



SPECIFICATION

CUSTOMER:

PRODUCTS : MICRO SPEAKER

MODEL : XHS171219LN-04-RH

ITEM. NO. :

DATE : 2019-5-6



APPROVER	CHECKER	DESIGNER

CUSTOMER APPROVER

SIGNATURE	IMPRINTMENT

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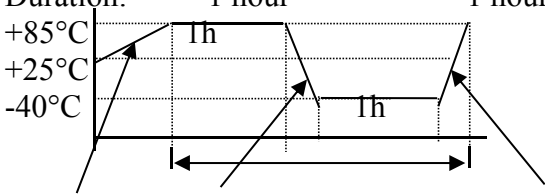
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ZHEJIANG ELECTRONIC CO.,LTD. TEL:86-573-84645930 、 84646197 FAX:86-573-84646190 E-mail: services@xh-haosheng.com.		HAOSHENG TECHNOLOGY SPECIFICATIONS (1/9)		
		TYPE NO.	XHS171219LN-04-RH	Issue:A/2
Revision				
No	Date	Page	Description	Sign
1	2019-3-30	2,7/9	SPEC UPDATE	
2	2019-5-6	4/9	SPEC UPDATE	
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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 (2/9)		
		TYPE NO.	XHS171219LN-04-RH	Issue:A/2
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 1.9 grams		
1-4. Operating Temperature Range		-30℃ to +70℃ 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		8 ± 15% ohm （ at 2.5 KHz, 2.83V input ）		
2-3.Sound Pressure Level		94.5 ± 3 dB SPL /1.0W/10cm at 2 kHz in 0.7cc box Speaker shall be mounted in a baffle with minimum dimensions of 80cm x 100cm. See Figure 4.		
2-4.Frequency Response		See Figure 5 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		
2-6. Iput Power (Rated./Max.)		Rated Power: 1.0W (in 0.7cc box) Maximum Power: 1.5W (in 0.7cc box)		
2-7.Rub and Buzz:		The input power shall be set at 1.0W. Using an audio oscillator, sweep from 500 to 6000 Hz with the speaker mounted in 0.7cc measure box and in a baffle.There shall be no buzzes, rattles, nor spurious noises.		
2-8.THD		See Figure 6 Test at 1.0W/10 cm with the speaker mounted in 0.7cc measure box in a baffle.		
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.	XHS171219LN-04-RH	Issue:A/2
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: $-40^{\circ}\pm 3^{\circ}\text{C}$ $\longleftrightarrow$ $+85^{\circ}\pm 3^{\circ}\text{C}$ 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	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);700-1100Hz; 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	$85 \pm 2^{\circ}\text{C}$;96H;2H Recovery time		
3-10 Low Temperature Test	$-40 \pm 2^{\circ}\text{C}$;96H;2H Recovery time		

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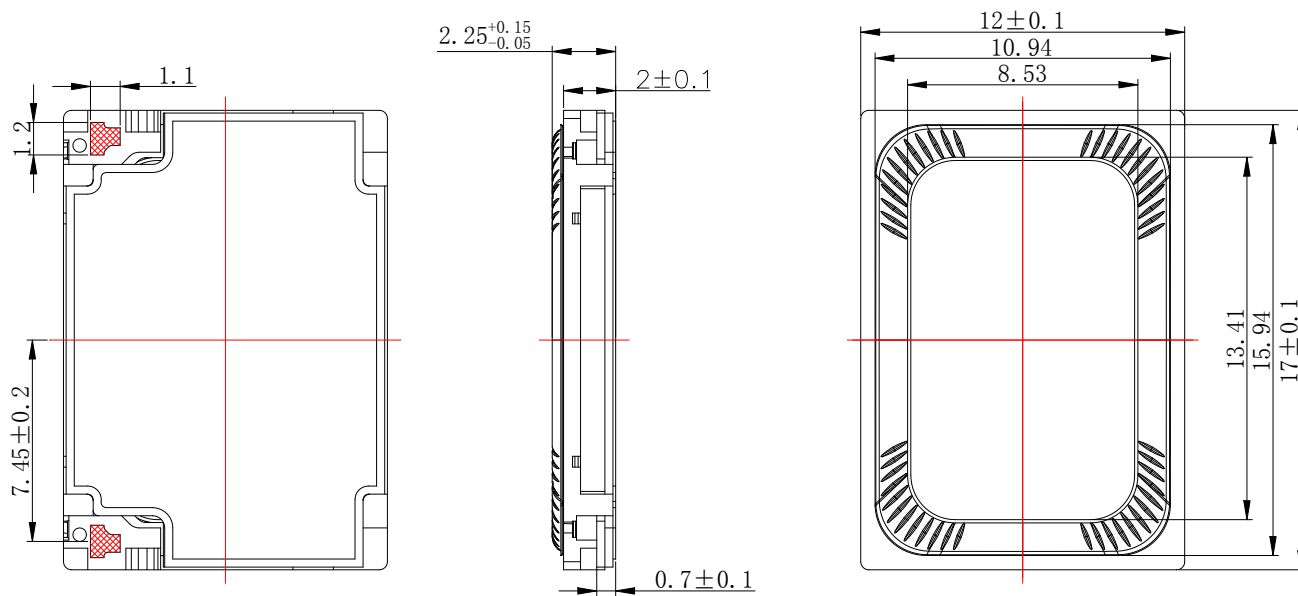
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4. Mechanical Layout and Dimensions

4.1 Mechanical Layout



Notes:

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

(Figure 1)

7	Spring	SUS	2	
6	Voice Coil	Copper	1	
5	Diaphragm	Polymer	1	
4	Pole Piece	Iron	1	
3	Magnet	NdFeB	5	
2	Yoke	Iron	1	
1	Frame	Plastic	1	
No.	Part Name	Material	Q'TY	Remark

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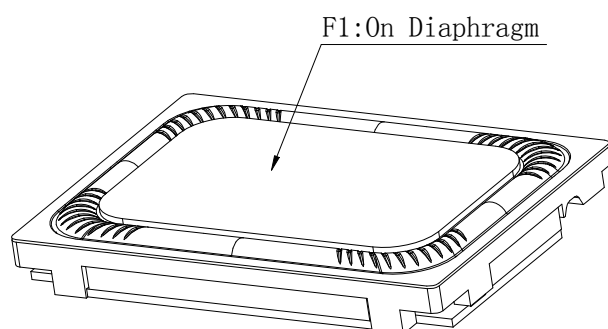
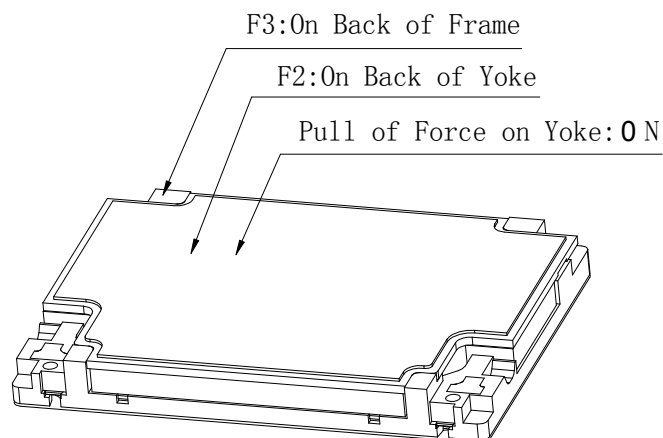
SPECIFICATIONS (5/9)

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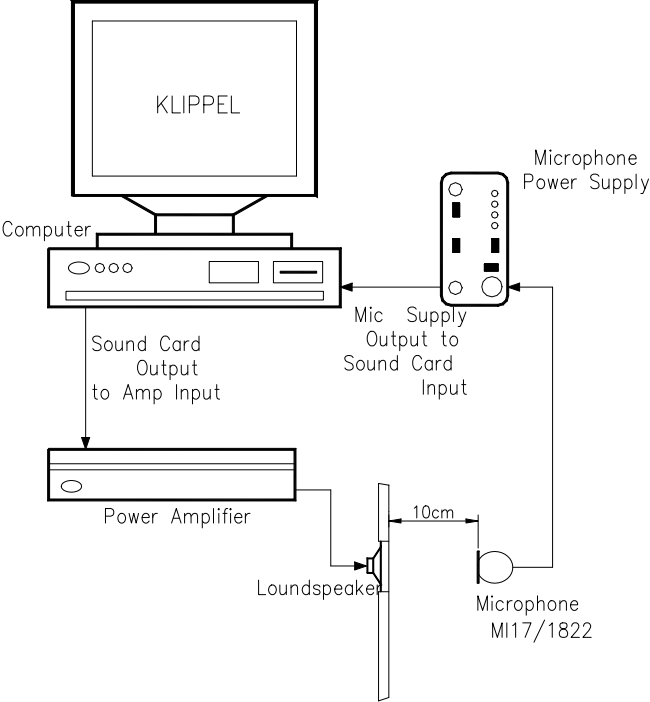
4.2. Permitted Force to Speaker



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

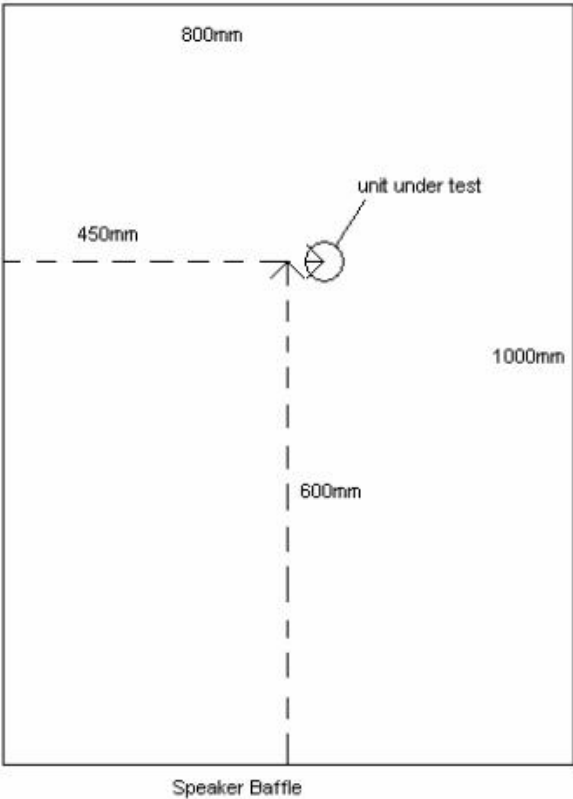
(Figure 2)

5. Measuring Setup



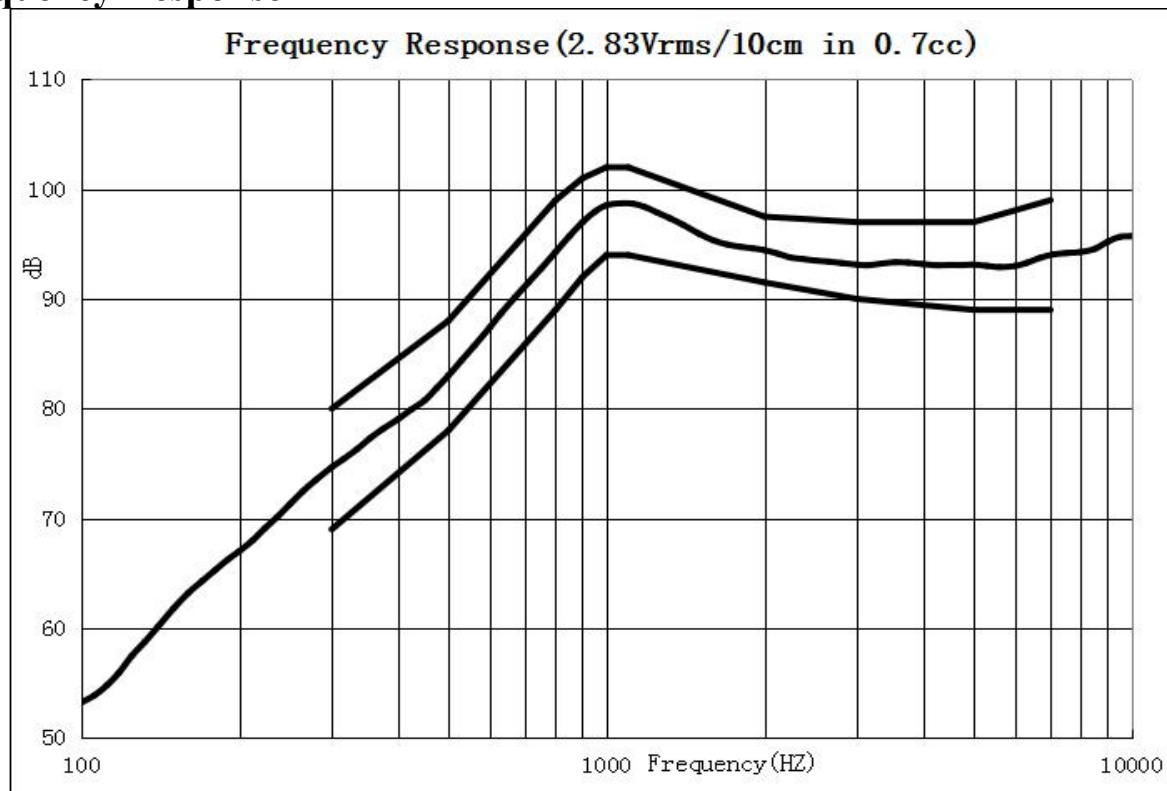
(Figure 3)

Baffle



(Figure 4)

6. Frequency Response

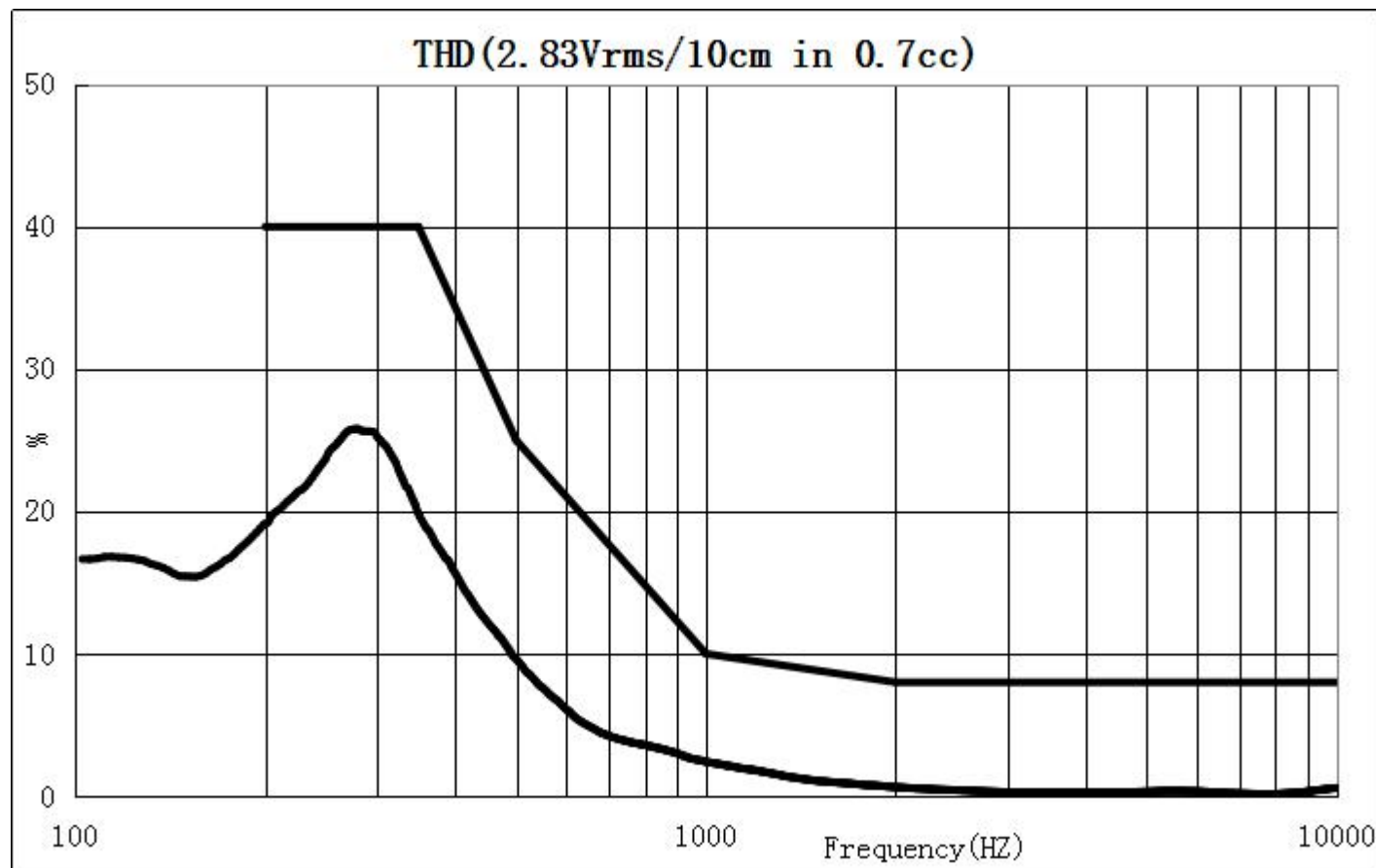


(Figure 5)

Table 1:Tolerance Limits Data for FR

Frequency(Hz)	Upper Limit(dB)	Frequency(Hz)	Lower Limit(dB)
300	80	300	69
500	88	500	78
800	99	800	89
900	101	900	92
1000	102	1000	94
1100	102	1100	94
2000	97.5	2000	91.5
3000	97	3000	90
5000	97	5000	89
7000	99	7000	89

7. Total Harmonic Distortion

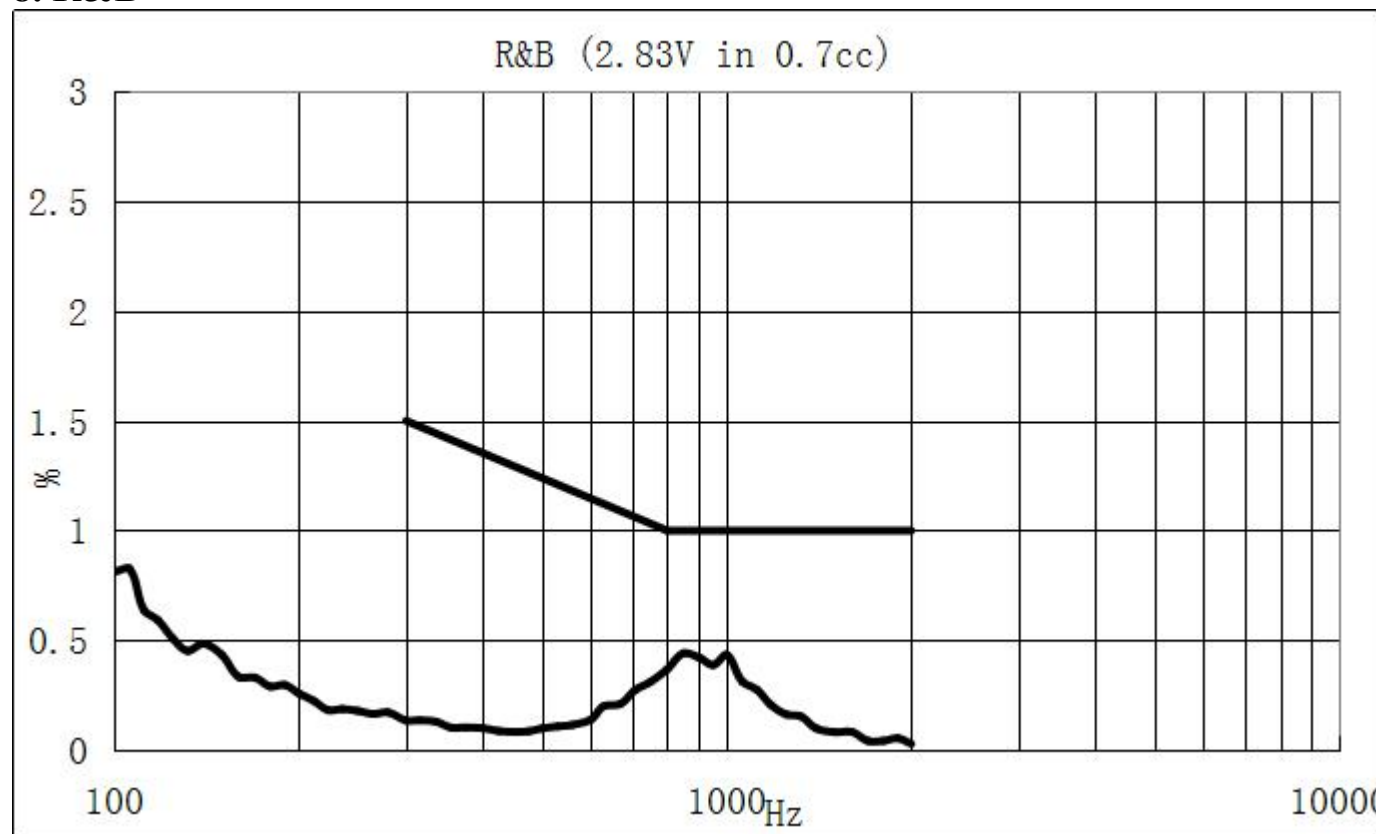


(Figure 6)

Table 2: Limits Date for THD

Frequency(Hz)	Limits
200	40
350	40
500	25
1000	10
2000	8
10000	8

8. R&B



(Figure 7)

Table 3: Limits Date for R&B

Frequency(Hz)	Limits
300	1.5
800	1
2000	1