SPECIFICATION

MICRO SPEAKER

CUSTOMER:与德通讯技术有限公司
LCN P/N: RR120620LE11
CUSTOMER P/N:
DATE: 2017-4-7

	PREPARED	CHECKED	APPROVED
SIGNATURE	吴超超	何时辉	陈国基
DATE	2017-4-7	2017-4-7	2017-4-7

CUSTOMER CONFIRMATION

SIGNATURE：_____

DATE：_____

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SHENZHEN LINKCONN ELECTRONICS CO.,LTD TEL: 86-0755-82943323 Fax: 86-0755-82966567 E-mail: Services@linkconn.com			SPECIFICATIONS (1/17)			
			TYPE NO.	RR120620LE11		Issue:A/0
Environmental Requirement	**HF**	√	**ROHS**	√	**REACH**	√

Revision

No	Date	All Page	Description	Sign
0	2017-2-13		A0	WCC
1	2017-4-7		Update 2D add "+/-"	WCC

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SPECIFICATIONS (2/17)		
TYPE NO.	**RR120620LE11**	**Issue:A/0**

1. Product Outline

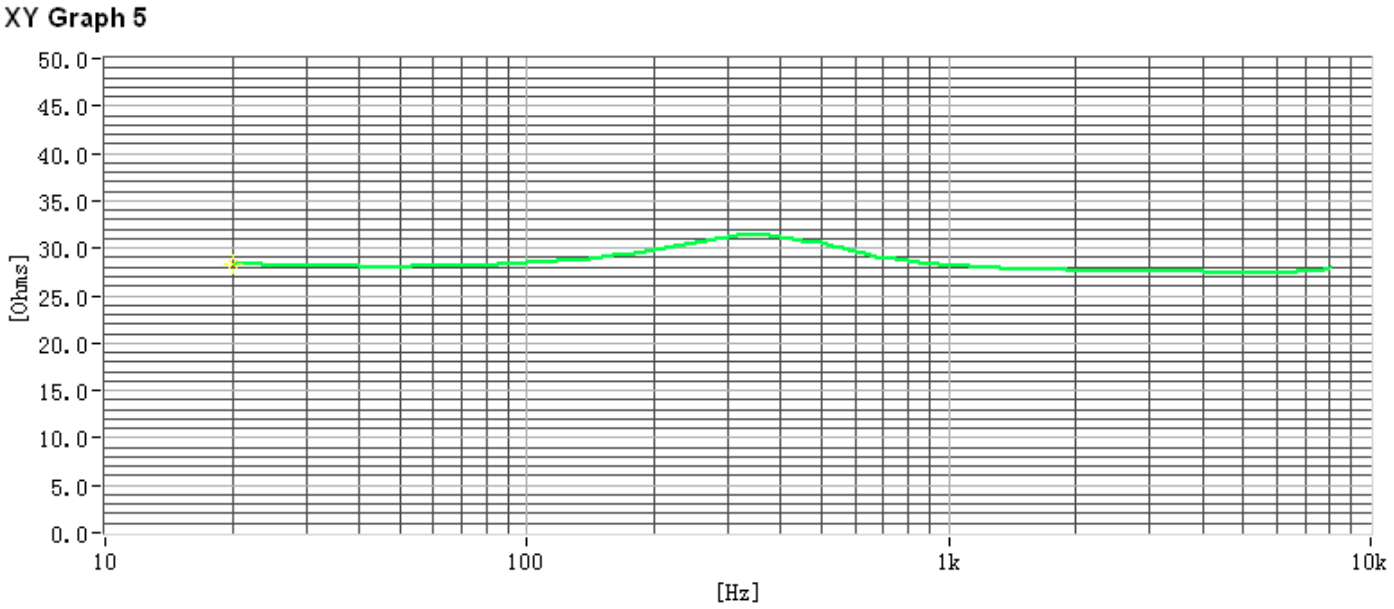
1.1 Scope	This specification is a typical receiver unit for telephone handset
1.2 Dimensions	As shown in figure 5
1.3 Net Weight	Approx 0.4 grams
1.4 Operating Temperature Range	-30°C to +70°C without loss of function
1.5 Storage Temperature Range	-40°C to+85°C(Note: Return to ambient room temperature before using)

2. Electroacoustic Characteristics

2.1 Impedance	AC:30±15% ohm （at 2 .5KHz，0.8Vrms input ） DC:28±15% ohm
2.2 Sound Pressure Level	112±3 dB SPL (at 1kHz 179mV ,0dBspl=20ｕ Pa) with IEC 318 ear See Figure 6
2.3THD	Input 179mVrms, with 318 Ear（Production line test） See Figure 7 , Table 4
2.4 Bass Resonance Frequency	410 Hz±20% in Free air See Figure 1
2.5 Rated Frequency Range	300 Hz- 7 kHz
2.6 Frequency Response (High-leak)	25.5±3 dB Pa/V (at 800mV,1kHz with Type3.2 HL ear) Input 800mVrms, with Soundcheck 4195 Ear（Type 3.2HL） See Figure 2, Table 1
2.7 Input Power (Rated./Max.)	Rated Power: 20mW Maximum Power: 40mW
2.8 Rub and Buzz:	A sine sweep among rate frequency range at 800mVrms for a period of 1 second will not result in any buzzing or extraneous sound
2.9 THD (High-leak)	Input 800mVrms, with B&K 4195 Ear（Type 3.2HL） See Figure 3 , Table 2
2.10R&B	Input 800mVrms, with IEC 318 Ear（Production line test） See Figure 8, Table 5
2.11Polarity	When a DC sources “+” polarity is attached to speakers “+” polarity, “-“polarity is attached speaker’s “-“polarity, the membrane will move forward.

3. Resonance Frequency

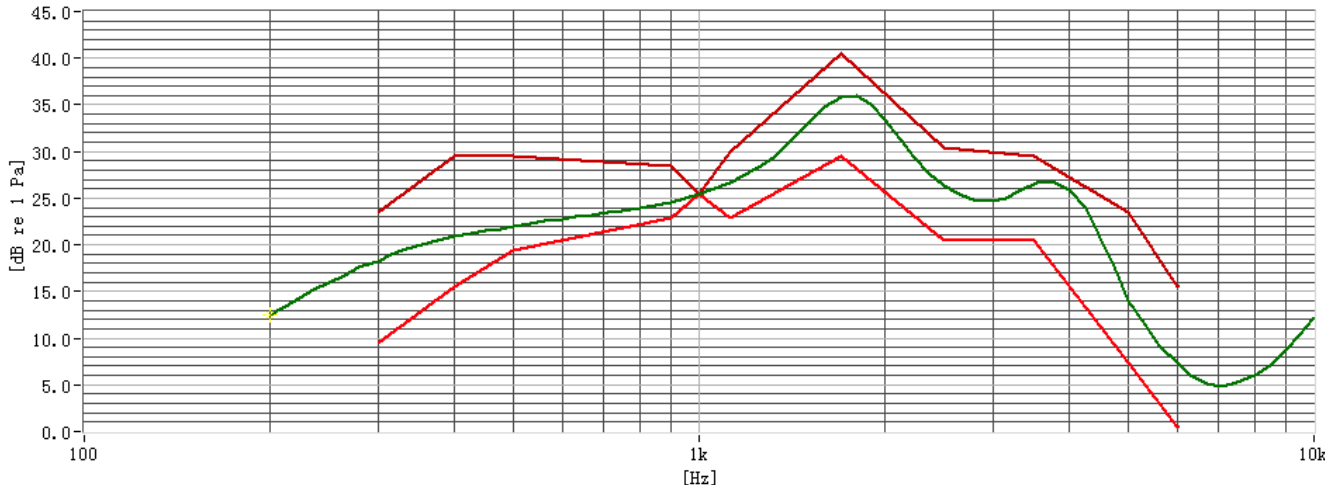
Resonance Frequency (0.8Vrms)



Frequency
(Figure 1)

4. Frequency Response(High-leak)

Frequency Response(0.8Vrms)



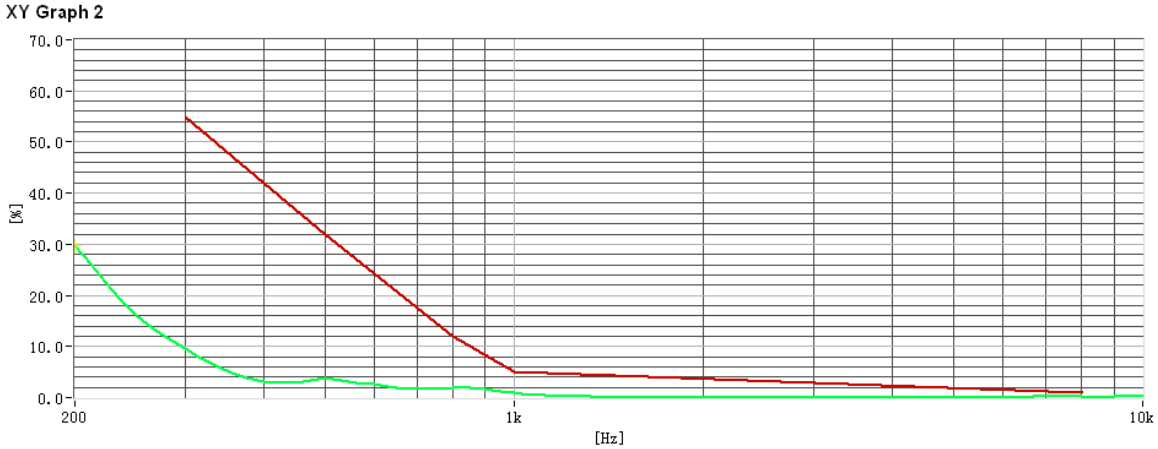
(Figure 2)

Table 1:Tolerance Limits Data for FR

Frequency(Hz)	Upper Limits(dB)	Frequency(Hz)	Lower Limits(dB)
300	-2	300	-16
400	4	400	-10
500	4	500	-6
900	3	900	-2.5
1000	0	1000	0
1120	4.5	1120	-2.5
1700	15	1700	4
2500	5	2500	-5
3500	3	3500	-6
5000	-3	5000	-19
6000	-10	6000	-25

5. Total Harmonic Distortion(High-leak)

THD(0.8Vrms/High-Leak)



(Figure 3)

Table 2: Limits Data for THD

Frequency(Hz)	Limits
300	55
400	42
500	32
800	12
1000	5
4000	1

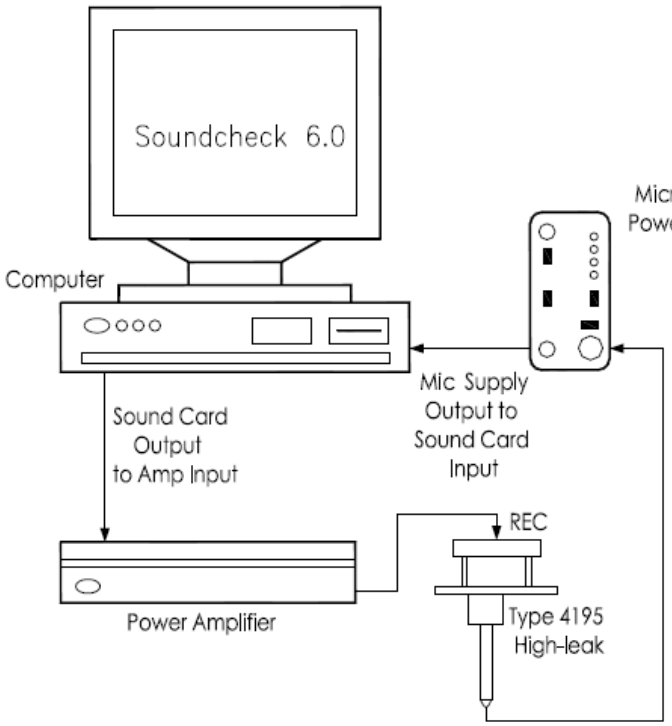
6. Test Method(High-leak)

6.1 Sensitivity and Frequency Response Curve:

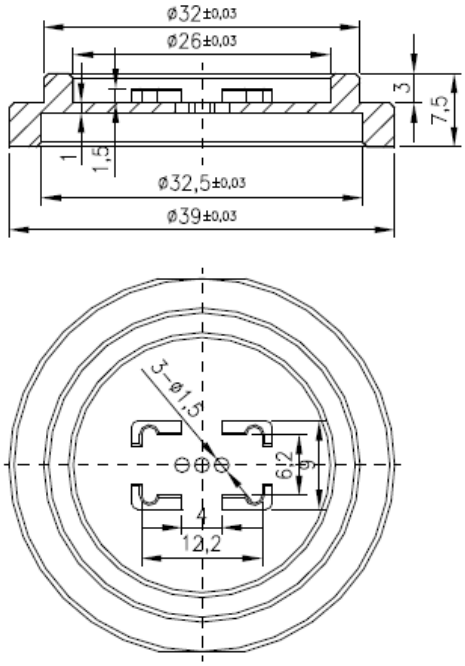
The receiver shall be mounted in a fixture shown in Figure 5.and the recommended acoustic measuring devices are shown below in figure4. The swept sine-wave frequency range is 100-10kHz(input 800mVrms) .

6.2 T.H.D:

The receiver shall be mounted in a fixture shown in Figure 5 .and the recommended acoustic measuring devices are shown below in figure 4. The swept sine-wave frequency range is 100-10kHz(input 800mVrms).



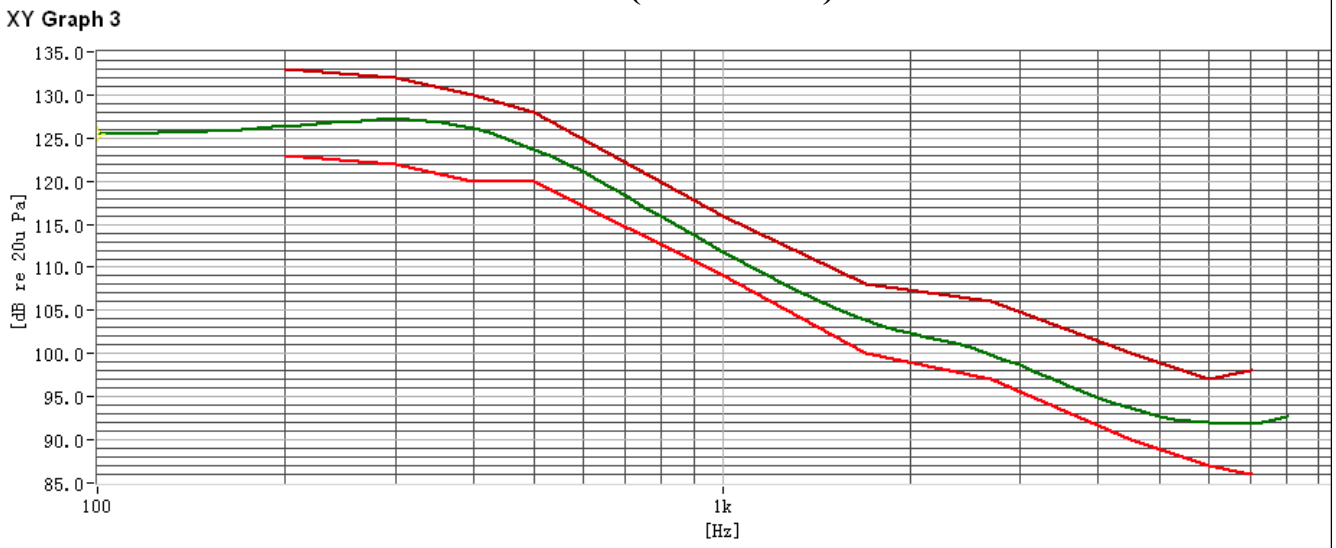
(Figure 4)



(Figure 5)

7. Frequency Response

SPL(0.179Vrms)



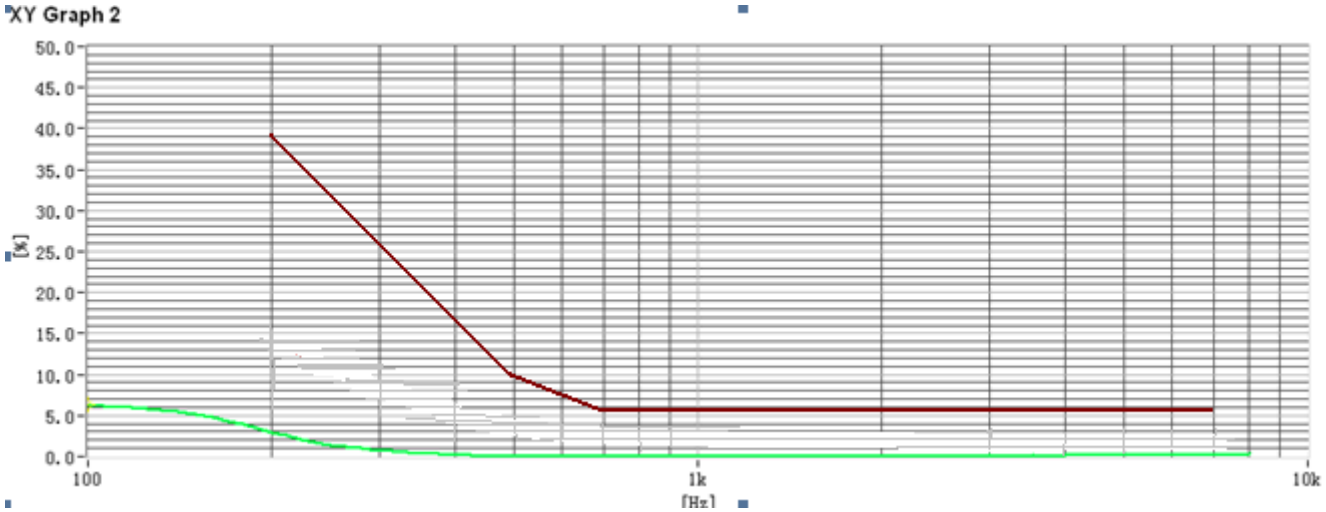
(Figure 6)

Table 3:Tolerance Limits Data for FR

Frequency(Hz)	Upper Limits(dB)	Frequency(Hz)	Lower Limits(dB)
200	133	200	123
400	130	400	120
800	120	800	112
3000	108	3000	100
6000	96	6000	88
8000	99	8000	89

8. Total Harmonic Distortion

THD(0.179Vrms)



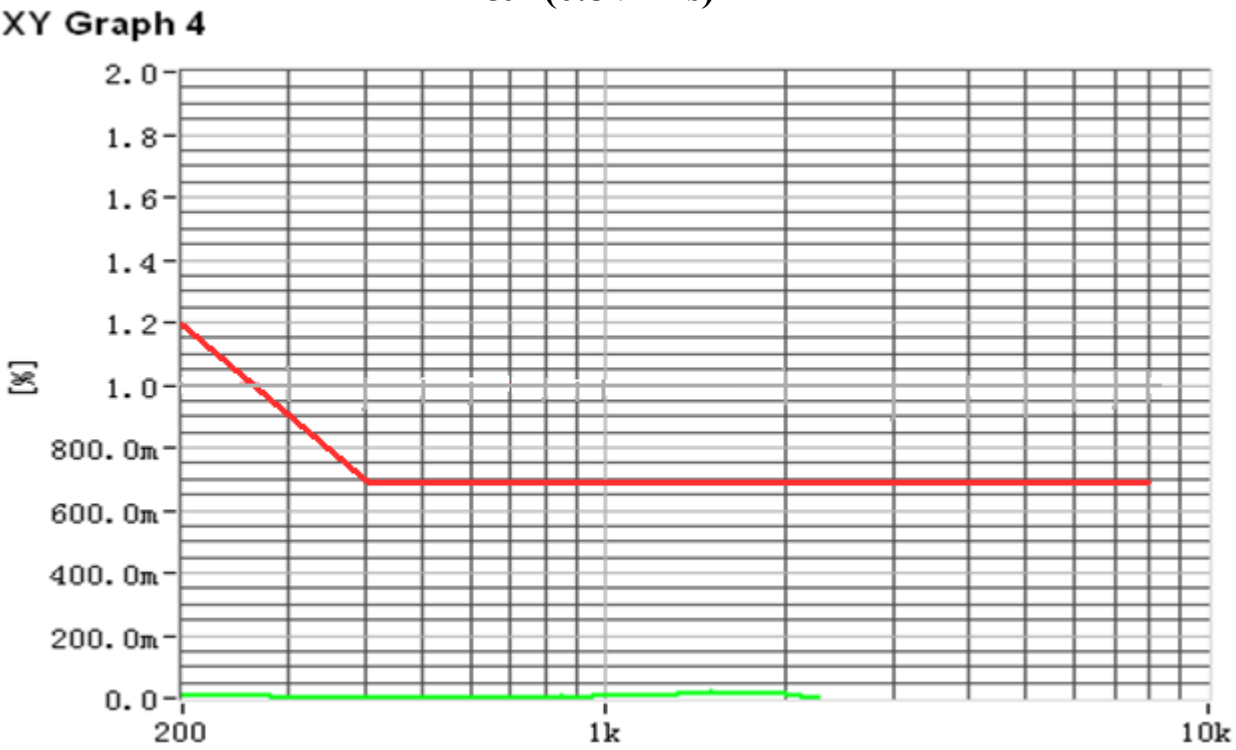
(Figure 7)

Table 4: Limits Data for THD

Frequency(Hz)	Limits
200	40
500	10
800	5
8000	5

9. Rub&Buzz Harmonic 10-35

R&B(0.8Vrms)



(Figure 8)

Table 5: Limits Data for R&B

Frequency(Hz)	Limits
200	1.2
400	0.6
8000	0.6

10.Test Method

10.1 Sensitivity and Frequency Response Curve:

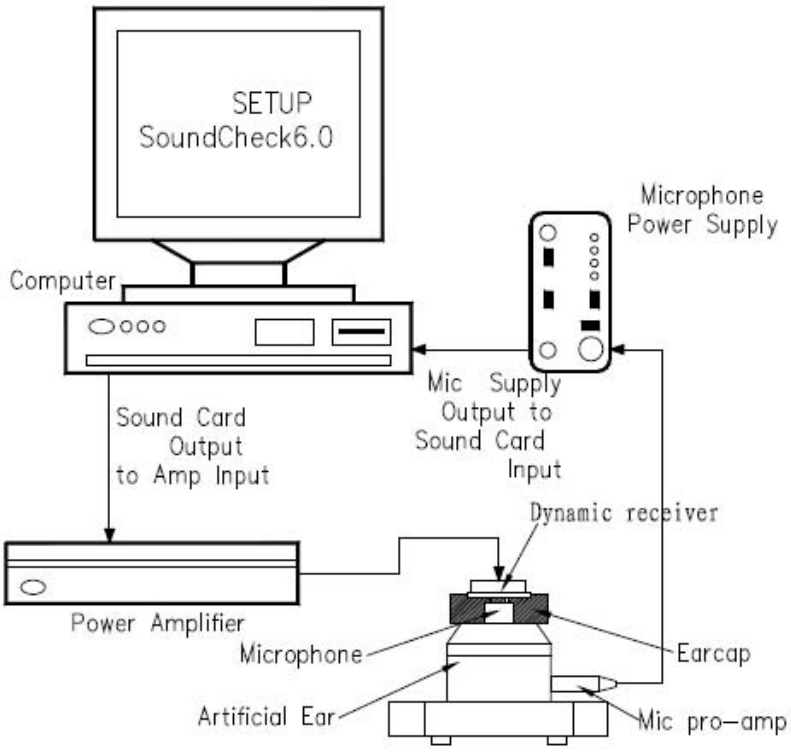
The receiver shall be mounted in a fixture shown in Figure 9 .and the recommended acoustic measuring devices are shown below in figure 8. The swept sine-wave frequency range is 100-10kHz (input 179mVrms).

10.2 T.H.D

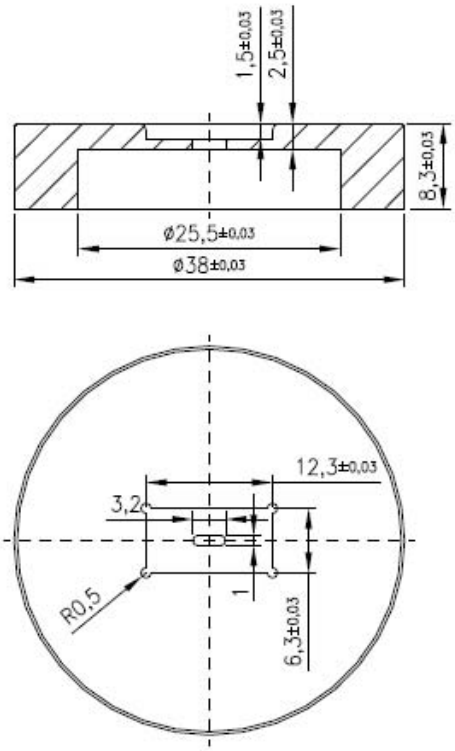
The receiver shall be mounted in a fixture shown in Figure 9 .and the recommended acoustic measuring devices are shown below in figure. (input 179mVrms)

10.3 R&B:

The receiver shall be mounted in a fixture shown in Figure 9 .and the recommended acoustic measuring devices are shown below in figure. (input 800mVrms)

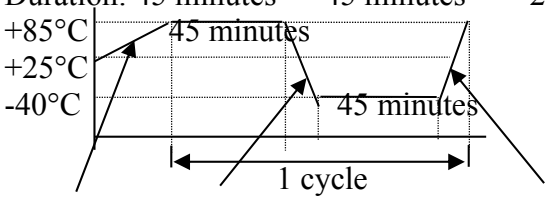


(Figure 9)



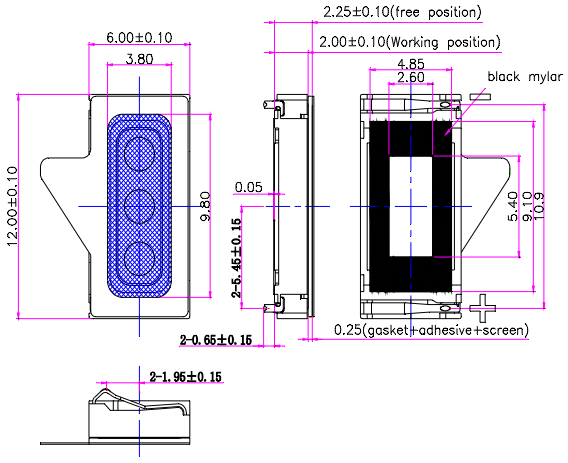
(Figure 10)

11. General Reliability

11.1 General	After any following tests the response at 1 KHz shall not deviate more than±3 dB from the initial value
11.2 Temperature Shock Test	Temperature: -40°C±3°C ⟷ +85°C±3°C Cycle: 12 cycles Duration: 45 minutes 45 minutes 2 hours (recovery 2 hours)  (30minutes) (5minutes) (5minutes)
11.3 Static Humidity Test	Temperature: +40°C±3°C Relative Humidity: 90%~95%RH Duration: 96 hours (recovery 6 hours)
11.4 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.
11.5 Drop Test	Height: 1.5m Cycle: 1 cycles Drop samples 1.5m 2 drops on side(2*6), 2 drops on each corner(2*4). Total 20 drops
11.6 Operating Life Test	25°C;Pink noise;300Hz-7kHz;20mW;Crest factor 1.8-2.2;96 H
11.7 Max Power Test	25°C;Pink noise;300Hz-7kHz;40mW;1 sec on/60 sec off;60 cycles
11.8 High Temperature Test	85 +/-3°C;96H;2H Recovery time
11.9 Low Temperature Test	-40 +/-3°C;96H;2H Recovery time

12. Mechanical Layout and Dimensions

12.1 Mechanical Layout



Notes:

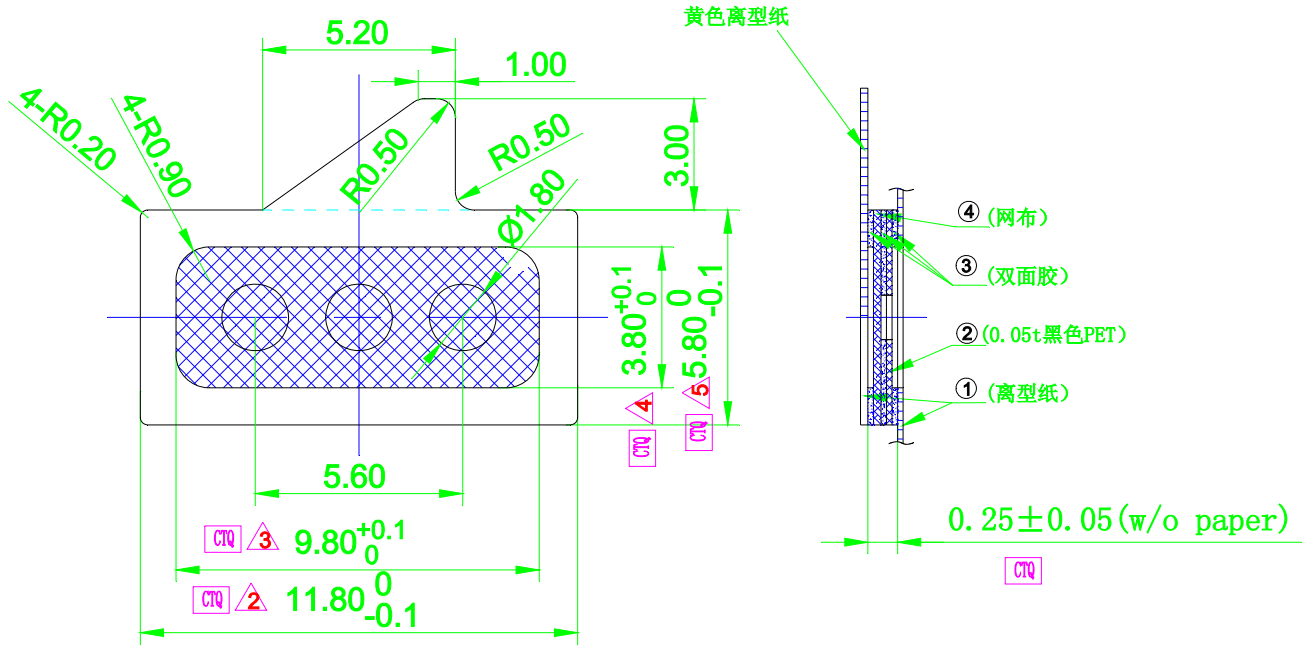
1、General unless otherwise noted ±0.2mm.

2、 Spring: Promptly contact surface gold plating thickness 0.1μm

(Figure 11)

No.	Part Name	Material	Q'TY	Remark
10	Gasket	0.05T	1	Mylar
9	Gasket	0.25t	1	420#
8	Spring	SUS301 3/4H-0.15T	2	gold plating thickness 4μm
7	Cover	SUS304 1/2H	1	
6	Voice Coil	DHT-FH5	1	
5	Diaphragm	PEEK+PEN	1	
4	Pole Piece	SPCC	1	
3	Magnet	N45H	1	
2	Yoke	SPCC	1	
1	Frame	PPA	1	

12.2 Dimensions Of Gaske



(Figure 12)

Notes:

1、Working position of gasket is 0.25mm

2、General unless otherwise noted ±0.1mm.

12.3 Pad Layout of Spring contact

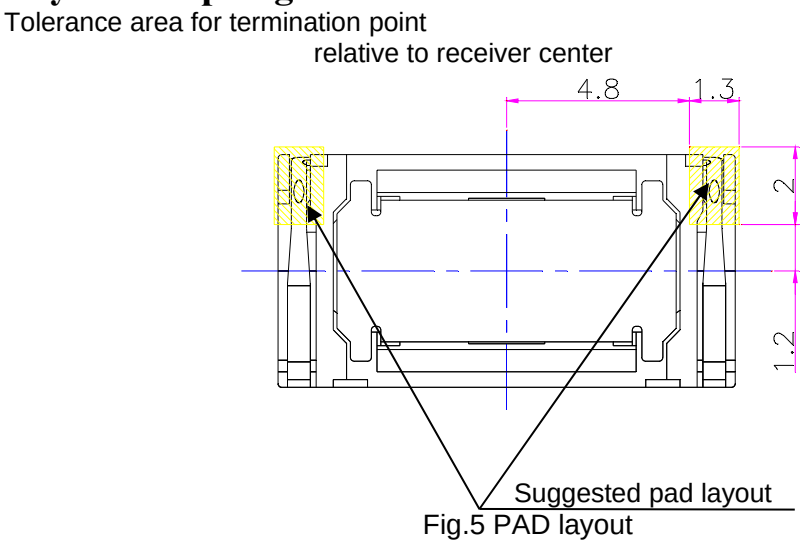
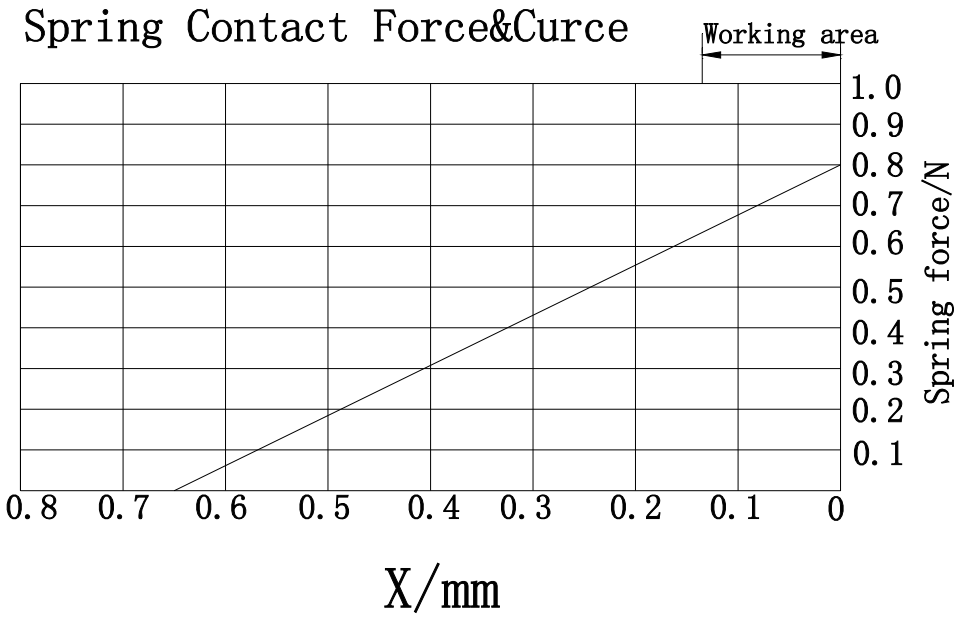


Fig.5 PAD layout

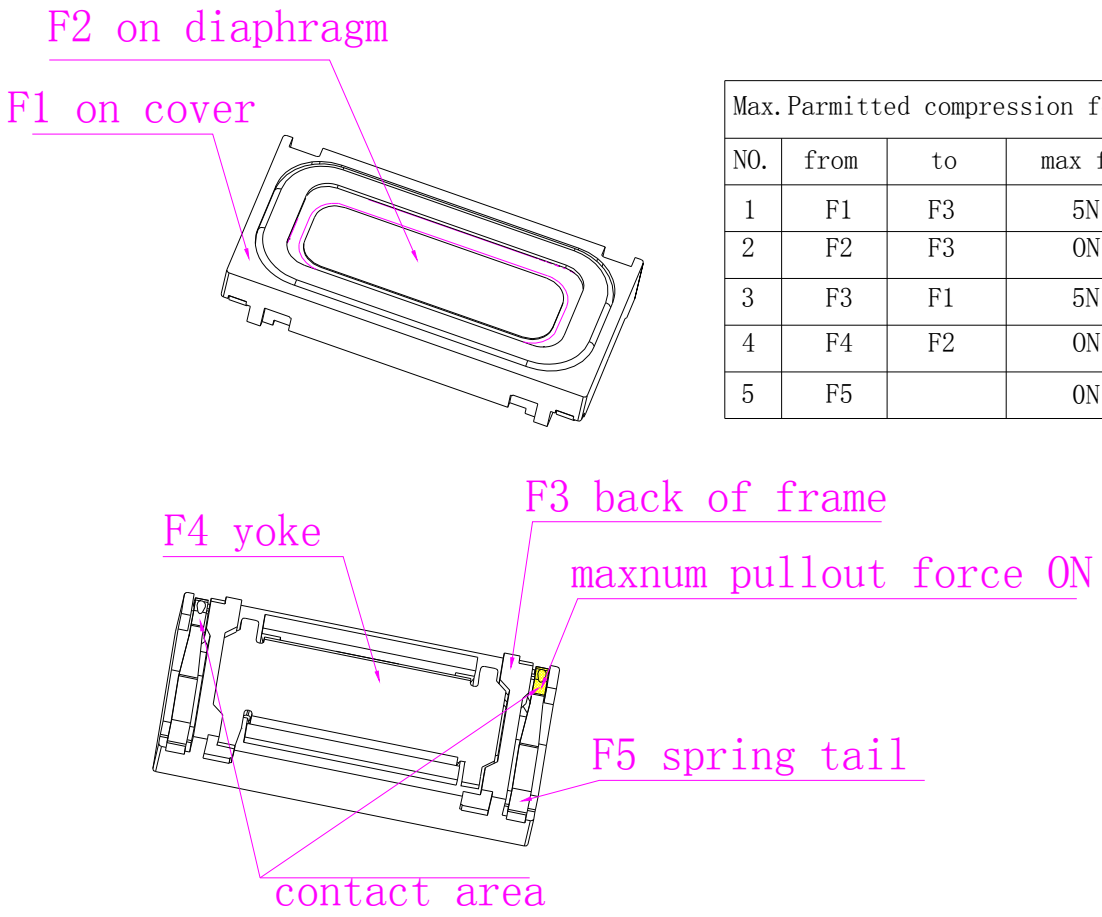
(Figure 13)

12.4 Force Diagram



(Figure 14)

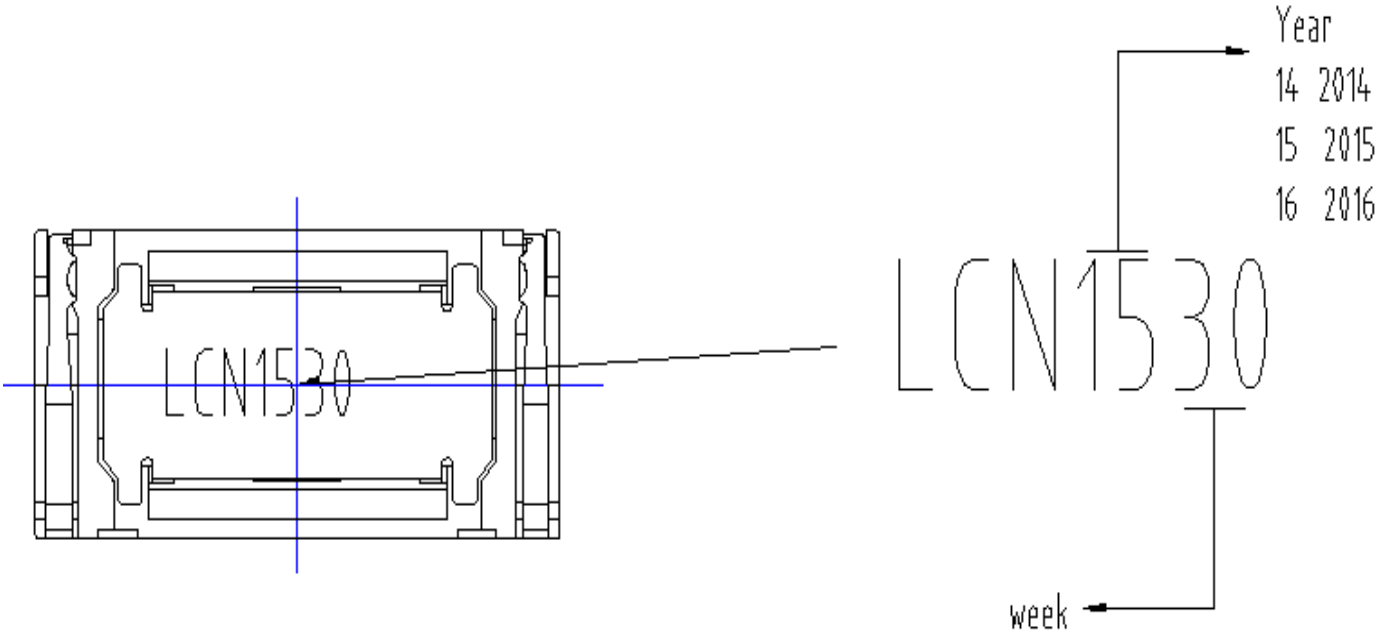
12.5 Permitted Force to Receiver



Max.Parmitted compression forces:			
NO.	from	to	max force
1	F1	F3	5N
2	F2	F3	0N
3	F3	F1	5N
4	F4	F2	0N
5	F5		0N

(Figure 15)

12.6 Date Code



(Figure 16)

13. Package

1、350pcs of speaker in each tray
2、16 trays in one carton
3、Total:5600 pcs / 1 carton
4、Gross Weight:3.80KG
5、Net Weight: 2.24KG