

TEBM46C20N-4B Balanced Mode Radiator

✓RoHS
COMPLIANT



Features

- Wide bandwidth and wide directivity
- Impedance: 4 ohm
- Dimensions: 75mm x 75mm
- Thickness: 34.65mm
- Mass: 194g

Applications

- Sound bars
- Portable speakers
- Internet radios
- Docking stations
- Wireless speakers

Description

The TEBM46C20N-4B Balanced-Mode Radiator (BMR) is an audio drive unit with an extended frequency response and wide directivity compared with a conventional drive unit. It combines the benefits of Tectonic Elements bending-wave technology and piston modes of operation. It is ideally suited for compact audio applications that require a full-range, high performance acoustic solution.

Parameters

Parameter	Description	min	typ	max	Units
R_e	DC resistance	-10%	3.94	+10%	Ohms
L_e	Inductance	-10%	0.03	+10%	mH
BL	Force factor		4.49		Tm
f_s	Resonance frequency	-20%	170	+20%	Hz
d_{Drv}	Voice coil diameter		32		mm
M_{ms}	Moving mass		2.26		g
C_{ms}	Compliance		0.39		mmN ⁻¹
R_{ms}	Suspension Loss		0.16		Nsm ⁻¹
$X_{mech\ max}$	Maximum coil excursion (p-p)		8.0		mm
S_d	Effective piston area		19.6		cm ²
V_{AS}	Equivalent volume		0.32		L
Q_{ms}	Mechanical quality factor		15.16		
Q_{es}	Electrical quality factor		0.47		
Q_{ts}	Total quality factor		0.46		

Operating conditions

Condition	Value
Continuous power handling (IEC 268-5 weighted pink noise, 150Hz high pass filter)	20W
Operating temperature range	-20 to 55° C
Audio frequency range	150Hz to 20kHz
Sound pressure level @ 1W, 1m	86 dB

Response

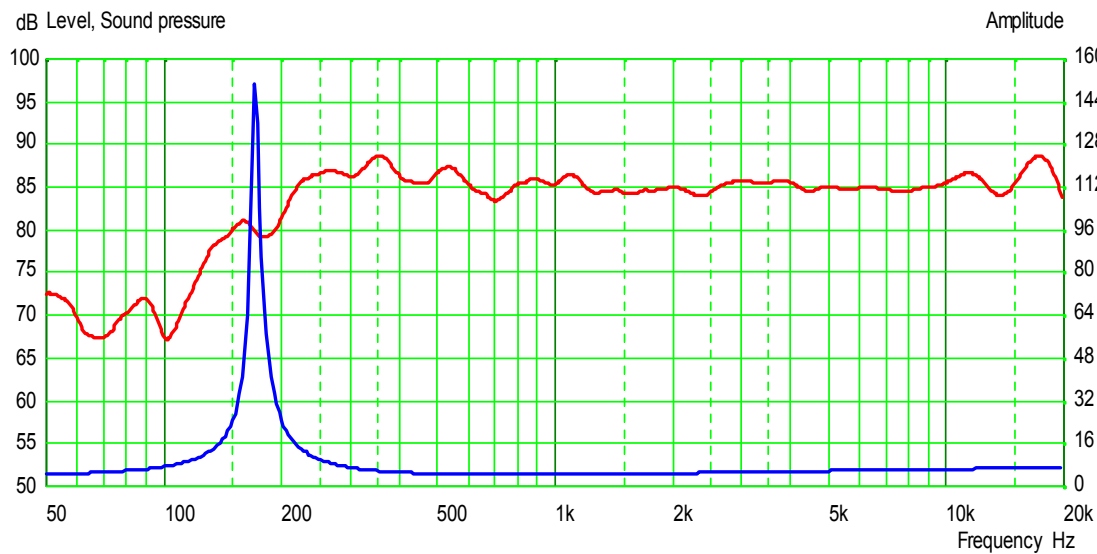


Figure 1. On-axis SPL at 1W, 1m (in-room), & impedance vs. frequency

Outline Drawing

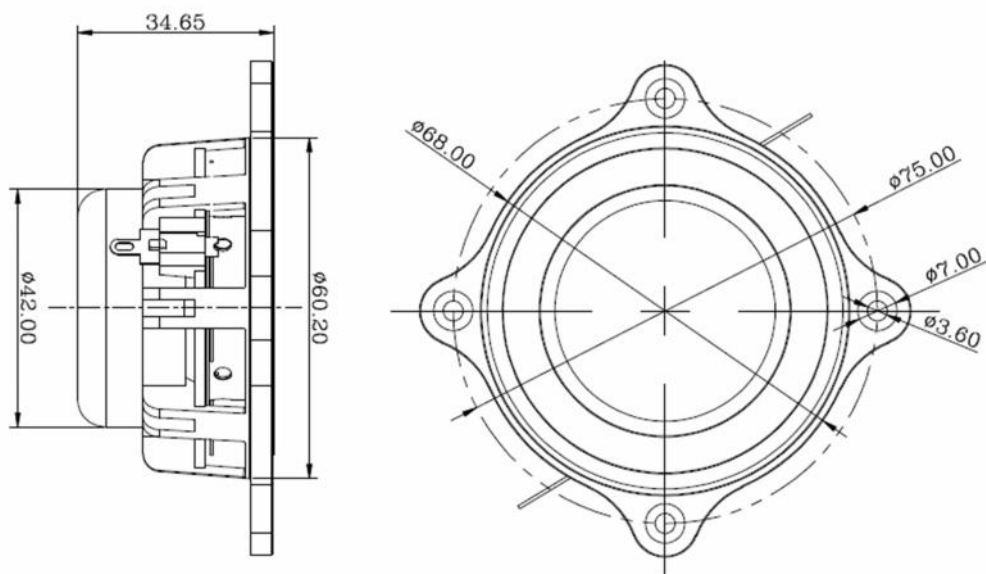
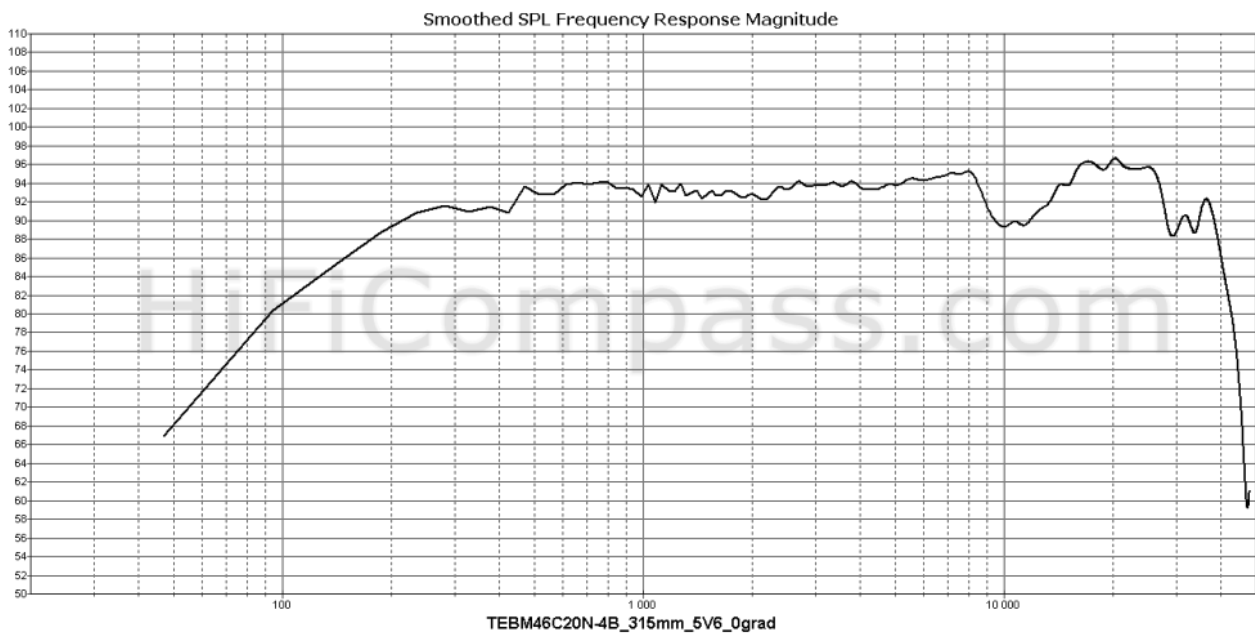
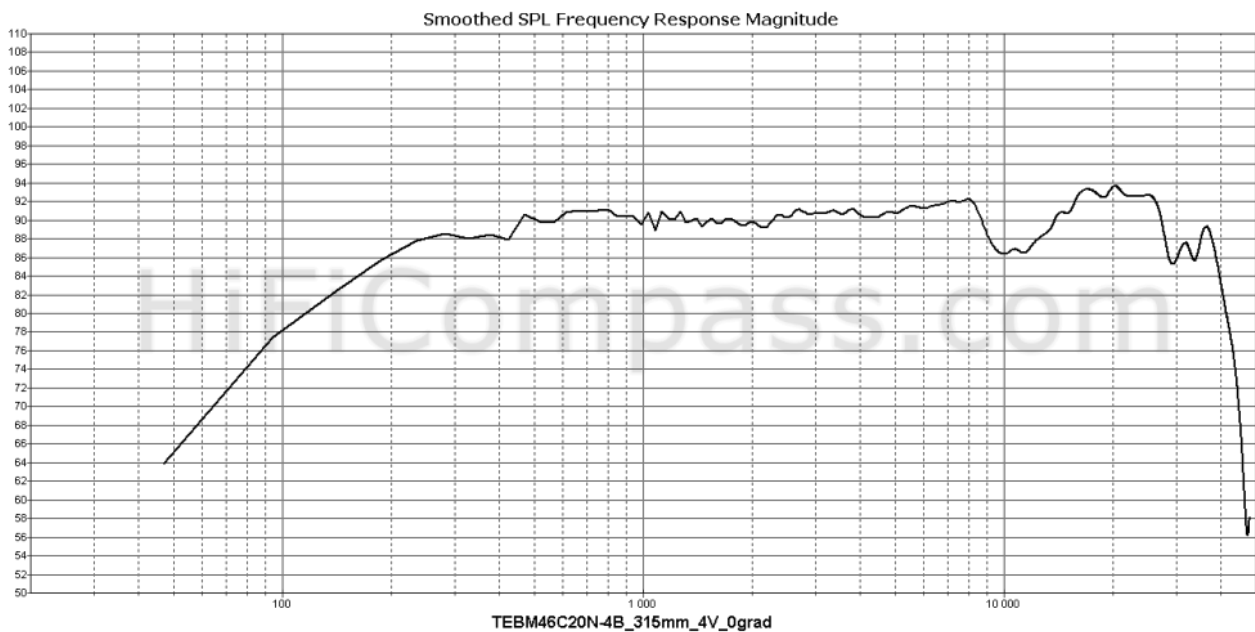
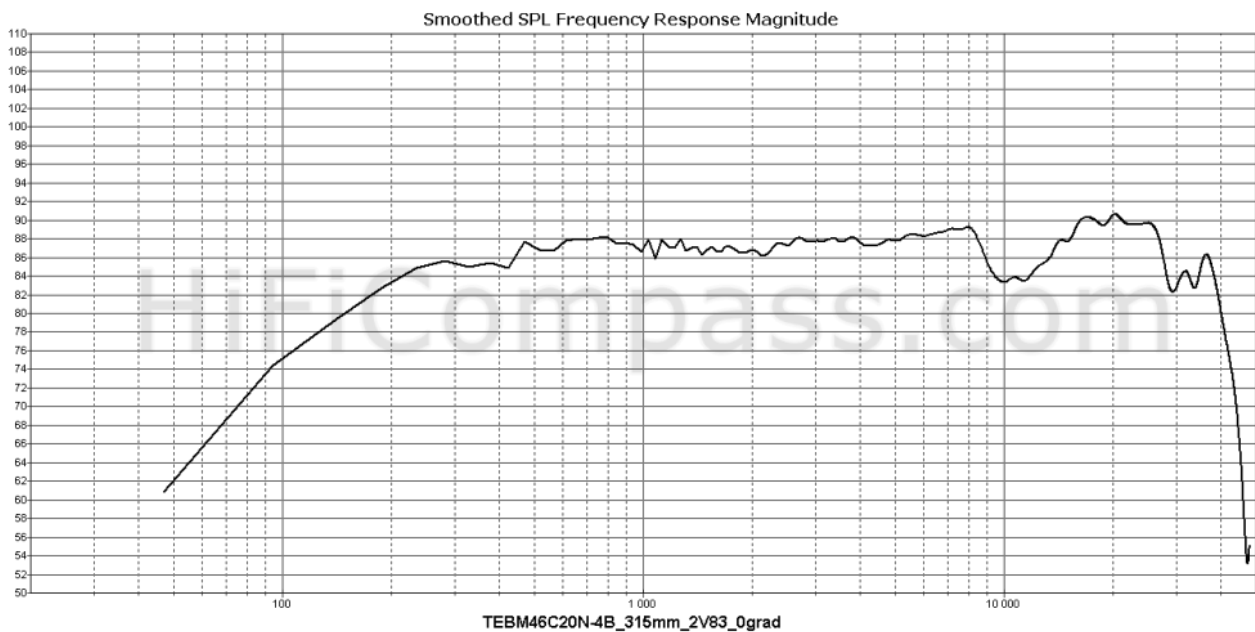
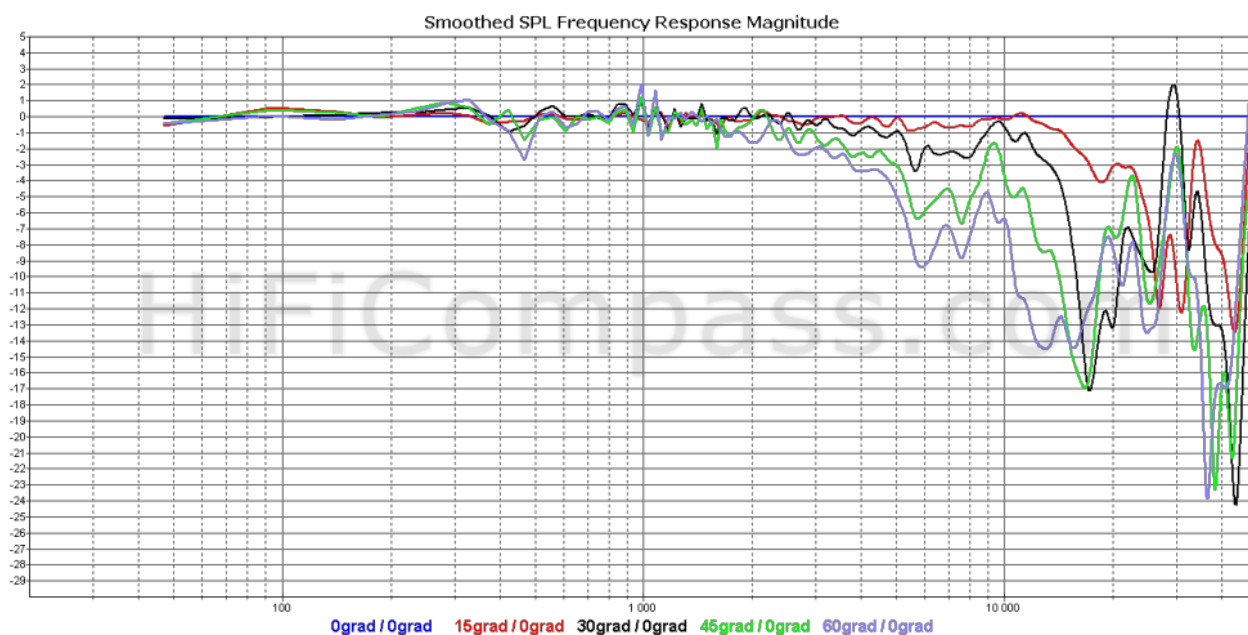
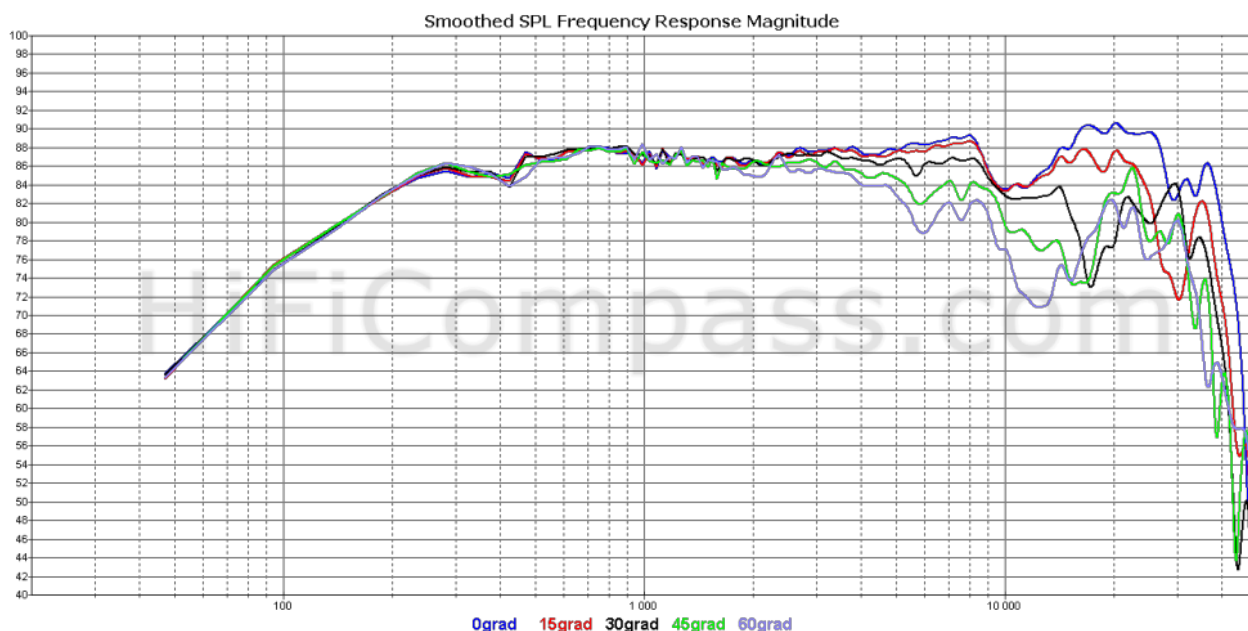
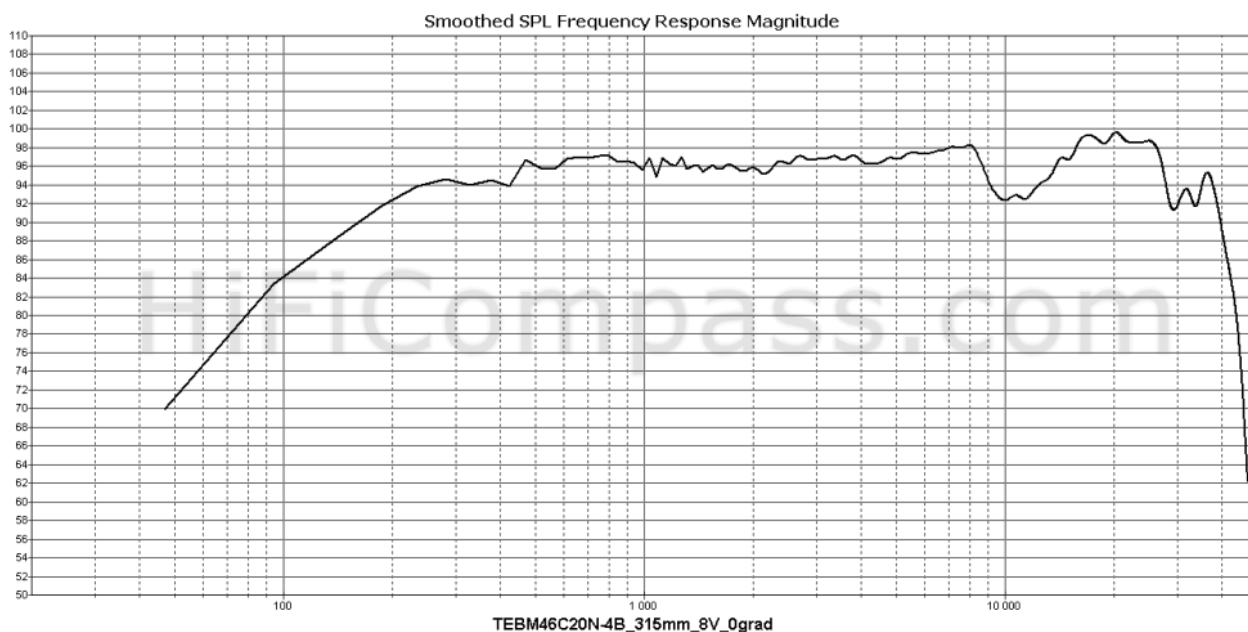
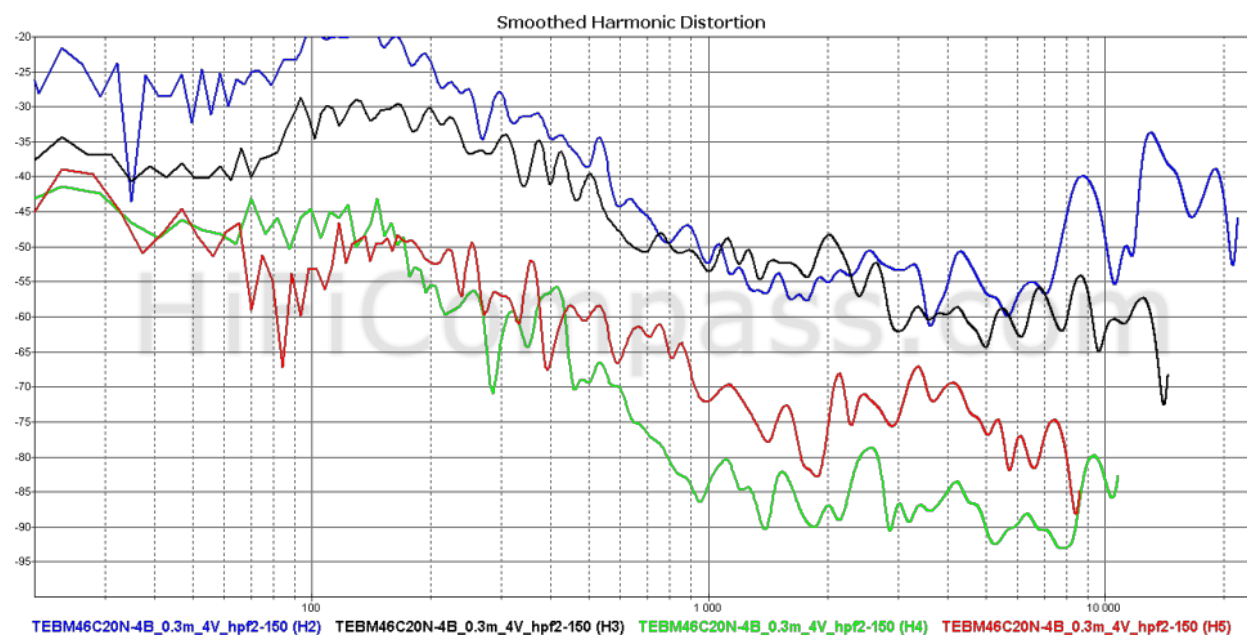
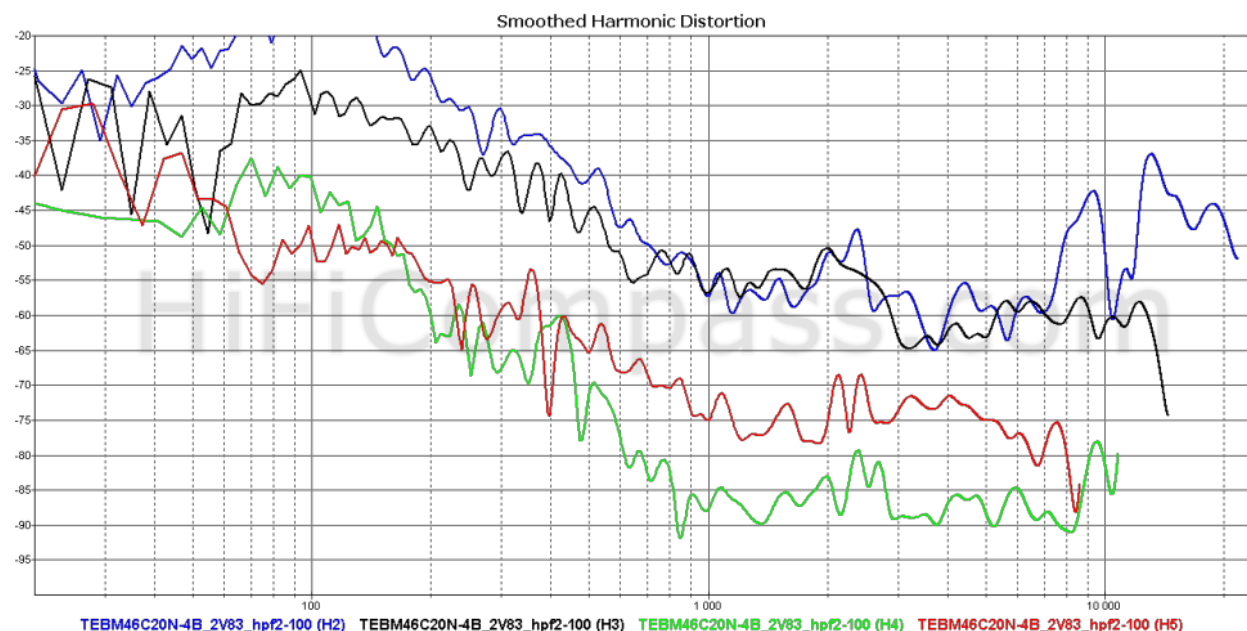
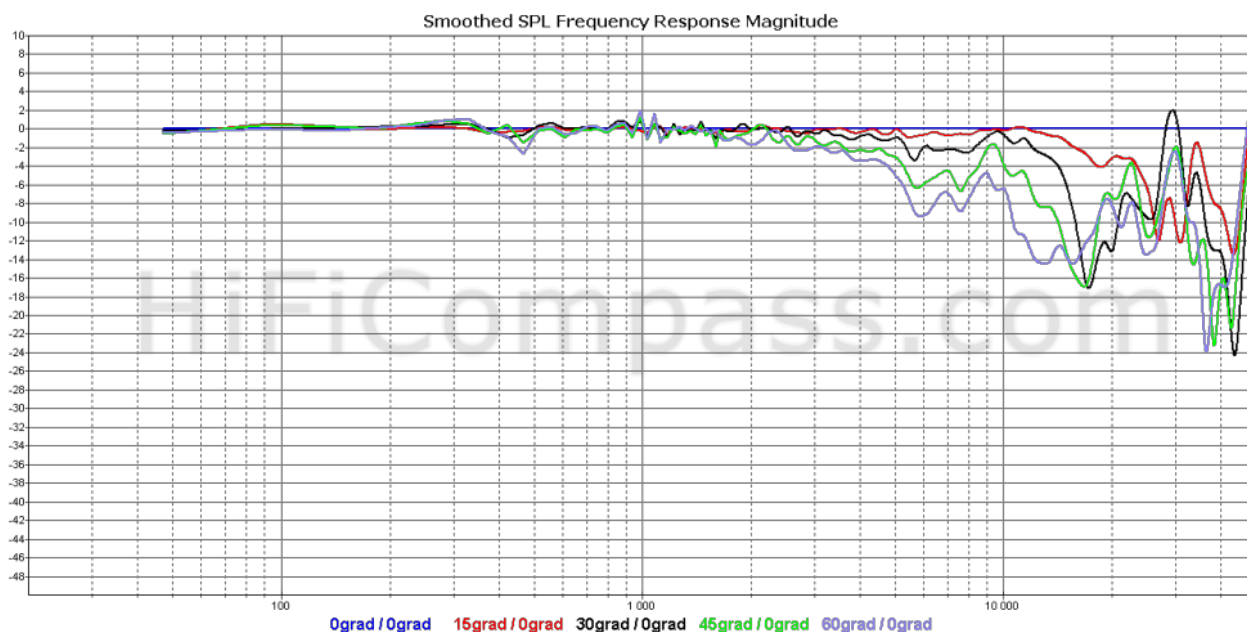
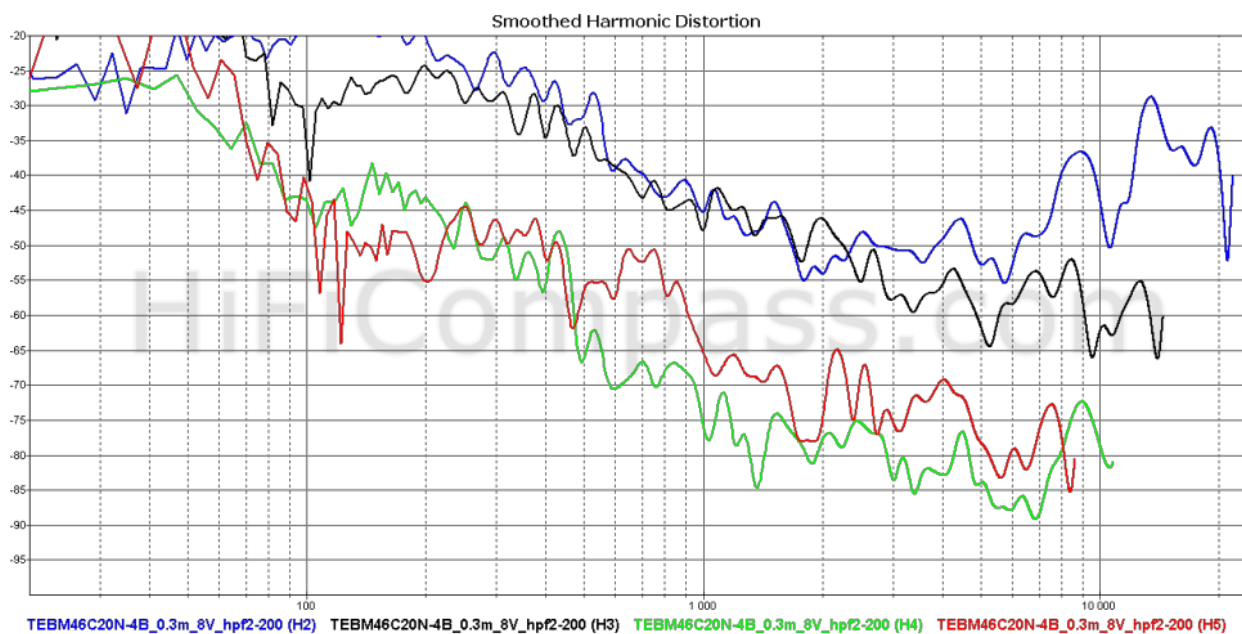
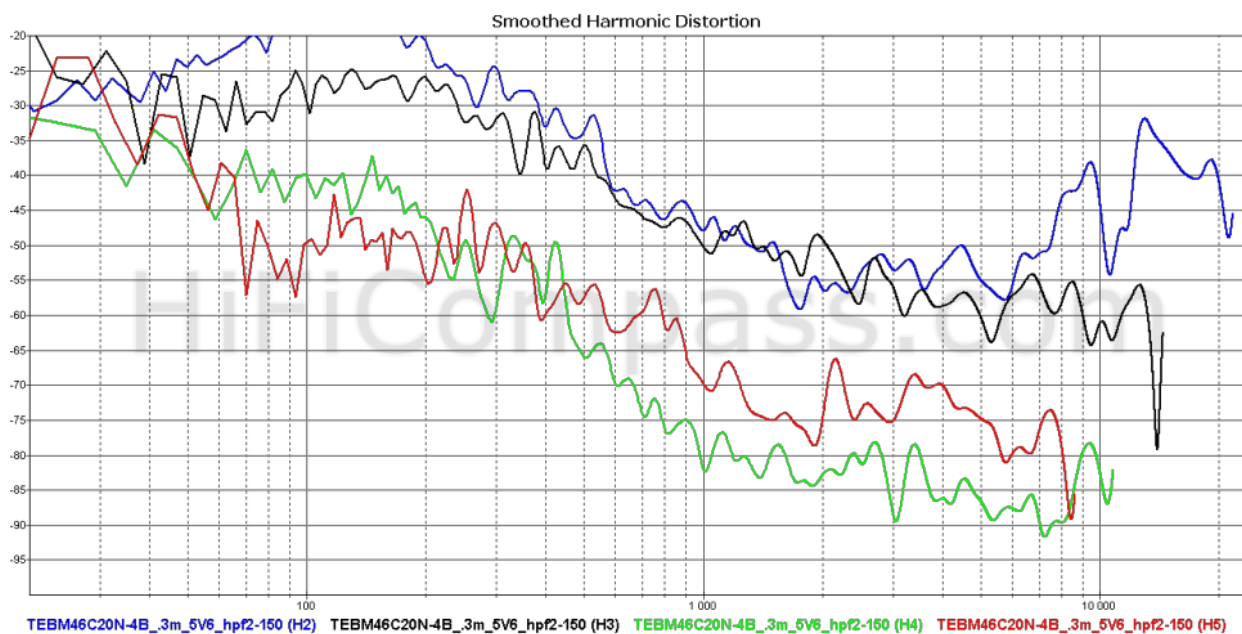


Figure 2. Nominal dimensions









Измерения нелинейных искажений на расстоянии 315мм и напряжении 2.83 Вольт проводились с включенным фильтром верхних частот второго порядка с частотой среза 100 Гц (HPF2-100)

Измерения нелинейных искажений на расстоянии 315мм и напряжениях 4 - 5.6 Вольт проводились с включенным фильтром верхних частот второго порядка с частотой среза 150 Гц (HPF2-150)

Измерения нелинейных искажений на расстоянии 315мм и напряжении 8 Вольт проводились с включенным фильтром верхних частот второго порядка с частотой среза 200 Гц (HPF2-200)

