PURIFI

6.5" Midrange

PURE SOUND

Ultra Low Distortion Midrange

PTT6.5M08-NAA-07
DATA SHEET

KEY SPECIFICATIONS

- Optimized for Midrange use
- Negligible Force Factor Modulation
- Ultra Low Magnetic Hysteresis Distortion
- Utilize PURIFI's Neutral Surround Technology
- Designed and Manufactured in Denmark

Driver size	6.5"
DC resistance, R_{DC}	6.2 Ω
Resonance freq., f_s	38 Hz
Total Q factor, Q_{ts}	0.31
Effective piston area	133 cm^2
Equivalent volume, V_{as}	21.6 L
SPL@2.83V_{rms}/1m	87.9 dB
Linear X_{max}	+/- 2.9 mm
Mechanical X_{max}	+/- 14.5 mm
IEC Power handling	200 W
Cone material	Black Anodized Aluminum

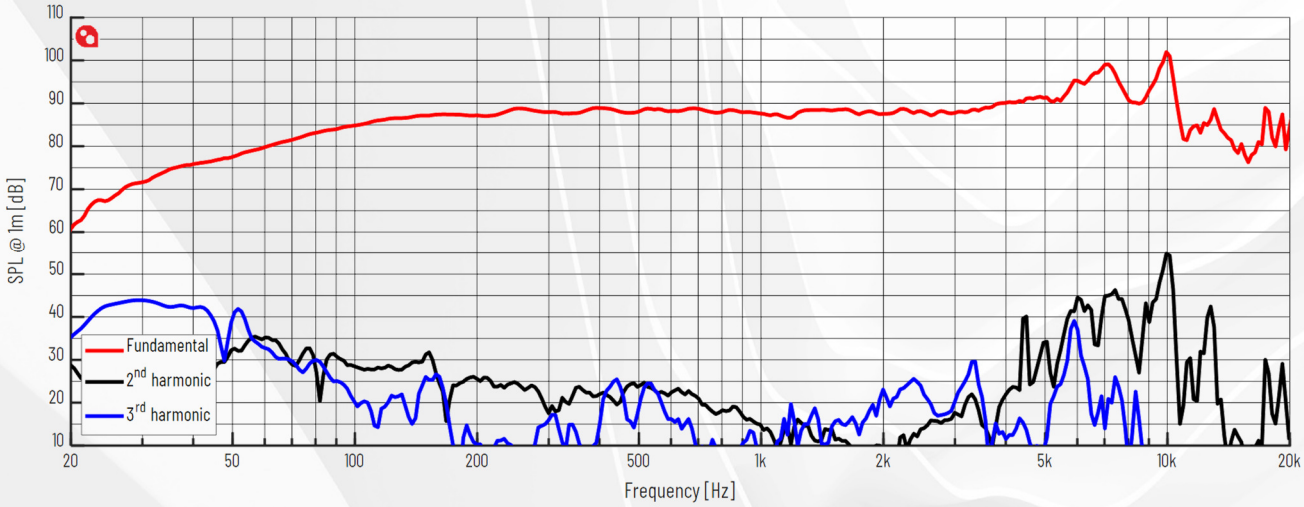

Figure 1 Frequency Response 2.83Vrms @1m

1 Specifications

1.1 Electrical & Acoustical Parameter

Parameter		Typ	Unit
Z_n	Nominal impedance	8	Ω
Z_{min}	Minimum impedance above resonance	6.7	Ω
f_{min}	Frequency for minimum impedance	341	Hz
Z_o	Maximum impedance	132	Ω
R_{DC}	DC resistance	6.2	Ω
L_e	Voice Coil inductance @ 1kHz 0mm	0.36	mH
SPL	SPL@2.83V_{rms}/1m, 1000Hz-2800Hz, ref. 20µPa (infinite baffle / 2pi)	87.9	dB
	SPL@1W(Z_{min})/1m, 1000Hz-2800Hz, ref. 20µPa (infinite baffle / 2pi)	87.1	dB

Table 1 Electrical & Acoustical Parameters

1.2 T/S & Lumped Parameters

Parameter		Typ	Unit
f_s	Resonance frequency	38	Hz
Q_{ms}	Mechanical Q factor	6.7	-
Q_{es}	Electrical Q factor	0.33	-
Q_{ts}	Total Q factor	0.31	-
V_{as}	Equivalent volume	21.6	L
S_d	Effective piston area	132.7	cm^2
D	Effective piston diameter	13.0	cm
Bl	Force factor	9.6	N/A
R_{ms}	Mechanical resistance	0.73	kg/s
M_{ms}	Moving mass	20.8	g
C_{ms}	Suspension compliance	0.87	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	+/-2.9	mm
	Mechanical excursion	+/-14.5	mm
Physical Dimensions			
	Basket diameter	176	mm
	Cutout diameter	148	mm
	Mounting hole pattern diameter	166	mm
	Mounting hole diameter	5.2	mm
	Magnet diameter	100	mm
	Outer flange height	3.6	mm
	Build-in depth	85.2	mm
	Weight	1.75	kg
Voice Coil Properties			
	Voice Coil diameter	39	mm
	Voice Coil length	9.8	mm
	Voice Coil layers	4	-
	Airgap height	4	mm
	Winding material	CCAW	-

Table 3 Mechanical Properties

1.4 Power Handling

Parameter		Typ	Unit
	Long term maximum power (IEC268-5 18.2)	200	W
	Rated noise power, 100h (IEC268-5 18.4)	80	W
	Crossover: 2nd order high pass Butterworth @ 200Hz	-	-

Table 4 Power Handling

1.5 Typical Performance, Graphs

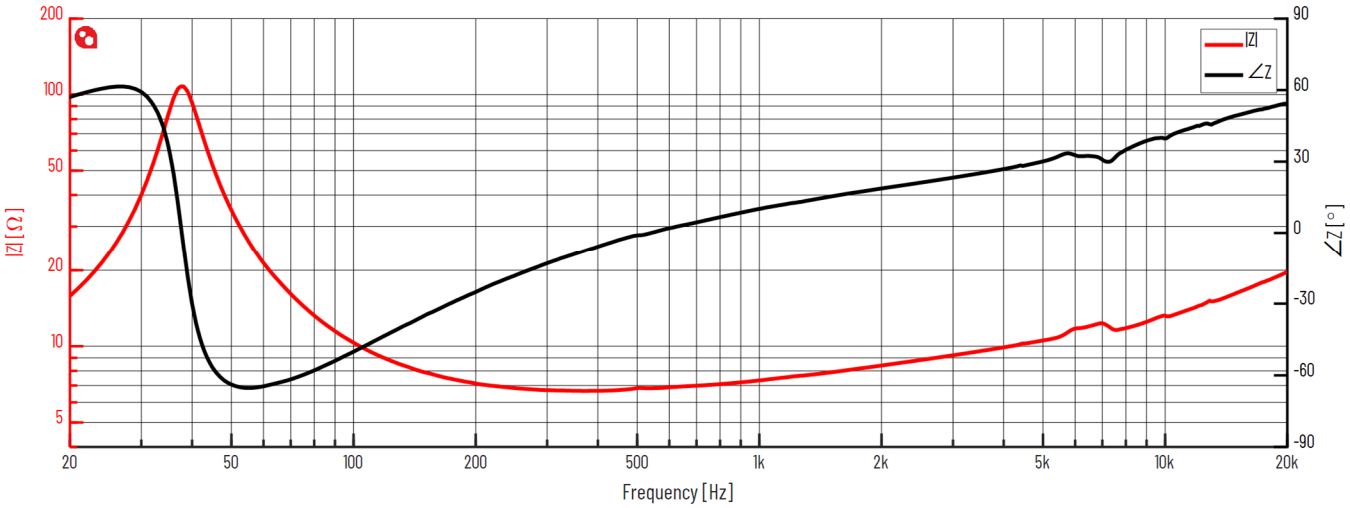

Figure 2 Impedance Response @ 2.83V

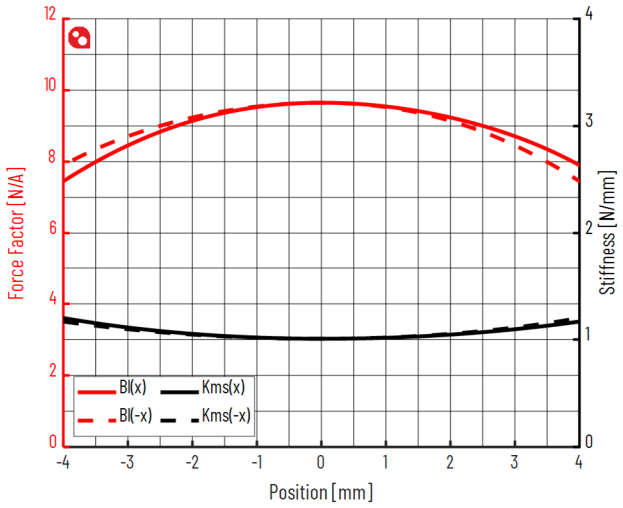

Figure 3 Force Factor and Stiffness vs Voice Coil Position

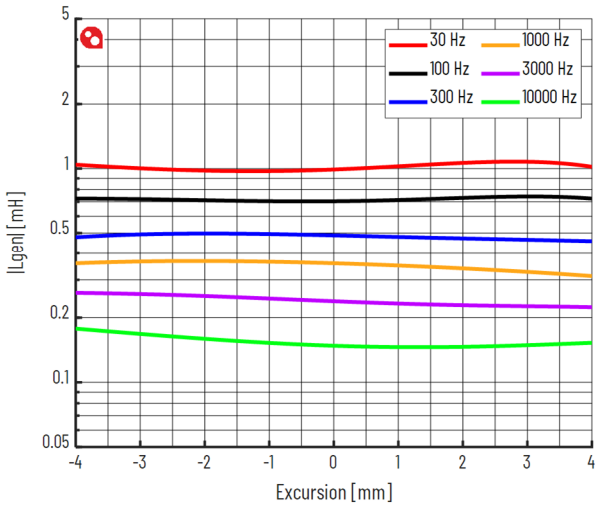

Figure 4 Inductance vs Voice Coil Position

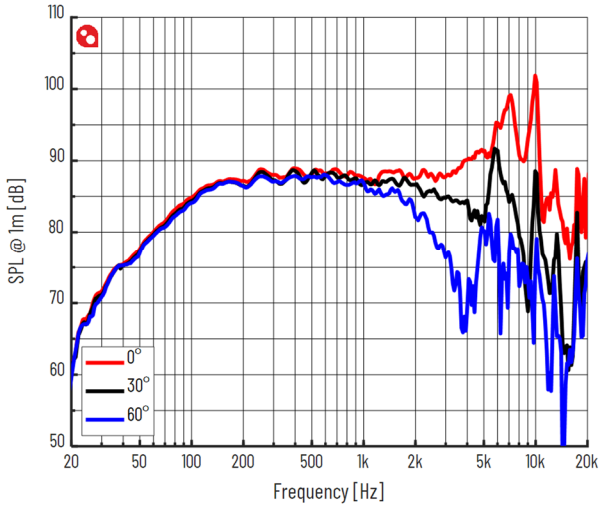

Figure 5 Axial Frequency Response @ 1m, 2.83Vrms

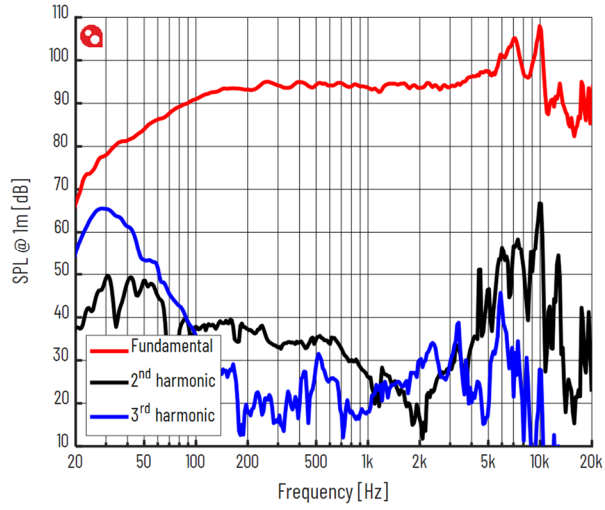

Figure 6 Frequency Response @ 1m, 94dB

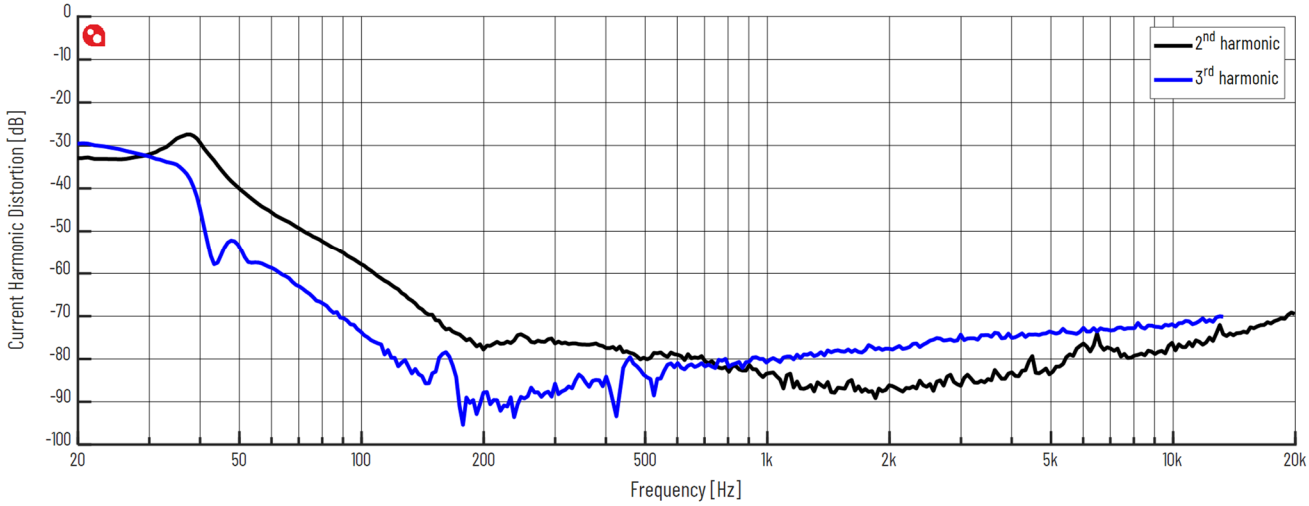

Figure 7 Current Harmonic Distortion @ 2.83Vrms

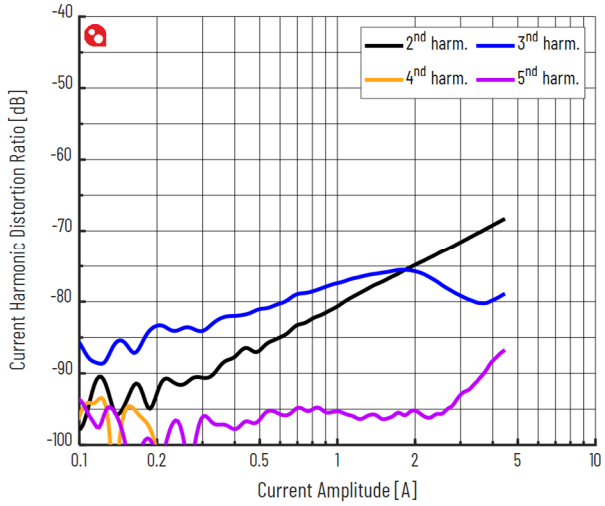

Figure 8 Current Harmonic Distortion @ 1kHz, 0-28.3Vrms

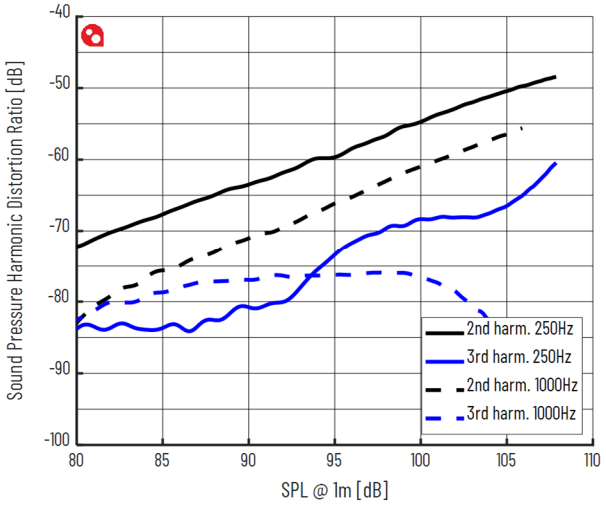

Figure 9 Sound Pressure Harmonic Distortion @ 1m, 0-28.3Vrms

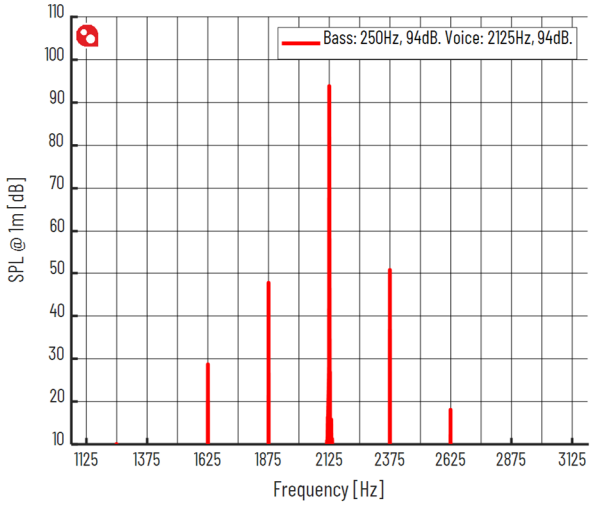

Figure 10 Intermodulation Distortion @ 250Hz 94dB, 2125Hz 94dB

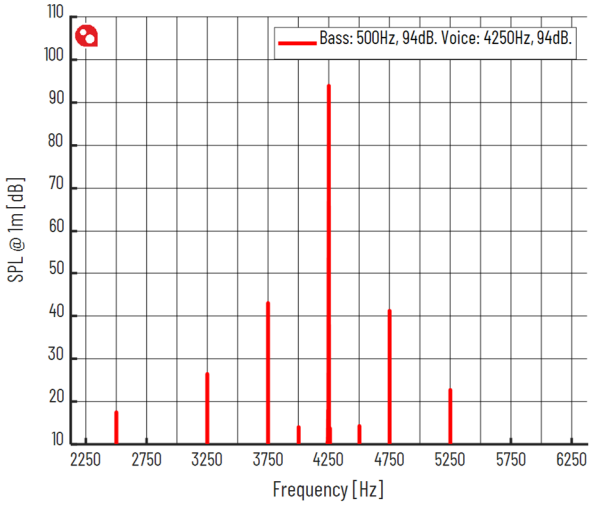

Figure 11 Intermodulation Distortion @ 500Hz 94dB, 4250Hz 94dB

2 Drawings