



SPECIFICATION

CUSTOMER:

PRODUCTS : MICRO SPEAKER

MODEL : XHS171225LN-07-RH

ITEM. NO. :

DATE :2022-3-30



APPROVER	CHECKER	DESIGNER

CUSTOMER APPROVER

SIGNATURE	IMPRINTMENT

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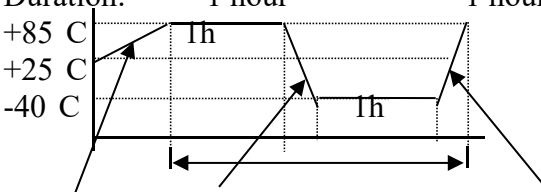
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ZHEJIANG ELECTRONIC CO.,LTD. TEL:86-573-84645930 、 84646197 FAX:86-573-84646190 E-mail: services@xh-haosheng.com.		HAOSHENG TECHNOLOGY SPECIFICATIONS (1/13)		
		TYPE NO.	XHS171225LN-07-RH	Issue:A/3
Revision				
No	Date	Page	Description	Sign
1	2022.3.4	4/13	UPDATE SPEC	Cai
2	2022.3.29	4/13	Add 0.8cc F0	ZY
3	2022.3.30	4,8/13	Mechanical Layout,SPL Update	ZY
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		TYPE NO.	XHS171225LN-07-RH	Issue:A/3
1. Product Outline				
1-1. Scope		This specification is a typical speaker unit for telephone handset		
1-2. Dimensions		As shown in figure 1		
1-3. Net Weight		Approx 2.6 grams		
1-4. Operating Temperature Range		-30 C to +70 C without loss of function		
1-5. Storage Temperature Range		-40 C to +85 C (Note: Return to ambient room temperature before using)		
2. Electroacoustic Characteristics				
2-1. Test Setup		Measuring instrument as shown in Figure 3		
2-2. Impedance		AC:8 15% ohm(at 2 KHz, 2.83V input) DC:6.8 0.5 ohm		
2-3.Sound Pressure Level		95 2 dB SPL /1.0W/10cm at 2kHz in 0.7cc box 74.6 dB at 300Hz/83.6 dB at 500Hz SPL /1.0W/10cm in 0.7cc box 75.5 dB at 300Hz/84.3 dB at 500Hz SPL /1.0W/10cm in 0.8cc box Speaker shall be mounted in a baffle. See Figure 6. See Figure 7		
2-4.Frequency Response		See Figure 5, Table 2 Test at 1.0W/10 cm with the speaker mounted in 0.7cc measure box in a baffle.		
2-5.Bass Resonance Frequency		880 15% Hz in 0.7cc box 850 15% Hz in 0.8cc box		
2-6.Rated Frequency Range		200 Hz-10kHz		
2-7. Iput Power (Rated./Max.)		Rated Power: 1.0W (in 0.7cc box) Maximum Power: 1.5W (in 0.7cc box)		
2-8.Rub and Buzz:		The input power shall be set at 1.0W. Using an audio oscillator, sweep from 500 to 6kHz with the speaker mounted in 1.5cc measure box and in a baffle.There shall be no buzzes, rattles, nor spurious noises.		
2-9.THD		See Figure7 , Table 3 Test at 1.0W /10 cm with the speaker mounted in 0.7cc measure box in a baffle.		
2-10.Polarity		When a DC source's “+” polarity is attached to speaker's “+” polarity,“-“ polarity is attached speaker's “-“ polarity ,the membrane will move forward .		

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3. General Reliability			
3-1 General	After any following tests the response at 2 KHz shall not deviate more than 3 dB from the initial value		
3-2 Temperature Shock Test	Temperature: -40 °C ↔ +85 °C Cycle: 10 cycles Duration: 1 hour 1 hour (recovery 2 hours)  (30minutes) (5minutes) 1 cycle (5minutes)		
3-3 Static Humidity Test	Precondition at +25°C for 1 hour. Next expose samples to +55°C with 95% relative humidity for 96 hours with no bias. Finally allow test samples to dry at room ambient temperature for 3 ± 1 hour before taking final measurements.		
3-4 Vibration Test	Secure device using a fixture appropriate for this test. Fixture shall be capable of mounting on vibration table. Vibrate from 10Hz to 2000Hz, 1 octave per minute, 2mm displacement ±x, ±y, ±z directions with 15 g's force for 2 hrs per each plane.		
3-5 Drop Test	Drop samples 1.5 meters three times in each direction along each of the three mutually perpendicular axes for a total of 18 shocks.(Samples shall be mounted in a 100g fixture)		
3-6 Operating Life Test	0.7cc box;25°C;Pink noise;20Hz-20kHz; 1.0W;Crest factor 3-4;96 H		
3-7.Rated Sweep Power Test	0.7cc box;25°C;Rated Power(1.0W);650-1050Hz; 1 sec;12 H		
3-8 Max Power Test	0.7cc box;25 °C ;Pink noise;20Hz-20kHz;1.5W;1 sec on/60 sec off;60 cycles		
3-9.High Temperature Test	85 +/-2°C;96H;2H Recovery time		
3-10.Low Temperature Test	-40 +/-2°C;96H;2H Recovery time		

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SPECIFICATIONS (4/13)

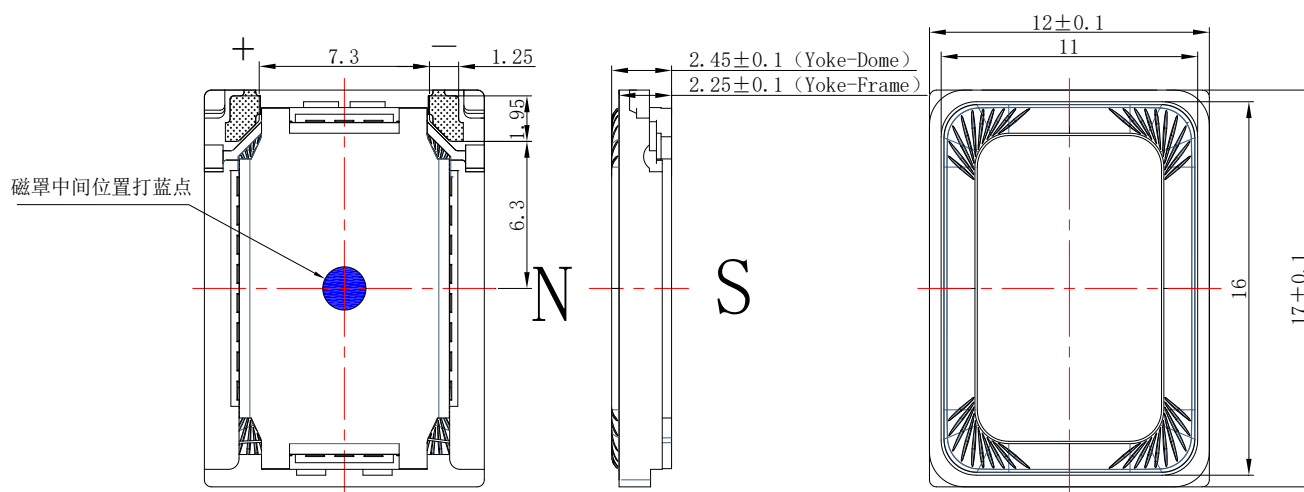
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4. Mechanical Layout and Dimensions

4.1 Mechanical Layout



Notes:

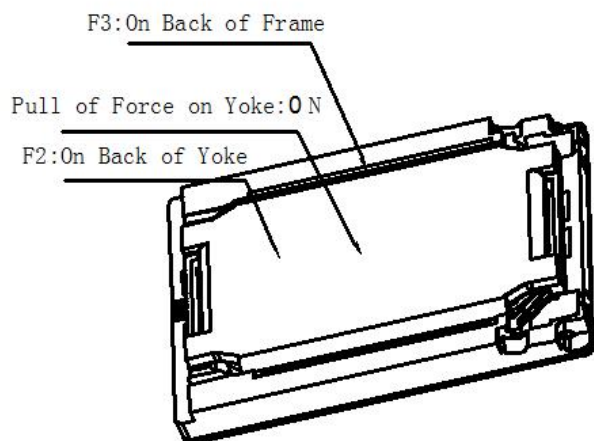
1、General unless otherwise noted $\pm 0.15\text{mm}$.

(Figure 1)

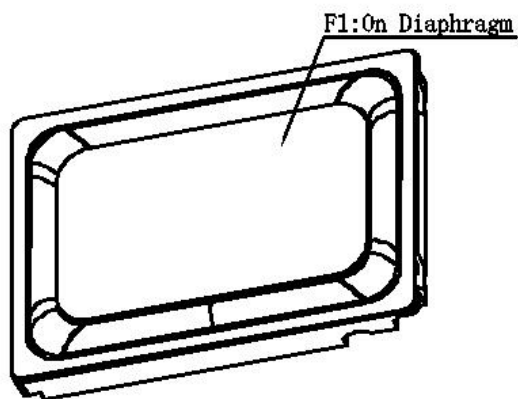
8	PAD	SUS301 3/4H	2	
7	Voice Coil	Copper	1	
6	Dome Type	Mcpet+Al	1	
5	Diaphragm	Polymer	1	
4	Pole Piece	Iron	2	
3	Magnet	NdFeB	1	
2	Yoke	Iron	1	
1	Frame	Plastic	1	
No.	Part Name	Material	Q'TY	Remark

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4.2 Permitted Force to Speaker

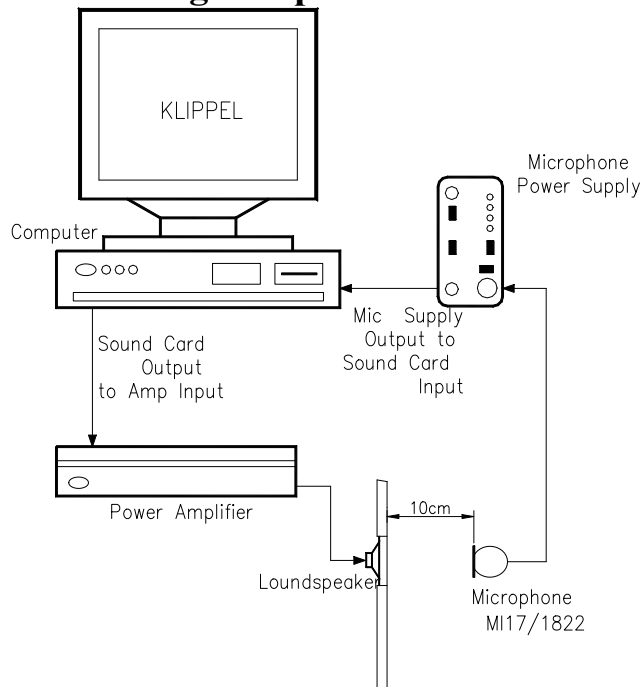


Max. Permitted Compression Forces			
No.	From	To	Maximum Force
1	F1		0N
2	F2		10N
3	F3		10N



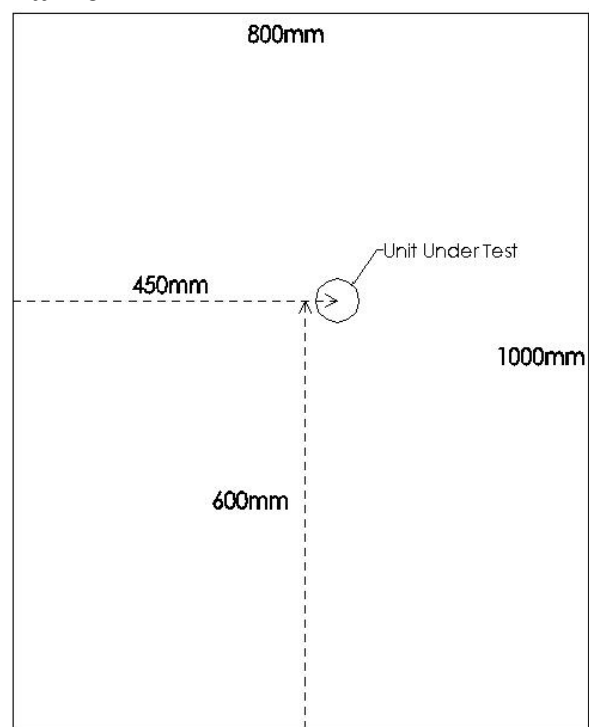
(Figure 2)

5. Measuring Setup



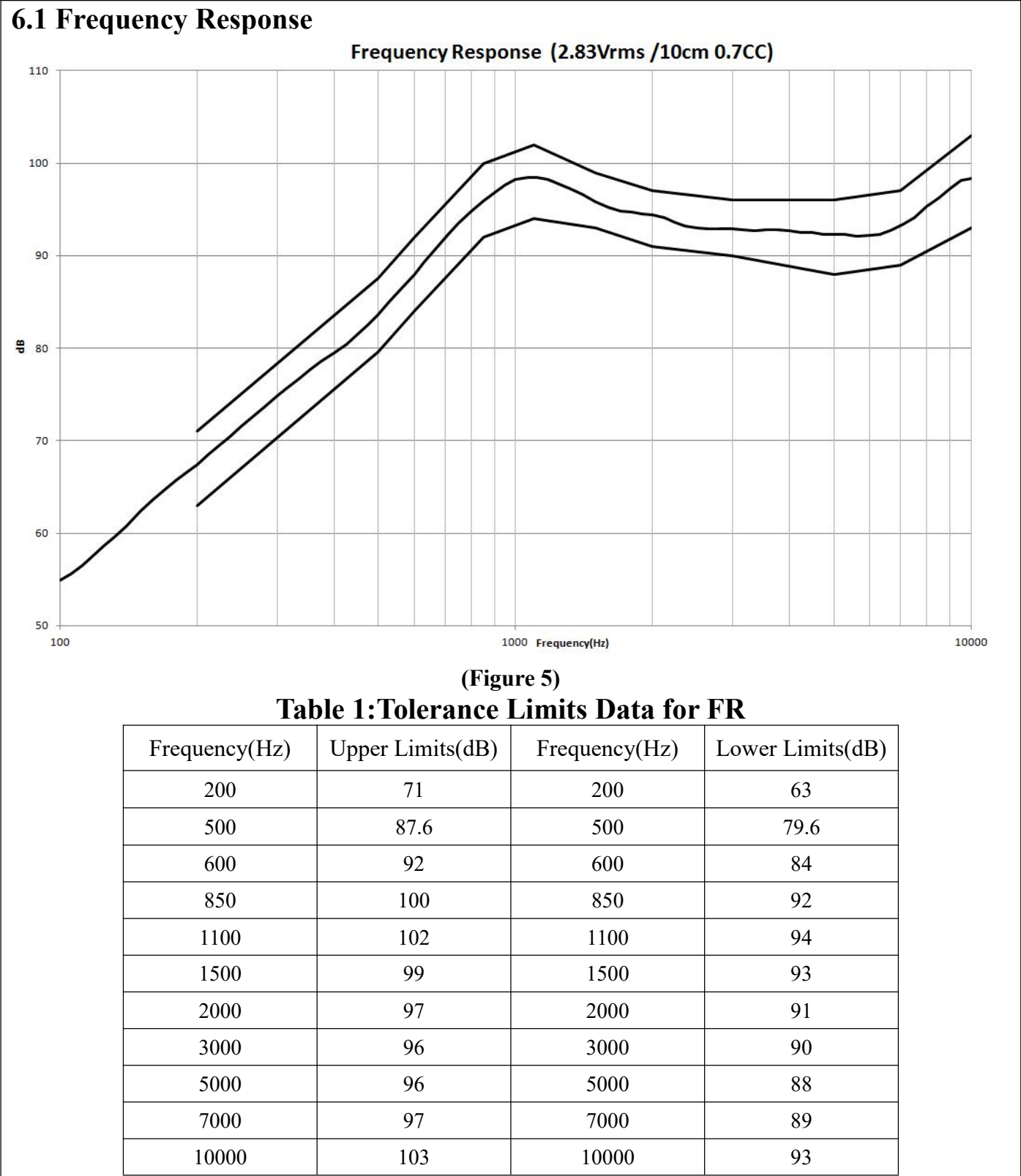
(Figure 3)

Baffle



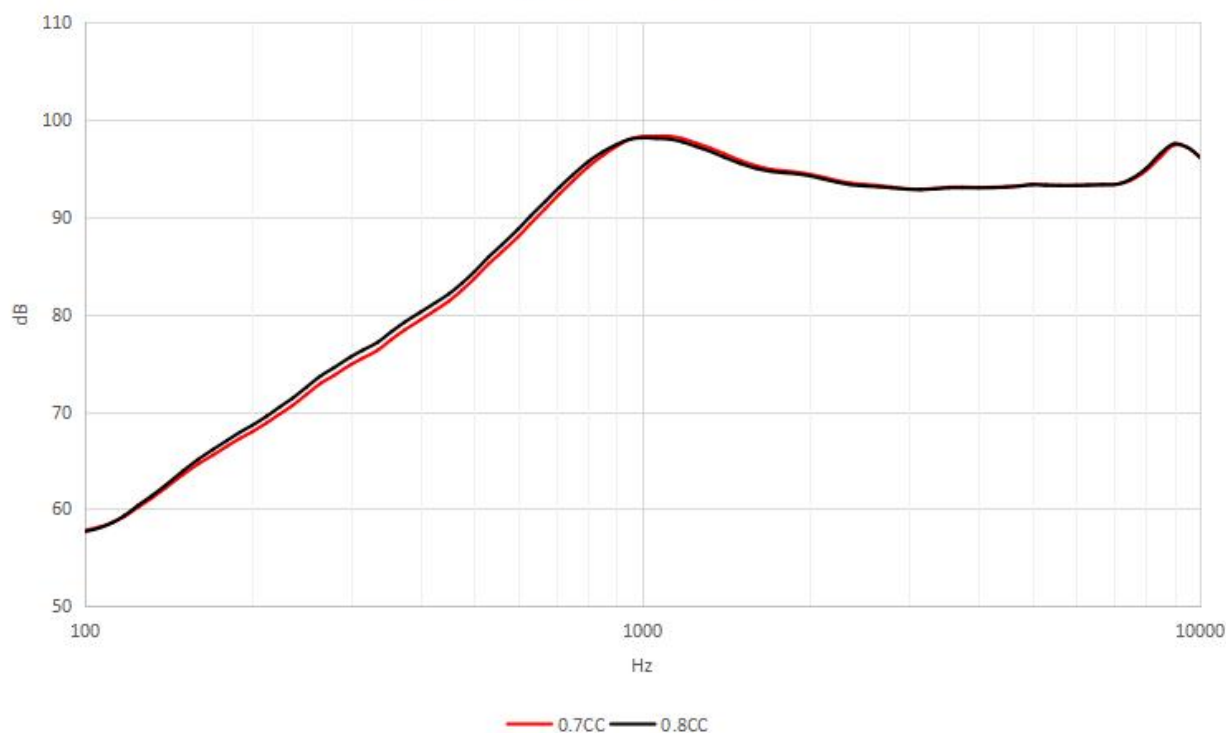
(Figure 4)

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6.2 Frequency Response

Frequency Response (2.83Vrms/10cm)



(Figure 6)

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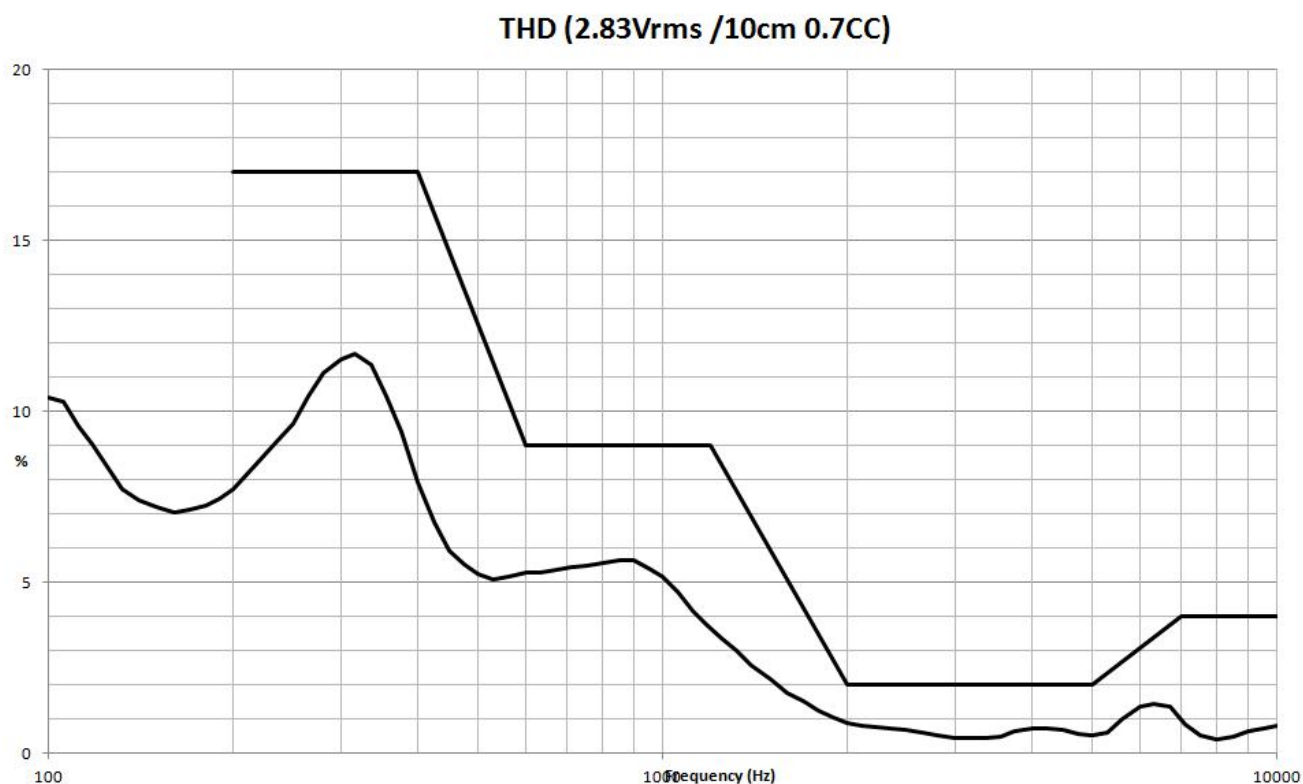
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7. Total Harmonic Distortion



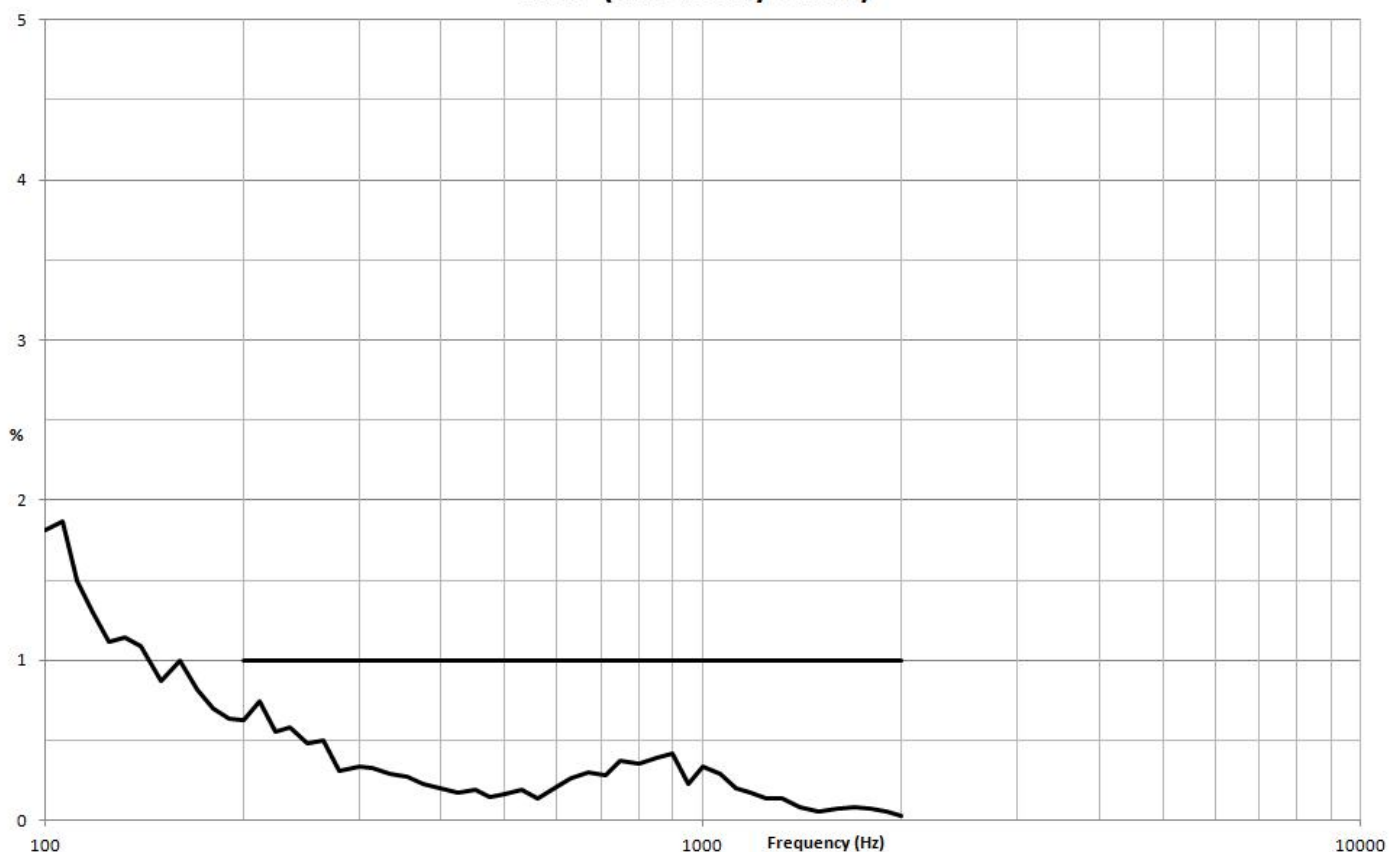
(Figure 7)

Table 2: Limits Data for THD

Frequency(Hz)	Limits
200	17
400	17
600	9
700	9
1200	9
2000	2
5000	2
7000	4
10000	4

8. Rub and Buzz

R&B (2.83Vrms / 0.7CC)



(Figure 8)

Table 3: Limits Data for R&B

Frequency(Hz)	Limits
200	1
300	1
2000	1

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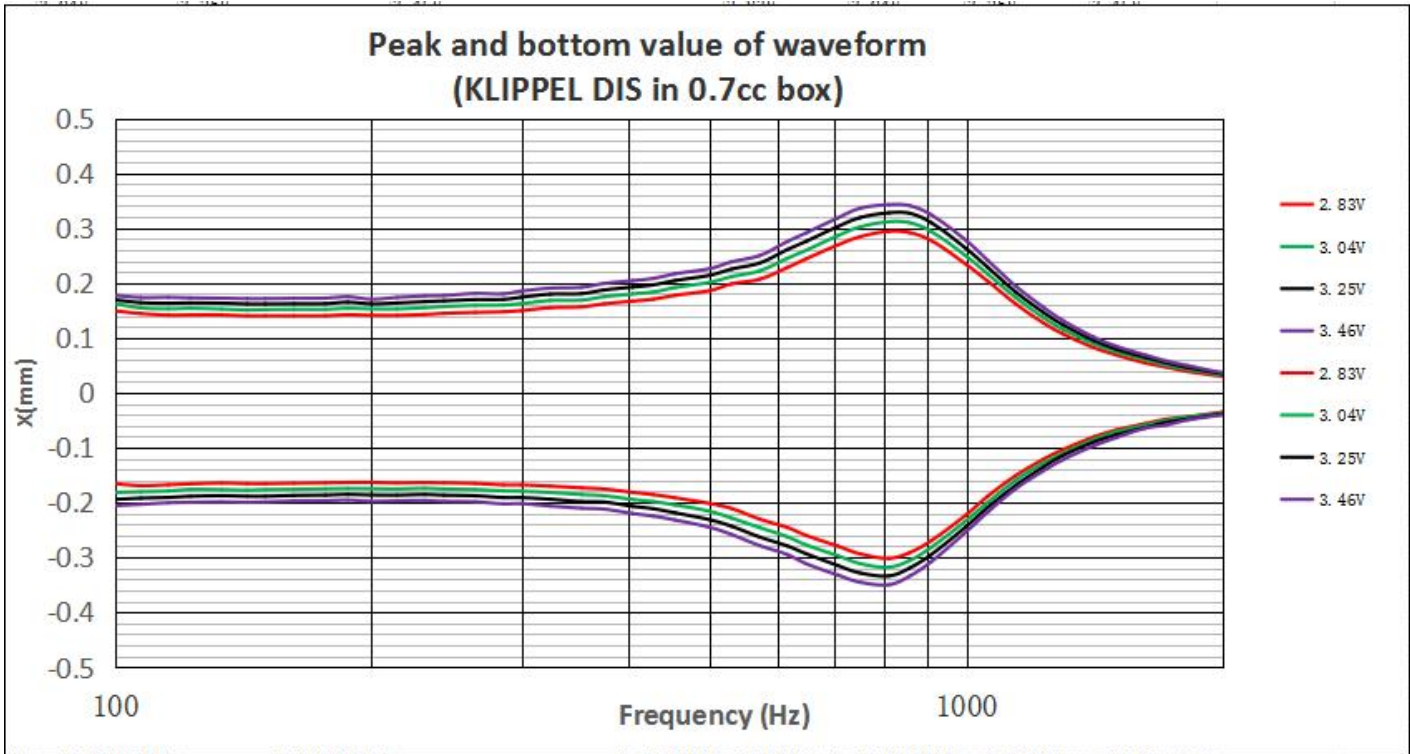
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9. T/S parameters

Thiele-Small Parameters: The following Thiele-Small Parameters are guidelines from a speaker exhibiting good audio performance.

Electrical Parameters	Re	6.66	Ohm
	Res	5.72	Ohm
	fs	510	Hz
Mechanical Parameters	Mms	111	mg
	Rms	0.137	kg/s
	Cms	0.876	mm/N
	Kms	1.14	N/mm
	B1	0.885	T.m
Loss factors	Qms	2.601	
	Qes	3.028	
	Qts	1.399	
Other Parameters	Vas	0.002058	l
	Sd	1.297	cm ²

10. Peak to peak excursion



(Figure 9)

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11. EQ Power

测试条件: KLIPPEL DIS in 0.7cc box		
频点 (Hz)	电压 (Vrms)	X-max (mm)
100	3.5	0.3
300	3.5	0.3
400	3.2	0.3
600	3	0.3
700	3.1	0.3
850	2.9	0.3
1050	3.2	0.3

12. Smart PA parameters

(单向峰值) Max Excursion Xmax	0.3	Mm
(双向峰值) Max Excursion Xmax (Xpp)	0.6	Mm
Tmax	100	℃
Tcoeff	0.00357	
BL	0.885	T.m
最大振幅对应电压 (F0点)	2.9	V
Back cavity	0.7	cc