

10.0" Extended Woofer

PURE SOUND

Long Stroke driver with
Ultra Low Distortion



PTT10.0X04-NAB-01 DATA SHEET

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	24 Hz
Total Q factor, Q_{ts}	0.33
Effective piston area	360 cm ²
Equivalent volume, V_{as}	82 L
SPL@2.83V _{rms} /1m	88.0 dB
Linear X_{max}	+/- 14.75 mm
Mechanical X_{max}	+/- 25.0 mm
IEC Power handling	TBD
Cone material	Black Anodized Aluminum

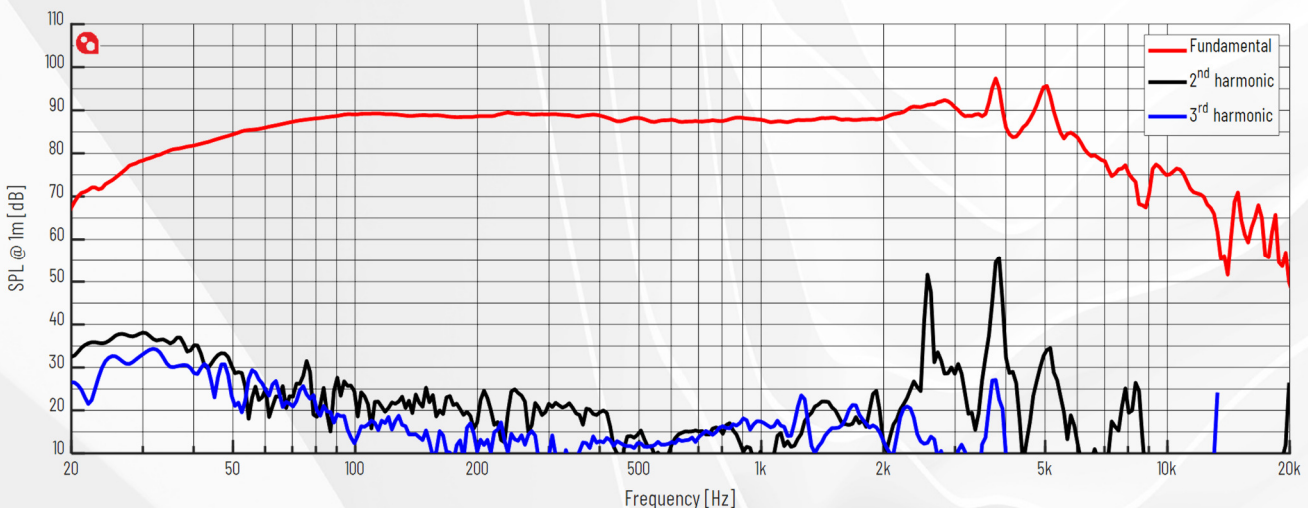


Figure 1 Frequency Response 2.83V_{rms} @1m

1 Specifications

1.1 Electrical & Acoustical Parameter

Parameter		Typ	Unit
Z_n	Nominal impedance	4	Ω
Z_{min}	Minimum impedance above resonance	4.7	Ω
f_{min}	Frequency for minimum impedance	156	Hz
Z_o	Maximum impedance	65	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)	88.0	dB
	SPL@1W(Z_{min})/1m, 300Hz-800Hz, ref. 20 μ Pa (infinite baffle / 2pi)	85.7	dB

Table 1 Electrical & Acoustical Parameters

1.2 T/S & Lumped Parameters

Parameter		Typ	Unit
f_s	Resonance frequency	24	Hz
Q_{ms}	Mechanical Q factor	5.5	-
Q_{es}	Electrical Q factor	0.35	-
Q_{ts}	Total Q factor	0.33	-
V_{as}	Equivalent volume	82	L
S_d	Effective piston area	360	cm ²
D	Effective piston diameter	21.4	cm
Bl	Force factor	12.8	N/A
R_{ms}	Mechanical resistance	2.69	kg/s
M_{ms}	Moving mass	98.0	g
C_{ms}	Suspension compliance	0.44	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	5.0	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	5.0	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

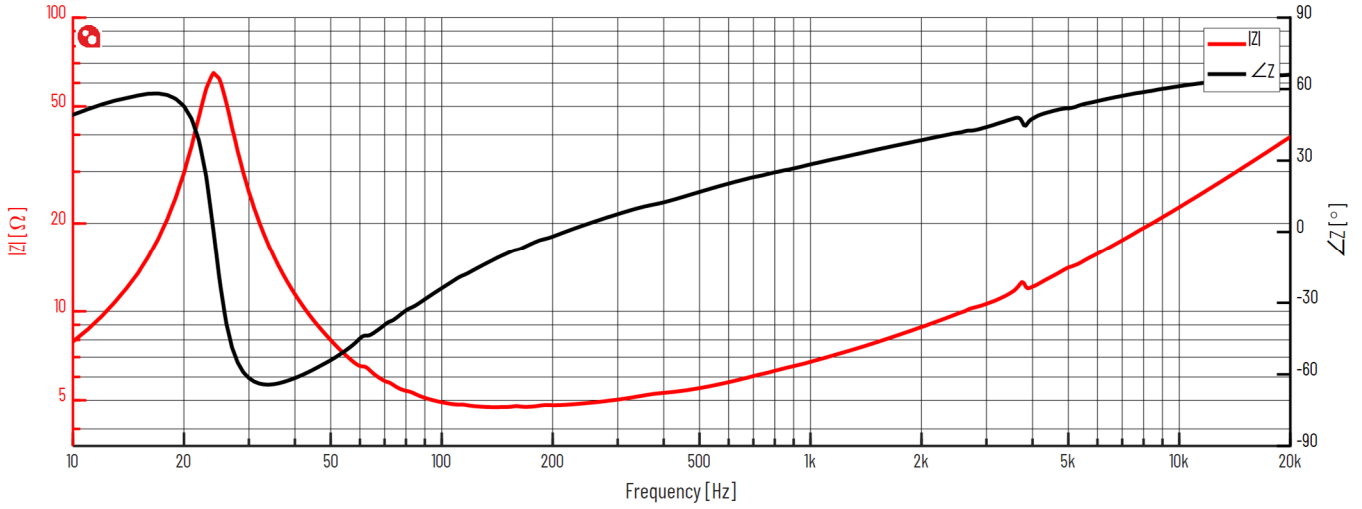


Figure 2 Impedance Response @ 2.83V

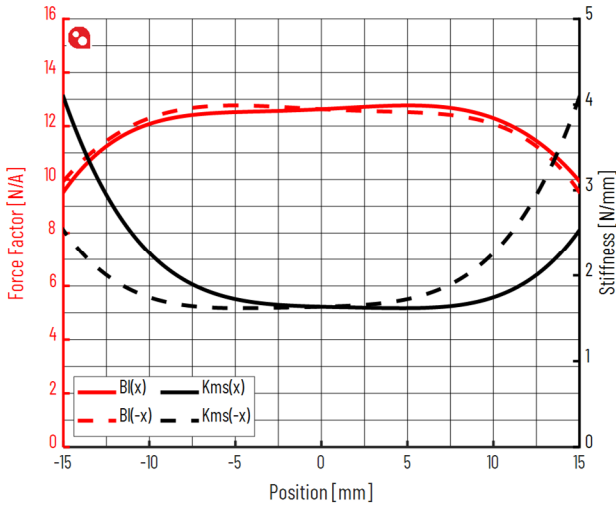


Figure 3 Force Factor and Stiffness vs Voice Coil Position

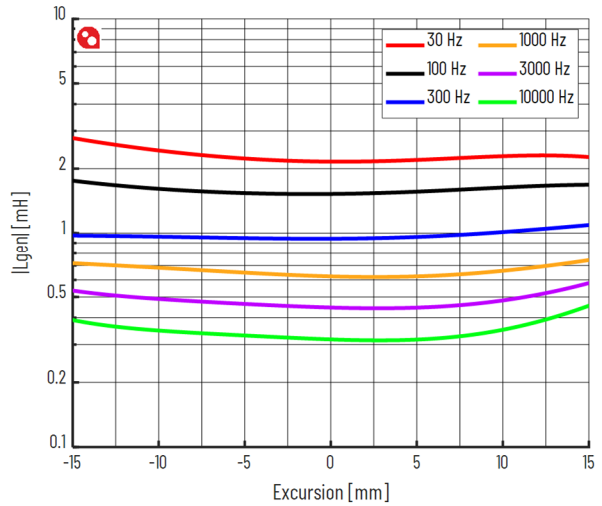


Figure 4 Inductance vs Voice Coil Position

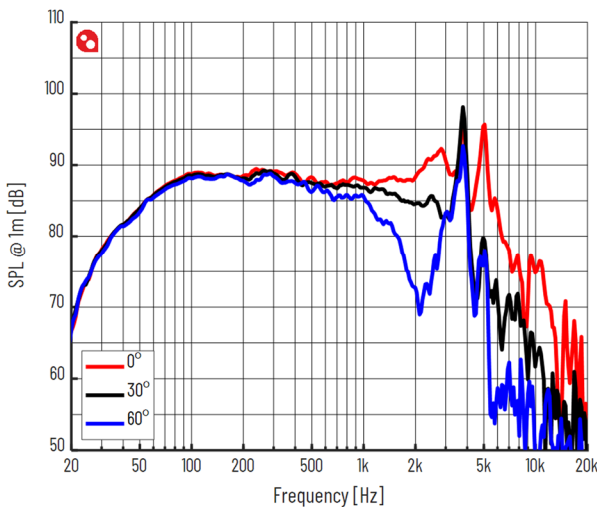


Figure 5 Axial Frequency Response @ 1m, 2.83Vrms

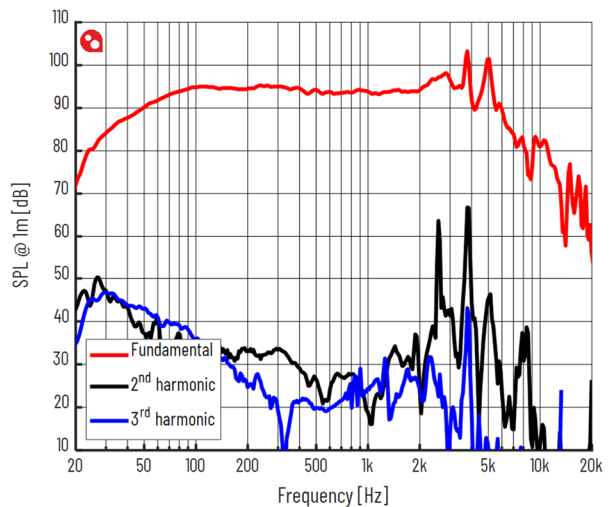


Figure 6 Frequency Response @ 1m, 94dB

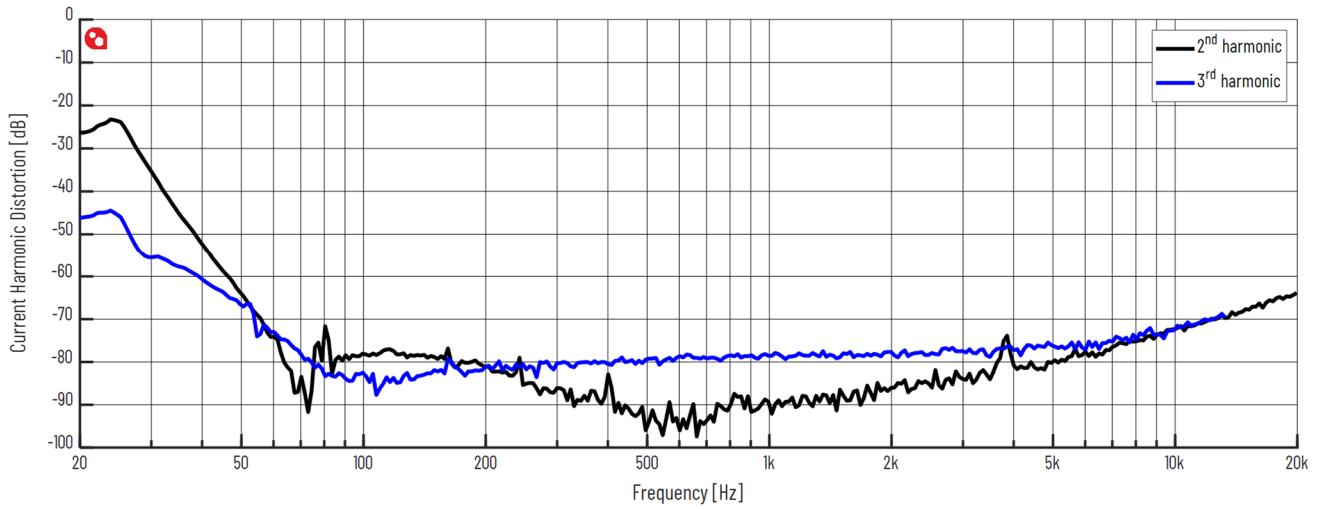


Figure 7 Current Harmonic Distortion @ 2.83Vrms

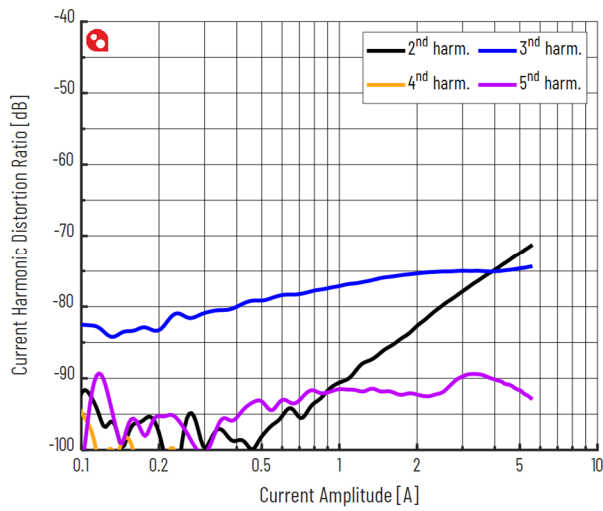


Figure 8 Current Harmonic Distortion @ 1kHz, 0-28.3Vrms

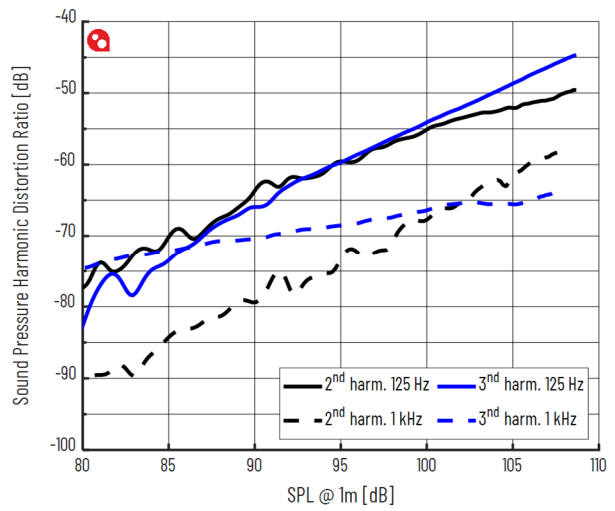


Figure 9 Sound Pressure Harmonic Distortion @ 1m, 0-28.3Vrms

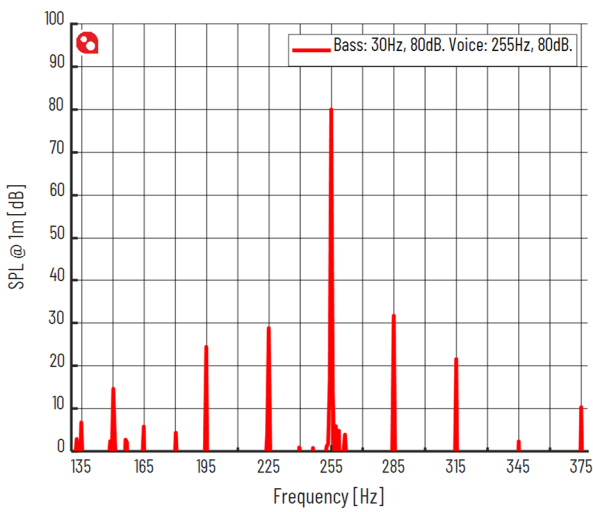


Figure 10 Intermodulation Distortion @ 30Hz 80dB, 255Hz 80dB

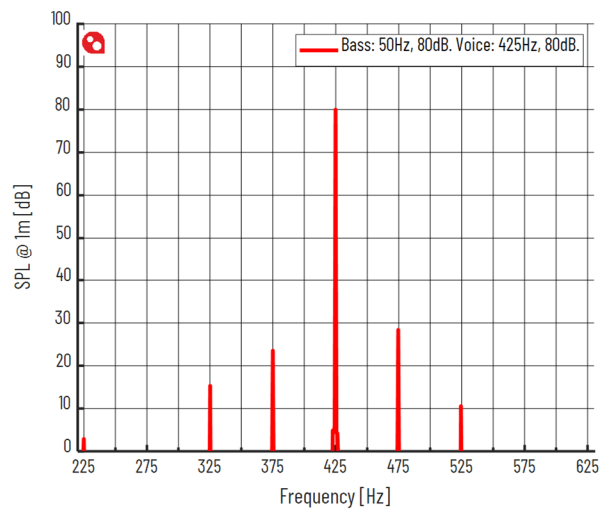
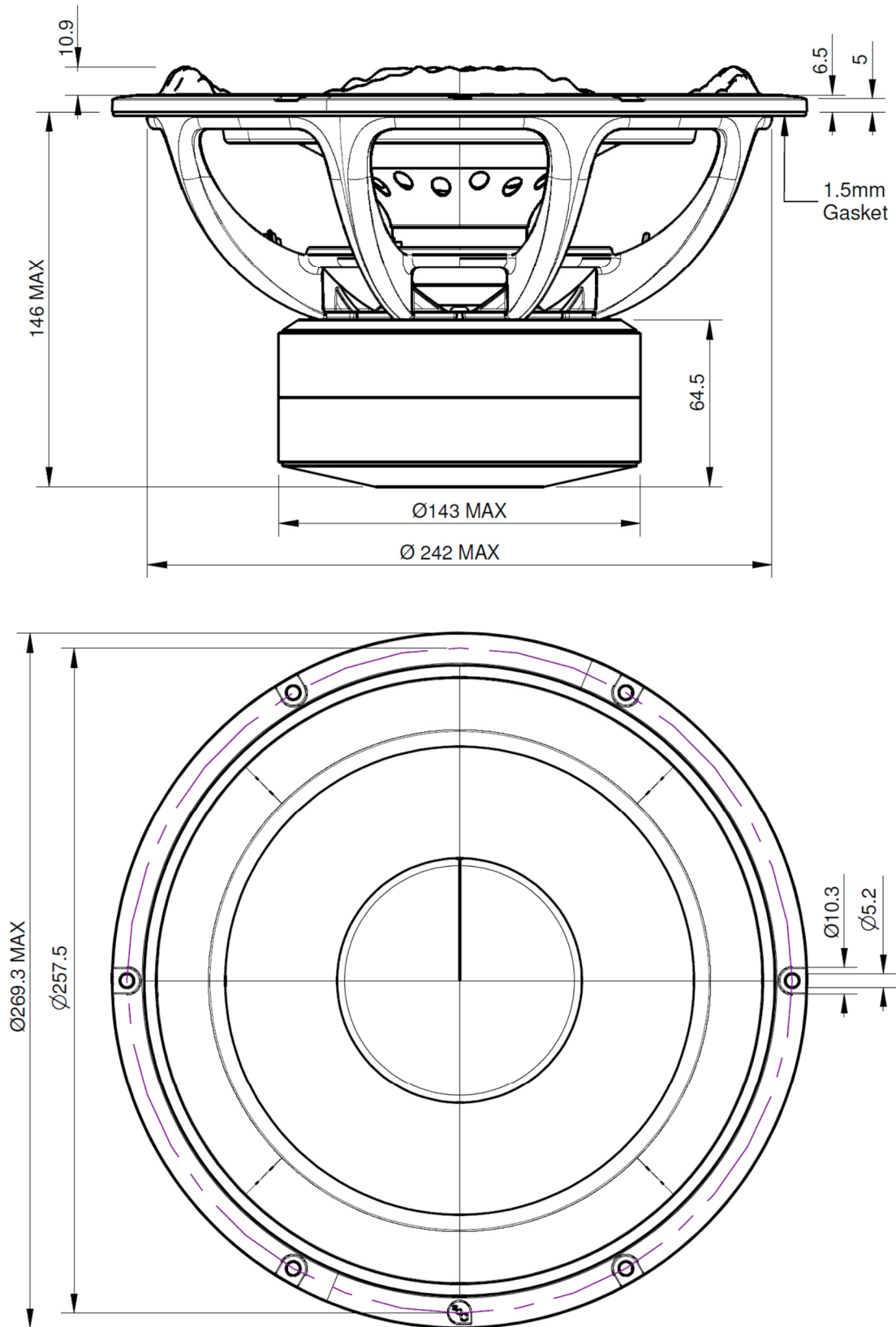


Figure 11 Intermodulation Distortion @ 50Hz 80dB, 425Hz 80dB

2 Drawings



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