



Elektrotechnik Karl-Heinz Mauz GmbH

LSF-S1206A-IPX7 (Artikel-Nr. 106126)

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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	32 ± 15% ohm
2.2 Sound Pressure Level	112 ± 3 dB At 0.566Vrms 1kHz @type3.2
2.3 Bass Resonance Frequency	400±100 Hz in free air
2.4 Rated Frequency Range	300 Hz- 7.0 kHz
2.5 Frequency Response	See Figure 1, Table 1
2.6 Input Power (Rated./Max.)	Rated Power: 10mW Maximum Power: 30mW
2.7 Rub and Buzz:	A sine sweep among rated frequency range at 566 mVrms for a period of 1 second will not result in any buzzing or extraneous sound
2.8 THD	See Figure2 , Table 2

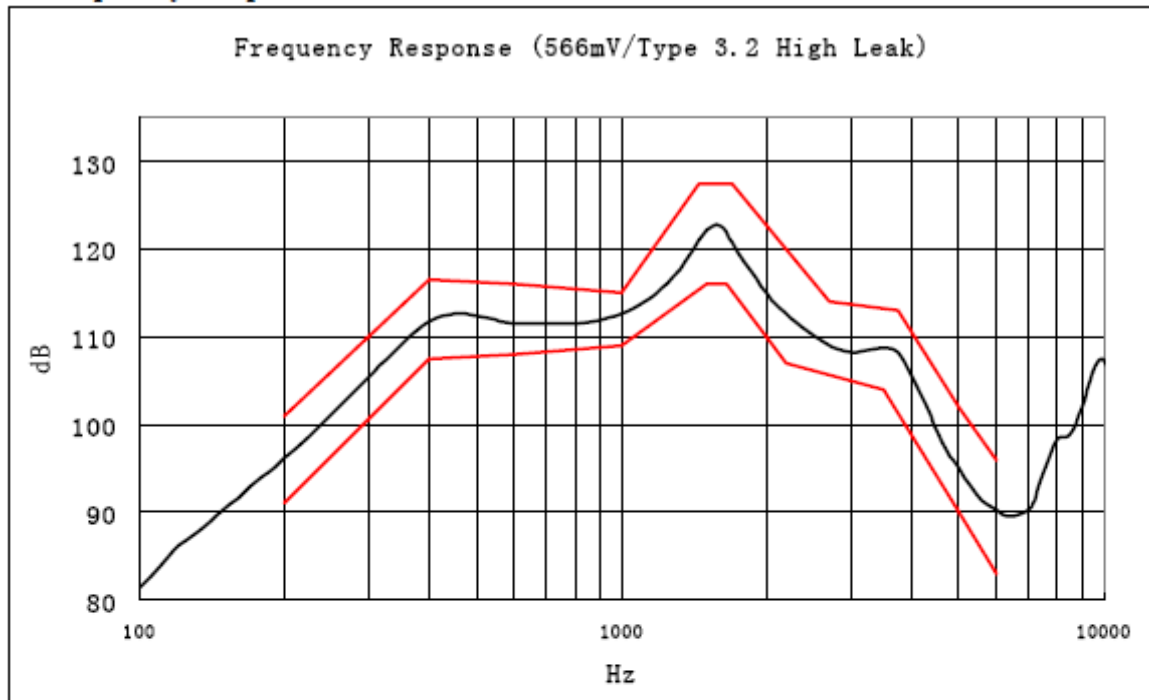
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3. Frequency Response

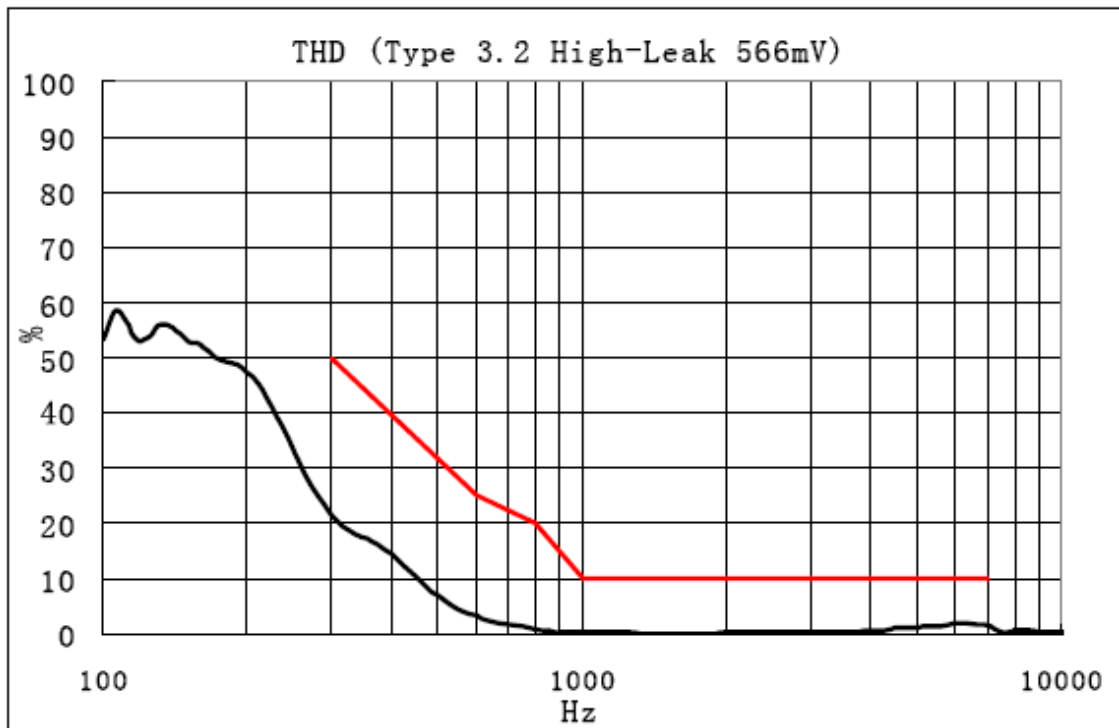


(Figure 1)

Table 1: Tolerance Limits Data for FR

Frequency(Hz)	Upper Limits(dB)	Frequency(Hz)	Lower Limits(dB)
200	101	200	91
400	116.5	400	107.5
600	116	600	108
1000	115	1000	109
1450	127.5	1500	116
1700	127.5	1650	116
2700	114	2200	107
3750	113	3500	104
5000	102	5000	90
6000	96	6000	83

4. Total Harmonic Distortion



(Figure 2)

Table 2: Limits Data for THD

Frequency(Hz)	Limits
300	50
600	25
800	20
1000	10
7000	10

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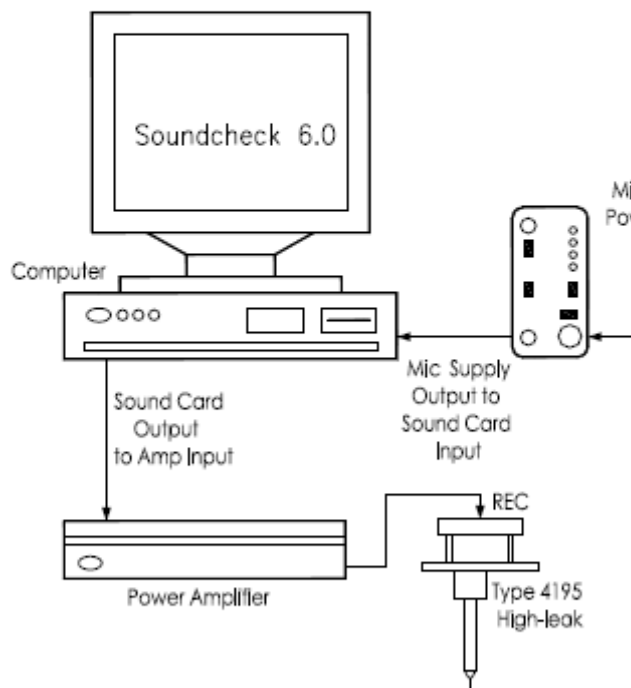
5. Test Method

5.1 Sensitivity and Frequency Response Curve:

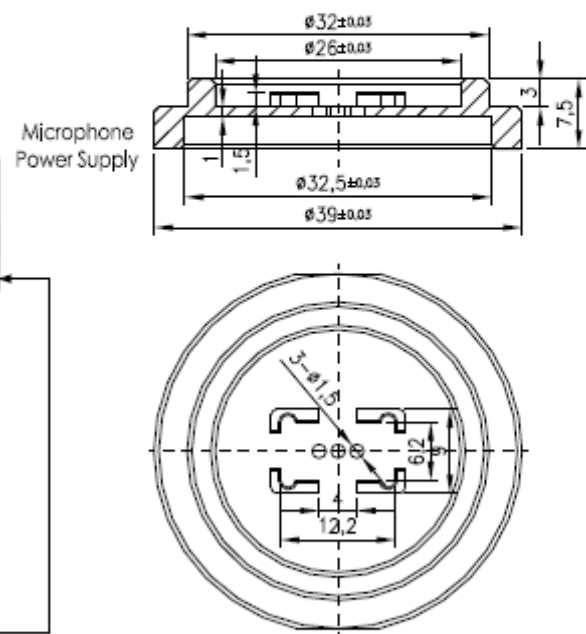
The receiver shall be mounted in a fixture shown in Figure 4 .and the recommended acoustic measuring devices are shown below in figure 3. The swept sine-wave frequency range is 100-10kHz(input 566mVrms) .

5.2 T.H.D.:

The receiver shall be mounted in a fixture shown in Figure 4 .and the recommended acoustic measuring devices are shown below in figure 3. The swept sine-wave frequency range is 100-10kHz(input 566mVrms) .



(Figure 3)



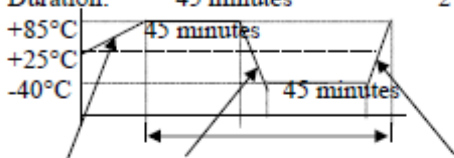
(Figure 4)



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6. General Reliability	
6.1 General	After any following tests the response at 1 KHz shall not deviate more than ± 3 dB from the initial value
6.2 Temperature Shock Test	Temperature: $-40^{\circ}\pm 3^{\circ}\text{C}$ \longleftrightarrow $+85^{\circ}\pm 3^{\circ}\text{C}$ Cycle: 12 cycles Duration: 45 minutes 2 hours (recovery 2 hours)  (30minutes) (5minutes) 1 cycle (5minutes)
6.3 Static Humidity Test	Temperature: $+40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ Relative Humidity: 90%~95%RH Duration: 96 hours (recovery 6 hours)
6.4 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.
6.5 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
6.6 Operating Life Test	25°C; Pink noise; 20Hz-20kHz; 10mW; Crest factor 1.8-2.2; 96 H
6.7 Max Power Test	25°C; Pink noise; 20Hz-20kHz; 30mW; 1 sec on/60 sec off; 60 cycles
6.8 High Temperature Test	85 \pm 3°C; 96H; 2H Recovery time
6.9 Low Temperature Test	-40 \pm 3°C; 96H; 2H Recovery time
6.10 Waterproof Requirement	IPX-7 Test Condition: Depth of water: 1 Meters Time of duration: 30 Minutes
6.11 Air Leak Test Conditions	Air pressure 10KPa, Back side pressure 0.5Kg, Continuous time 7 Seconds, Less than 1 SCCM

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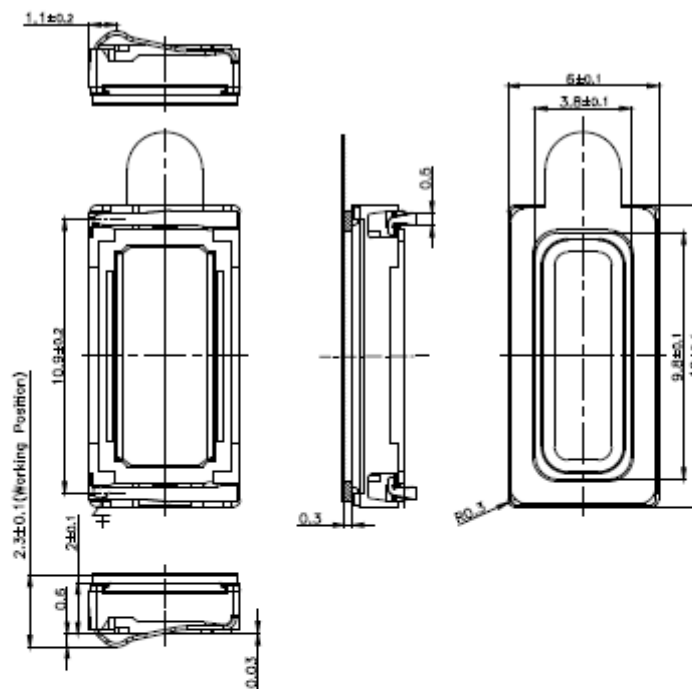
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7. Mechanical Layout and Dimensions

7.1 Mechanical Layout



Notes:

1. General unless otherwise noted $\pm 0.2\text{mm}$.

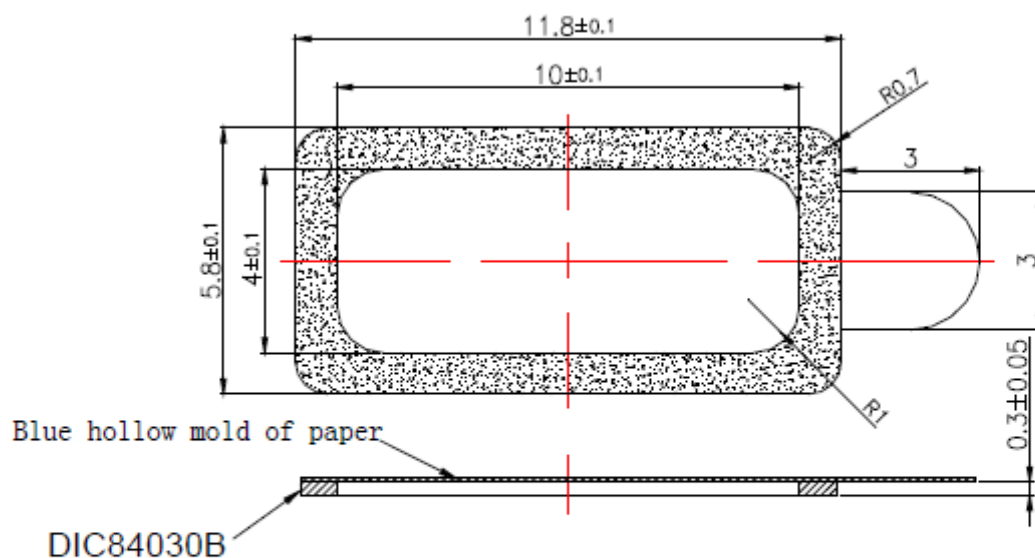
(Figure 5)

9	Gasket	0.3t DIC84030B	1	
	Waterproof gasket can't exceed the speaker outside diameter.			
8	Spring	Stainless Steel	2	
7	Cover	Brass	1	
6	Voice Coil	Copper	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

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7.2 Dimensions Of Gasket



Notes:

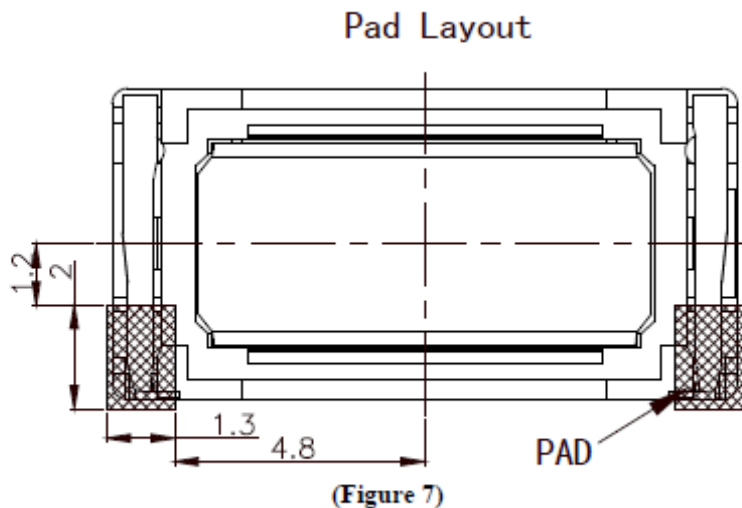
- 1、 Working position of gasket is 0.3mm
- 2、 General unless otherwise noted ± 0.2 mm.

(Figure 6)

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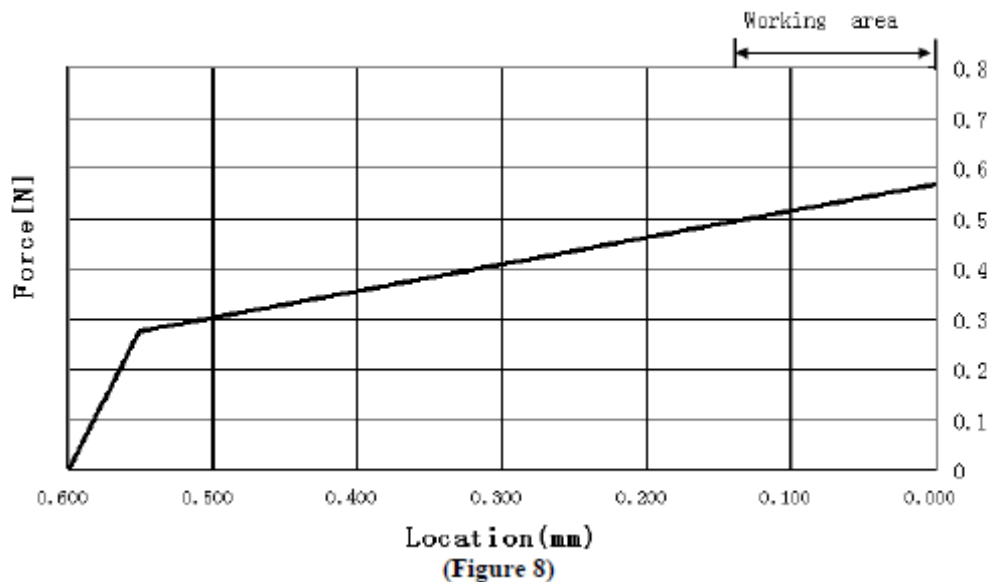
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7.3 Pad Layout of Spring contact

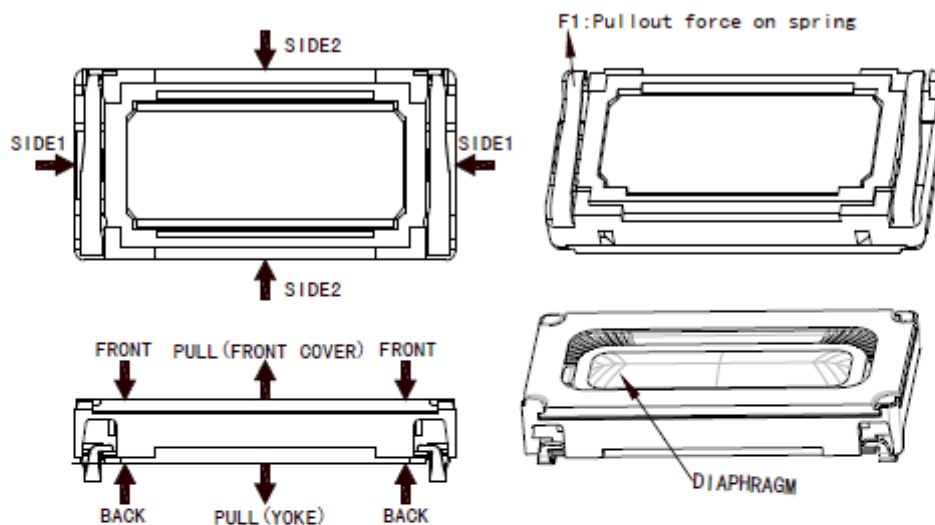


7.4 Force Diagram

FORCE PROGRESSION OF ONE SPRING CONTACT



7.5 Permitted Force to Receiver



(Figure 9)

Table 3: 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(Cover/Yoke)		0N
6	F1		0N

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8. Package

- 1、 100pcs of speaker in each tray
- 2、 20 trays in one carton
- 3、 Total:2000 pcs / 1 carton
- 4、 Gross Weight:2.8KGS
- 5、 Net Weight: 0.8KGS

