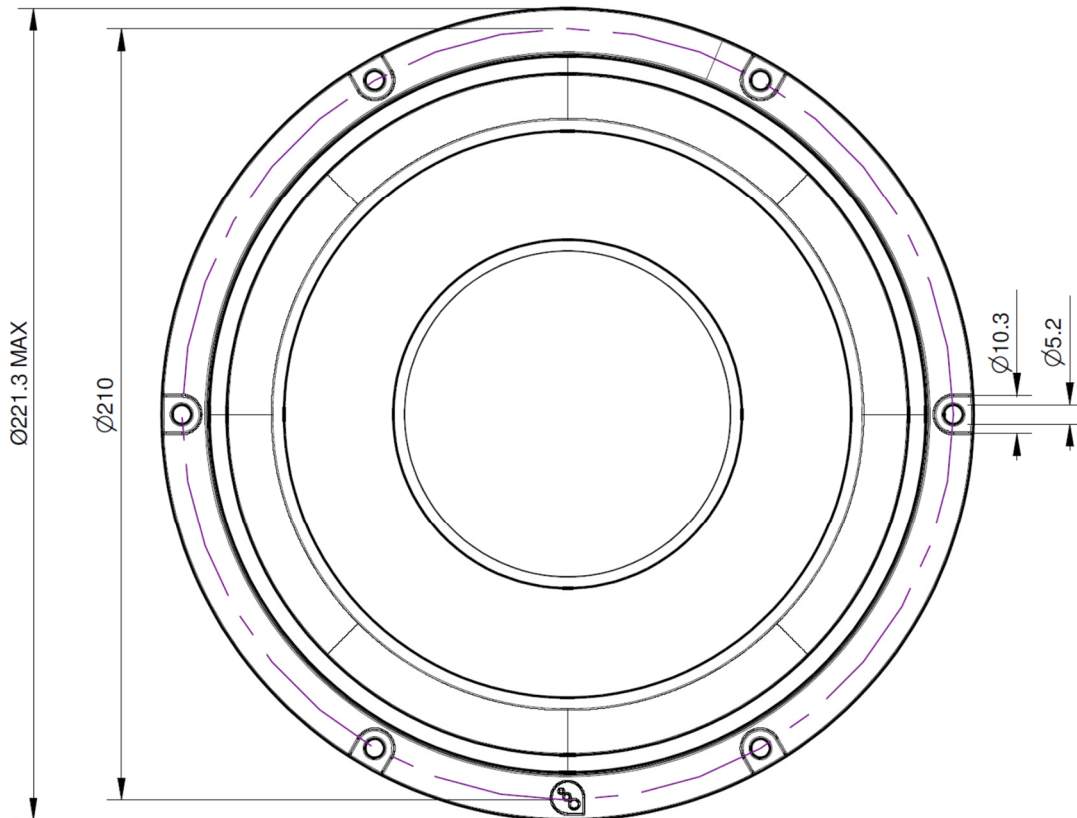
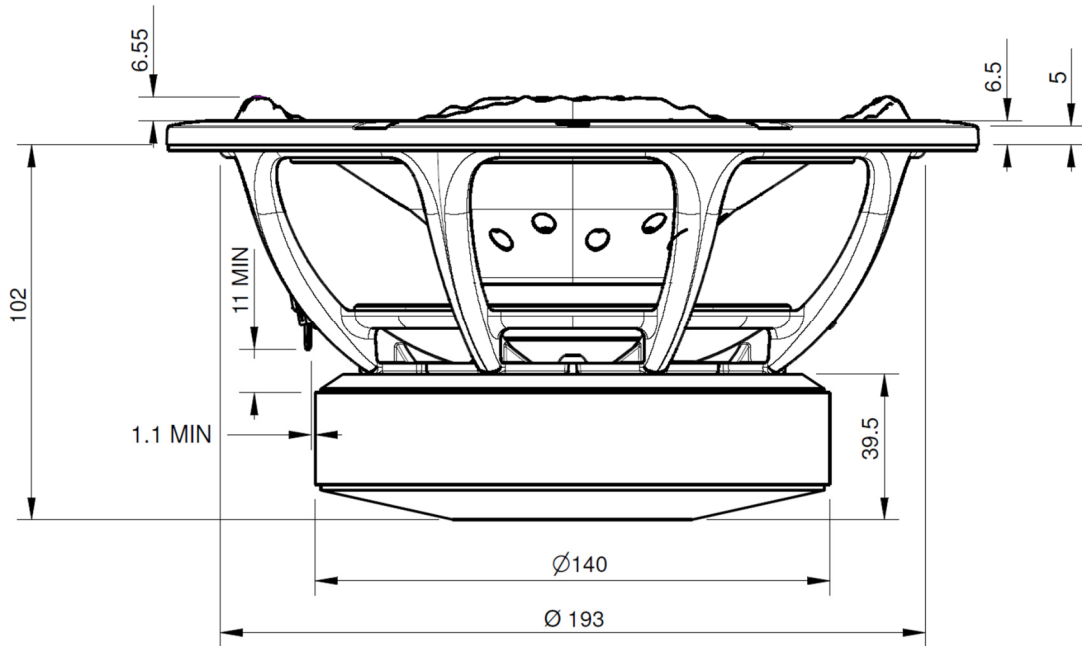


Figure 11 Intermodulation Distortion @ 50Hz 80dB, 425Hz 80dB

## 2 Drawings



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