



SPECIFICATION

CUSTOMER:

PRODUCTS : MICRO SPEAKER

MODEL : XHS151139PN-03-RH

ITEM. NO. :

DATE :2018-12-18



APPROVER	CHECKER	DESIGNER

CUSTOMER APPROVER

SIGNATURE	IMPRINTMENT

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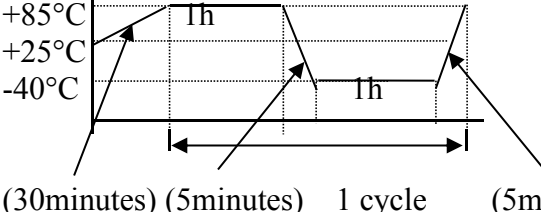
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ZHEJIANG ELECTRONIC CO.,LTD. TEL:86-573-84645930 、 84646197 FAX:86-573-84646190 E-mail: services@xh-haosheng.com.		HAOSHENG TECHNOLOGY SPECIFICATIONS (1/11)		
		TYPE NO.	XHS151139PN-03-RH	Issue:A/0
Revision				
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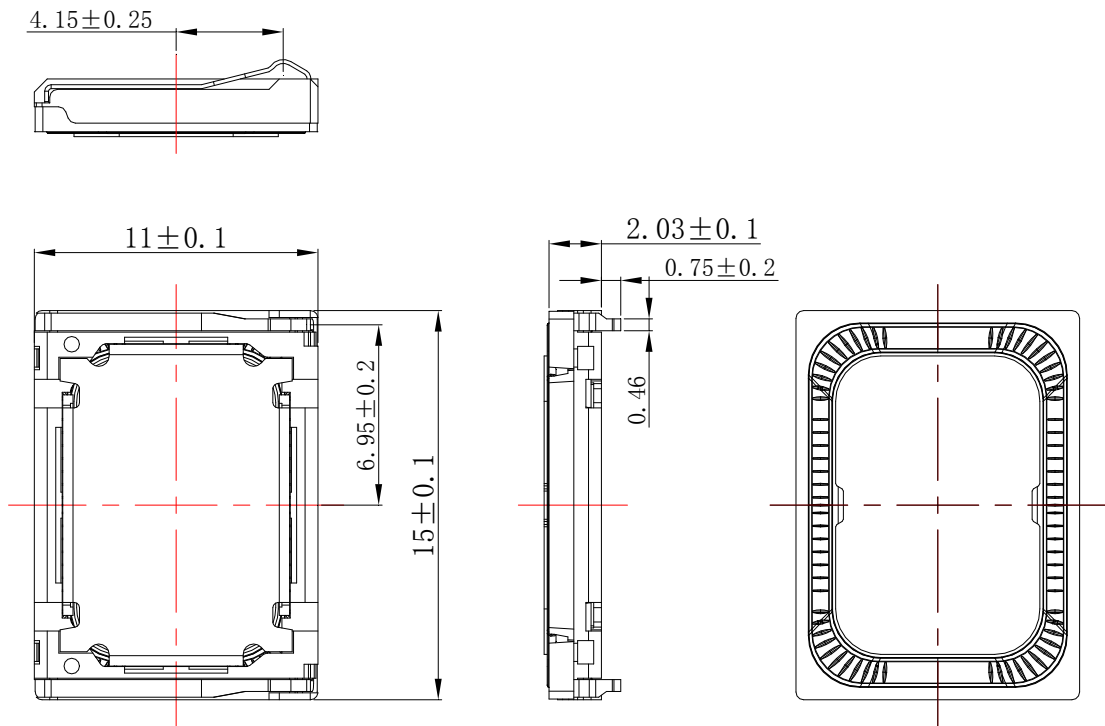
ZHEJIANG ELECTRONIC CO.,LTD. TEL:86-573-84645930 、 84646197 FAX:86-573-84646190 E-mail: services@xh-haosheng.com.	HAOSHENG TECHNOLOGY	SPECIFICATIONS (2/11)		
		TYPE NO.	XHS151139PN-03-RH	Issue:A/0
1. Product Outline				
1-1. Scope		This specification is a typical speaker unit for telephone handset		
1-2. Dimensions		As shown in figure 1		
1-3. Net Weight		Approx 1.4 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 5		
2-2. Impedance		AC: 8 ± 15% ohm (at 2 KHz, 2.83V input) DC: 7 ± 10% ohm		
2-3.Sound Pressure Level		95.5± 3 dB SPL /2.83V/10cm at 2kHz in 1cc box with baffle Speaker shall be mounted in a baffle with minimum dimensions of 80cm x 100cm. See Figure 6.		
2-4.Frequency Response		See Figure 7, Test at 1.0W /10 cm with the speaker mounted in 1cc measure box in a baffle.		
2-5.Bass Resonance Frequency		870±15% Hz in 1cc box input 2.83V;		
2-6. Iput Power (Rated./Max.)		Rated Power: 1.0W (in 1cc box) Maximum Power: 1.5W (in 1cc box)		
2-7.Rub and Buzz:		The input power shall be set at 1.0W. Using an audio oscillator, sweep from 200 to 3.4kHz with the speaker mounted in 1cc measure box and in a baffle.There shall be no buzzes, rattles, nor spurious noises.		
2-8.THD		Test at 1.0W /10 cm with the speaker mounted in 1cc measure box in a baffle. See Figure 8		
2-9.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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	TYPE NO.	XHS151139PN-03-RH	Issue:A/0
3. General Reliability			
3-1 General	After any following tests the response at 1 KHz shall not deviate more than ± 3 dB from the initial value		
3-2 Temperature Shock Test	Temperature: $-40\pm 3^{\circ}\text{C}$ $\longleftrightarrow$ $+85\pm 3^{\circ}\text{C}$ Cycle: 10 cycles Duration: 1 hour 1 hour (recovery 2 hours)  (30minutes) (5minutes) 1 cycle (5minutes)		
3-3 Static Humidity Test	Precondition at $+25^{\circ}\text{C}$ for 1 hour. Next expose samples to $+55^{\circ}\text{C}$ 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 $\pm x$, $\pm y$, $\pm z$ 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	1cc box; 25°C ;Pink noise;20Hz-20kHz;1W;Crest factor 3-4;96 H		
3-7 Rated Sweep Power Test	1cc box; 25°C ;Rated Power(1W);700-1100Hz;1W;1 sec;12 H		
3-8 Max Power Test	1cc box; 25°C ;Pink noise;20Hz-20kHz;1.5W;1 sec on/60 sec off;60 cycles		
3-9 High Temperature Test	$85 \pm 2^{\circ}\text{C}$;96H;2H Recovery time		
3-10 Low Temperature Test	$-40 \pm 2^{\circ}\text{C}$;96H;2H Recovery time		

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	TYPE NO.	XHS151139PN-03-RH	Issue:A/0

4. Mechanical Layout and Dimensions

4.1 Mechanical Layout



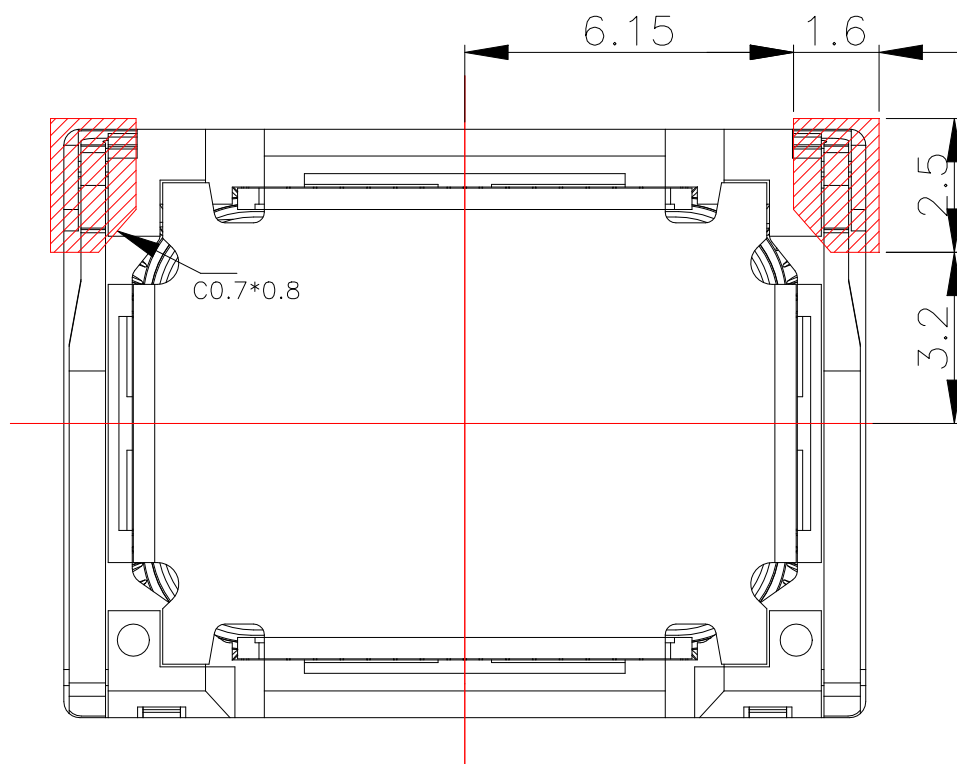
Notes:

1、 General unless otherwise noted ±0.15mm.

(Figure 1)

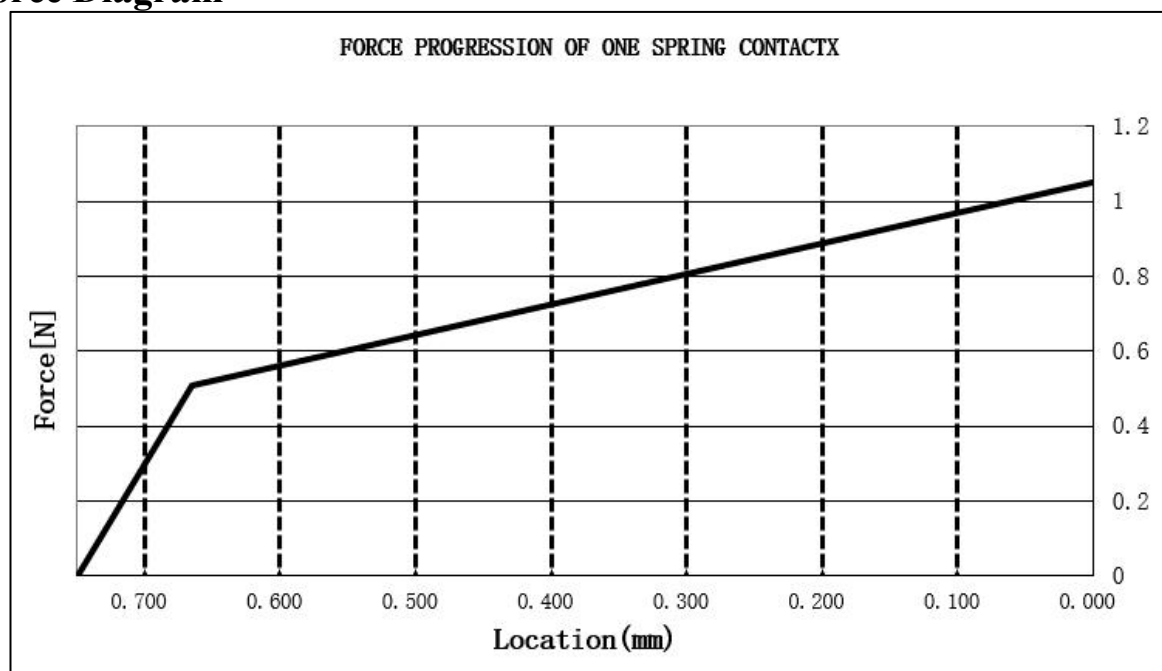
9	Cover	brass	1	
8	Spring	SUS301 0.15t	2	
7	Voice Coil	Copper	1	
6	Dome Type	Polymer	1	
5	Diaphragm	Polymer	1	
4	Pole Piece	Iron	1	
3	Magnet	NdFeB	1	
2	Yoke	Iron	1	
1	Frame	Plastic	1	
No.	Part Name	Material	Q'TY	Remark

4.2 Pad Layout of Spring contact



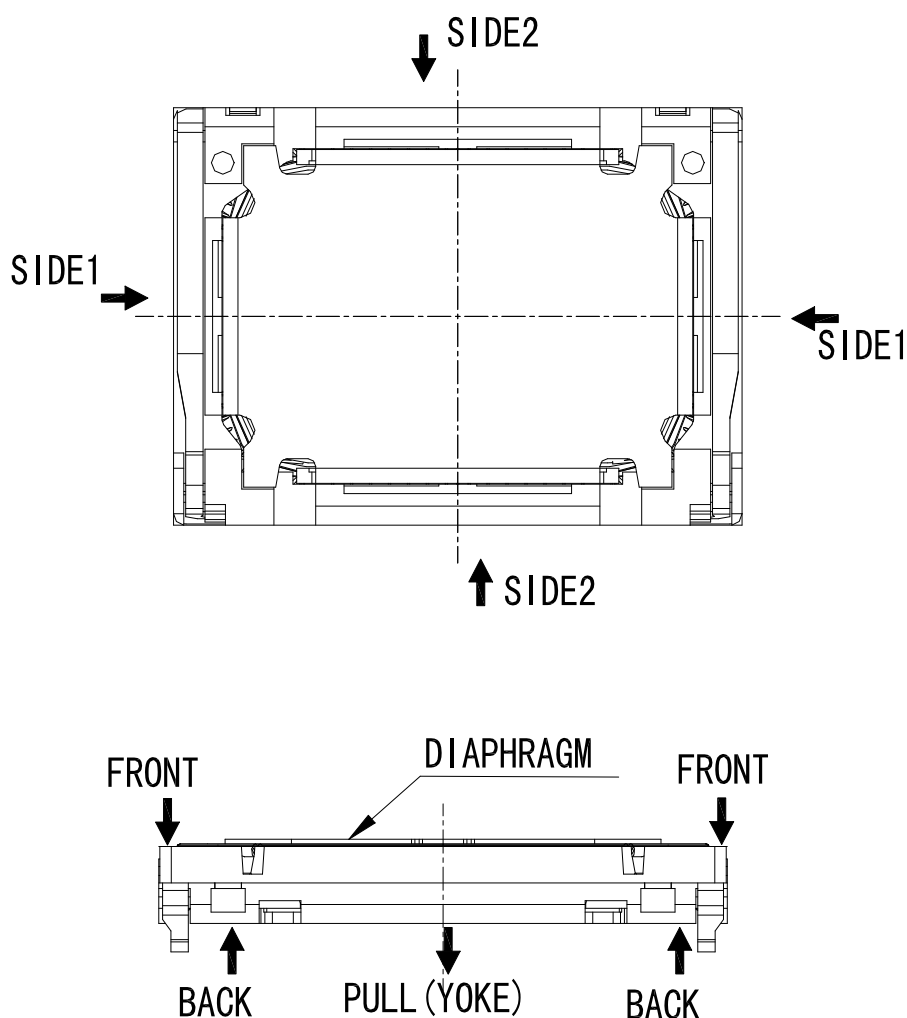
(Figure 2)

4.3 Force Diagram



(Figure 3)

4.4 Permitted Force to Speaker



(Figure 4)

Table 1: Max. Permitted compression forces

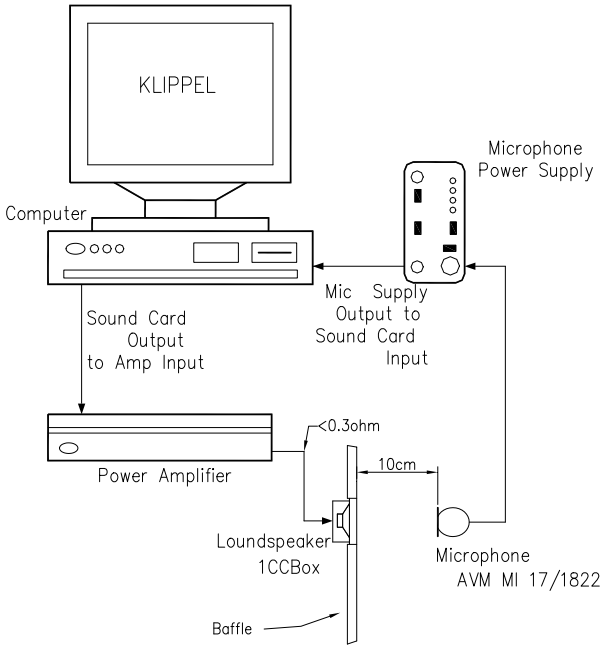
NO.	From	To	Max. Permanent Force(N)
1	Side 1	Side 1	10N
2	Side 2	Side 2	10N
3	Front	Back	5N
4	To Diaphragm		0N
5	Pull of Force(Yoke)		0N

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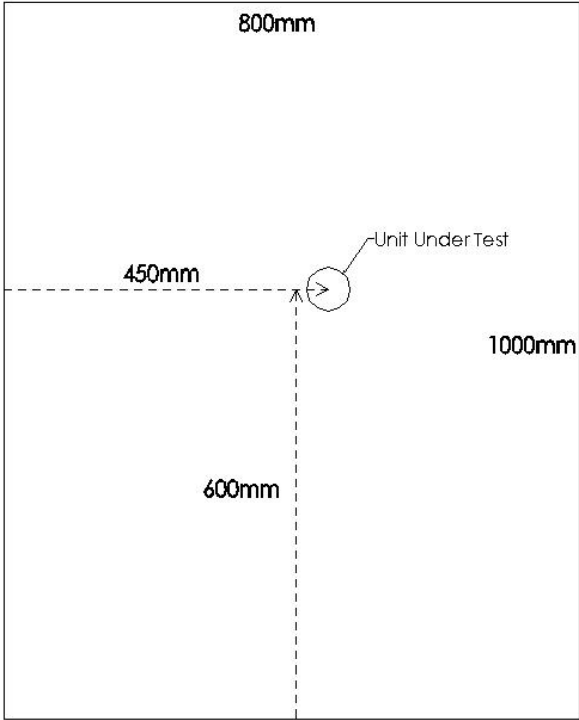
Issue:A/0

5. Measuring Setup



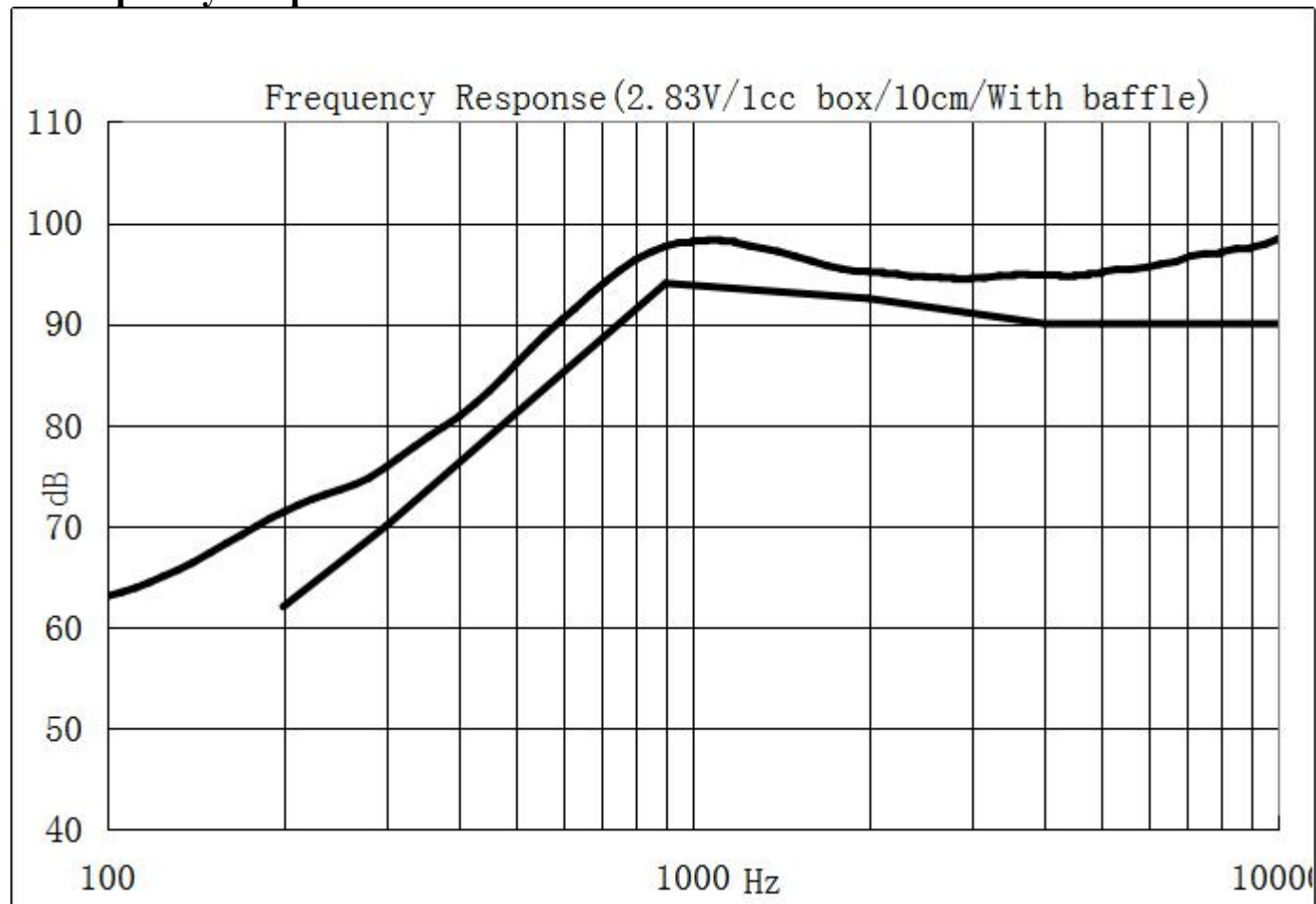
(Figure 5)

Baffle



Spaker Baffle
(Figure 6)

6. Frequency Response

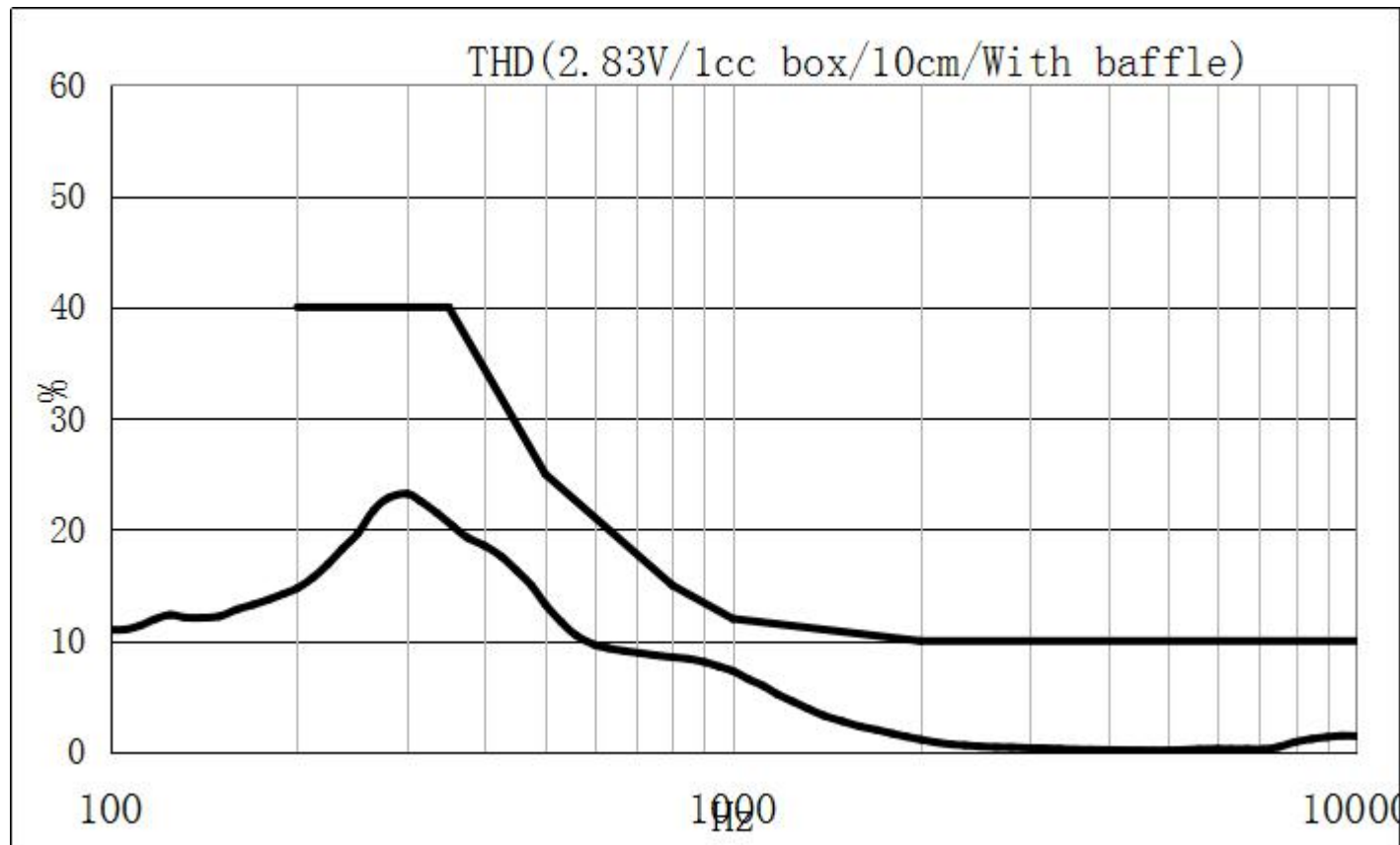


(Figure 7)

Table 1: Limits for SPL

Frequency(Hz)	Limit
200	62
300	70
900	94
2000	92.5
4000	90
5000	90

7. Total Harmonic Distortion

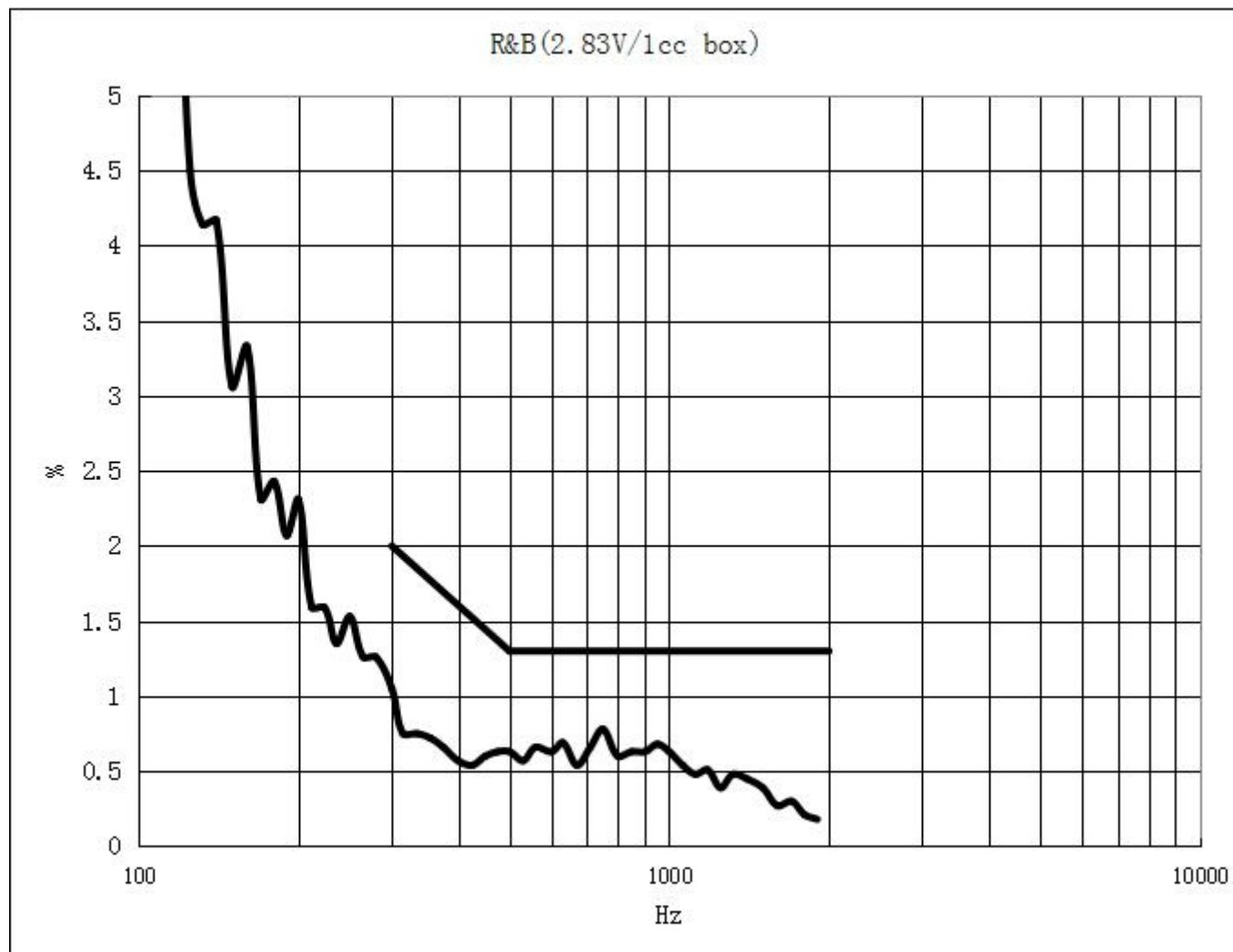


(Figure 8)

Table 2: Limits for THD

Frequency(Hz)	Limit
200	40
350	40
500	25
800	15
1000	12
2000	10
10000	10

8. R&B



(Figure 9)

Table 3: Limits for R&B

Frequency(Hz)	Limits
300	2
500	1.3
2000	1.3