



Dynamic receiver & loudspeaker

15.0 × 6.0 × 2.5 mm

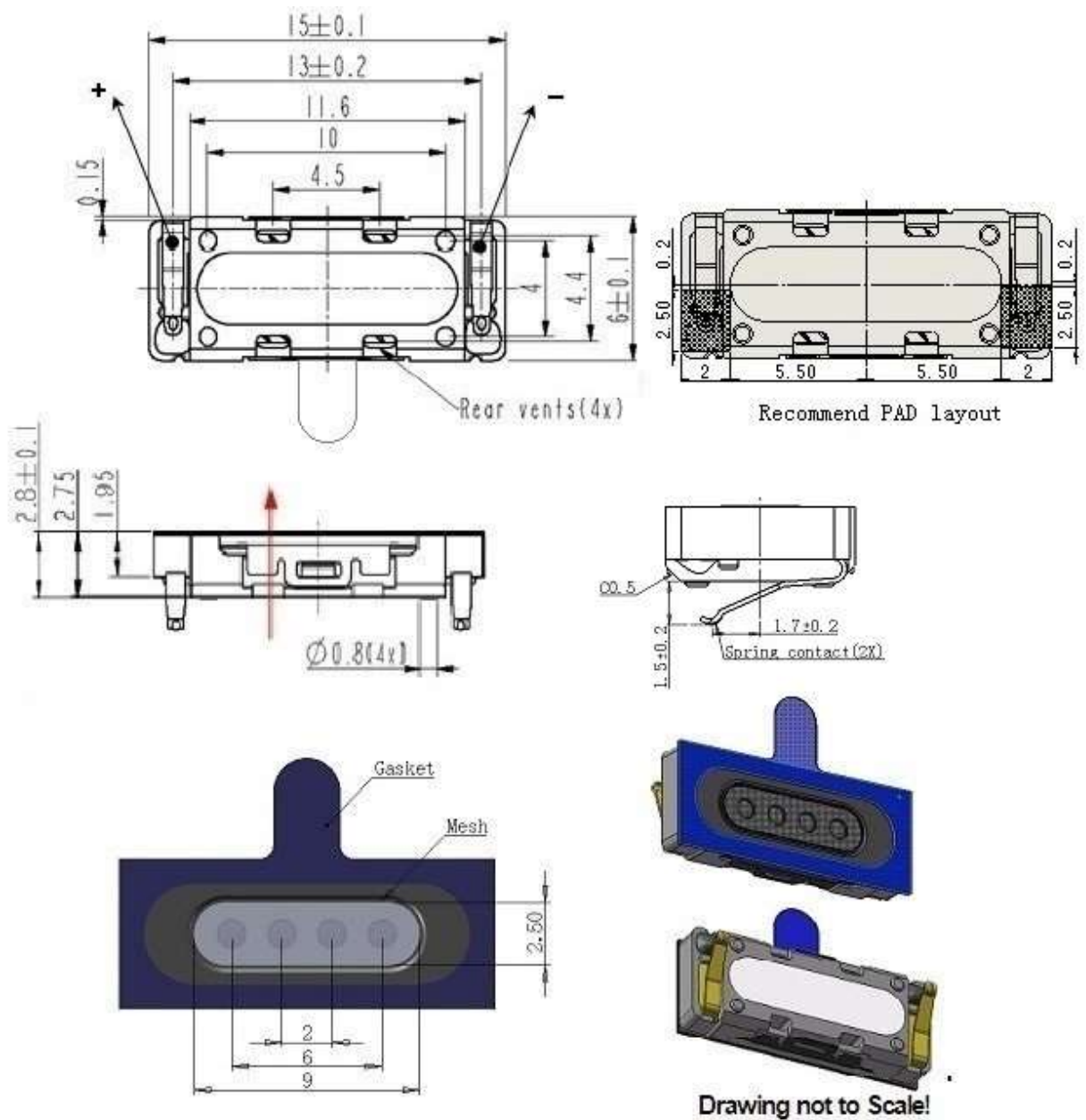
BR1506L025YN32M-2

Revision

Date	Version	Status	Changes	Approver
2019/6/11	V0.1	Draft	Initial release	AX
2019/7/26	V0.2	Draft	Add curves	AX
2019/9/26	V0.3	Draft	Add gasket, update dimension	AX
2019/11/13	V0.4	Draft	Add print code & PAD layout	AX
2019/11/15	V0.5	Draft	Update PAD layout	AX
2020/2/20	V0.6	Draft	Add spring size	AX

1. Mechanical Characteristics

1.1. Mechanical Drawing



Positive voltage on pad '+' moves membrane in direction of red arrow!

1.2. Part Marking/Labeling



1.3. Material List

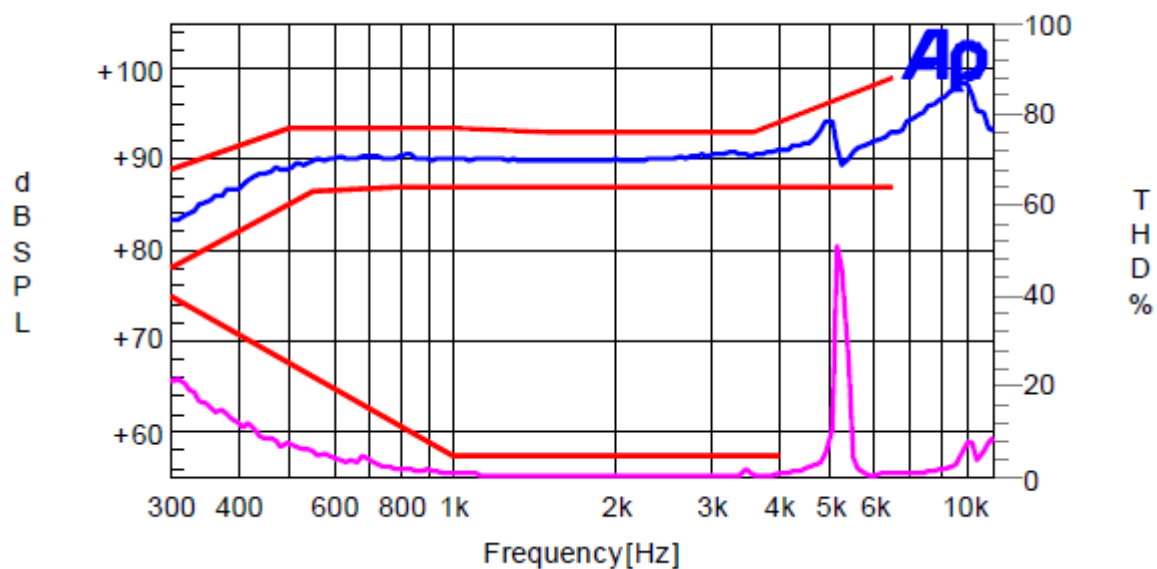
- | | | |
|----|-----------|--------------------|
| 1) | Basket | PPA |
| 2) | Membrane | PEN |
| 3) | Cover | CrNi steel |
| 4) | Pot | Soft magnetic iron |
| 5) | Magnet | Nd-Fe-B |
| 6) | Top plate | Soft magnetic iron |
| 7) | Spring | CrNi steel |
| 8) | Dimension | 06X15X2.5mm |
| 9) | Weight | 0.5g |

2. Electro-Acoustic Characteristics

2.1. Frequency Response

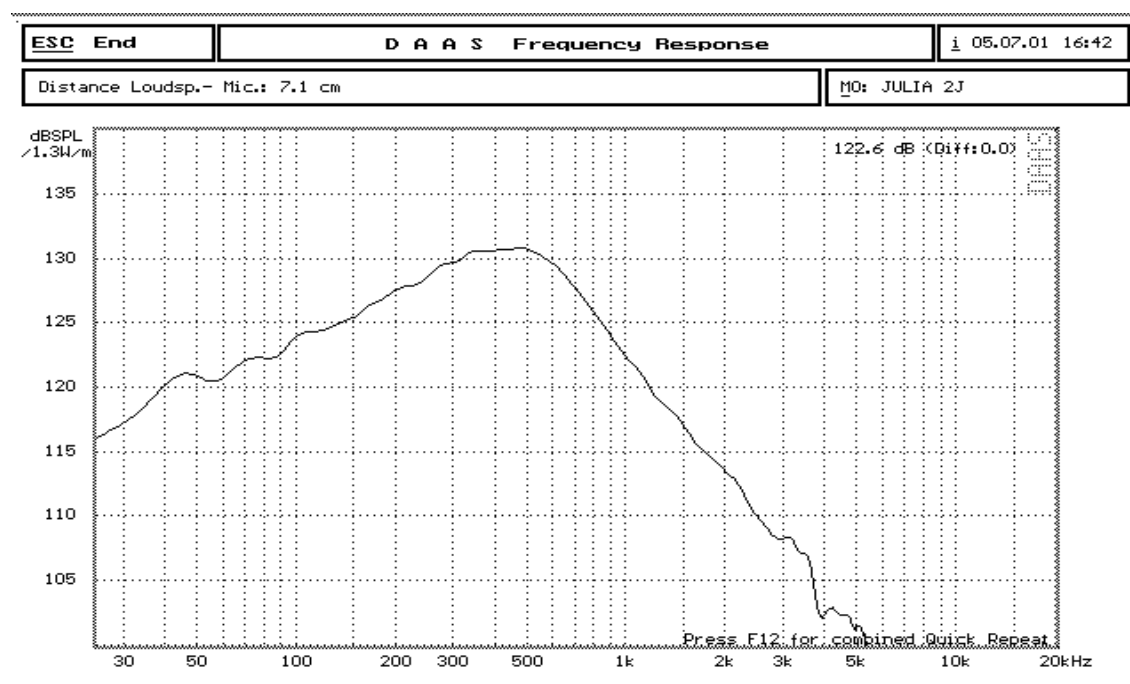
Typical frequency response measured according to chapter 2.4
(Baffle at 10mw, in 1cm distance)

Specifications

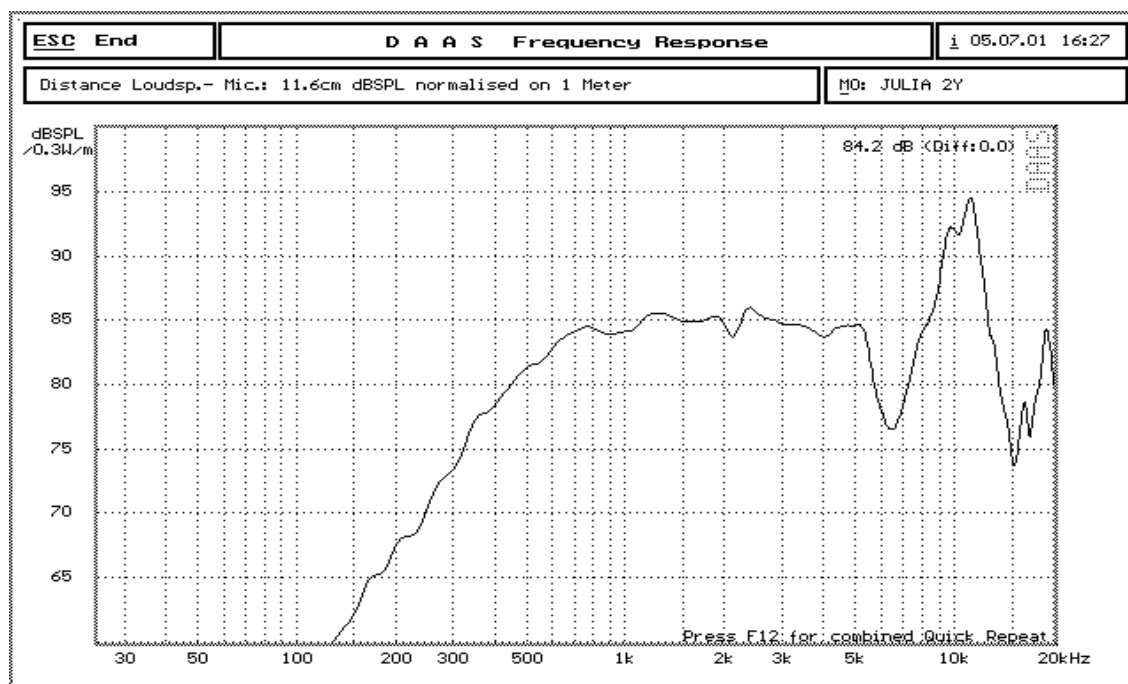


f(Hz)	SPL [dB] Lower limit	f(Hz)	SPL [dB] Upper limit	f(Hz)	THD [%] upper limit
300	78	300	89	300	40
550	86.5	500	93.5	1000	5
800	87	1000	93.5	4000	5
6500	87	1500	93		
		3600	93		
		6500	99		

In coupler IEC 318; 10mW



On baffle; 300mW, 10cm distance



2.2. Electro-Acoustic Parameters

Receiver mounted in adapter according to 2.6 measured on ear cap according to 2.4.

- | | | |
|--------------------------|------------------|--------------|
| 1. Rated impedance | Z: | 32Ω |
| 2. Voice coil resistance | R: | 28.8Ω ± 10 % |
| 3. Resonance frequency | F ₀ : | 450Hz ± 15% |

(measured at 566mVrms, in free air)

4. Measured characteristic sensitivity

For receiver: 90 ± 3dB

(measured at 10mw 1cm baffle 2kHz to 3kHz average value)

For speaker: 86 ± 3dB

(measured at 300mw 10cm baffle 1kHz to 10kHz average value)

5. THD according to chapter 2.1

All acoustic measurements at 23±3°C

2.3. Power Handling

Receiver mounted in life time test device (open rear/open front)

For receiver:

1. MAX.SHORT TERM POWER (1sec. ON / 60sec. OFF) 50mW

(pink noise with band-pass 12dB/Oct. at 200Hz and 4000Hz, crest factor 2)

2. MAX. CONTINUOUS POWER (168h) 20mW

(pink noise with band-pass 12dB/Oct. at 200Hz and 4000Hz, crest factor 2)

For Speaker

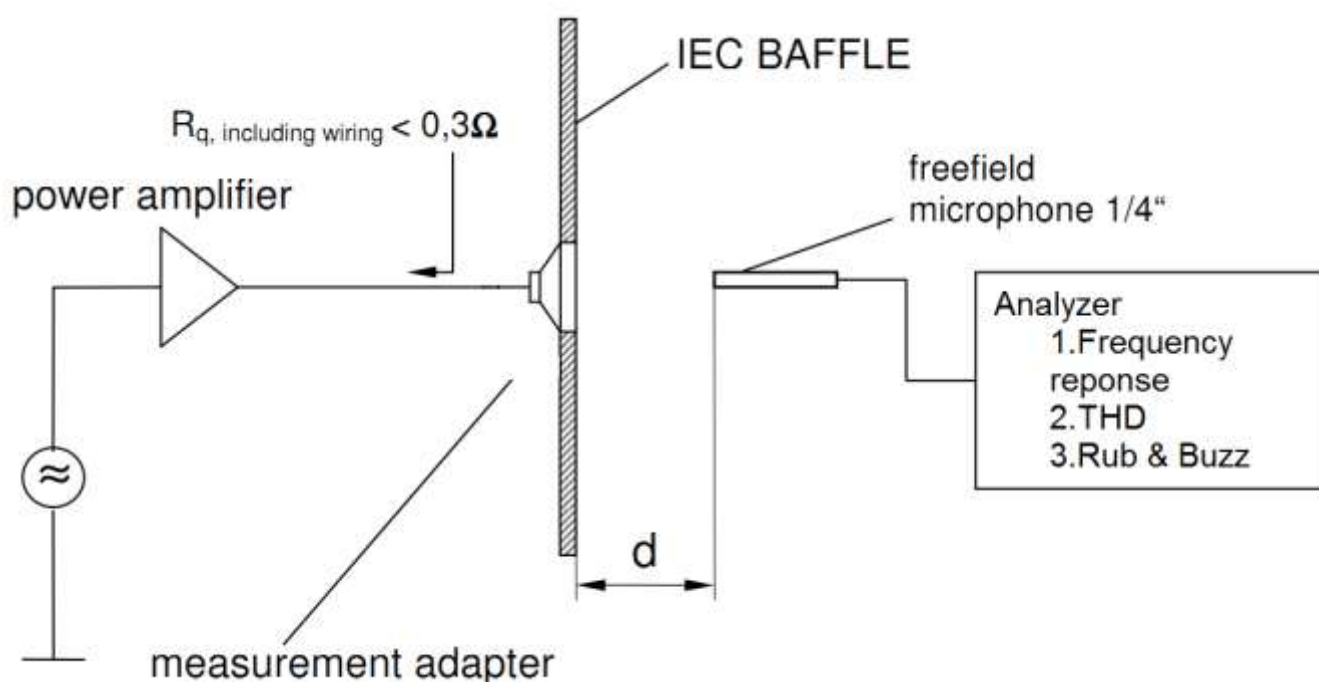
1. MAX.SHORT TERM POWER (1sec. ON / 60sec. OFF) 400mW

(pink noise with band-pass 12dB/Oct. at 1KHz and 10KHz, crest factor 2)

2. MAX. CONTINUOUS POWER (96h) 300mW

(pink noise with band-pass 12dB/Oct. at 1KHz and 10KHz, crest factor 2)

2.4. Measurement Setup (Acoustics)



2.5. Measured Parameters

2.5.1. Sensitivity

Unless specified, SPL is expressed in dB ref 20uPa, computed according to IEC 268-5

Measurement set up according to chapter 2.4

2.5.2. Frequency Response

Frequency response is measured according to test set up in chapter 2.4 and checked against the tolerance window defined in chapter 2.1.

2.5.3. Total Harmonic Distortion (THD)

Total harmonic distortion (THD) is measured according to IEC 268-5 (2nd to 5th harmonics) and test set up in chapter 2.4 and checked against the tolerance window defined in chapter 2.1.

2.5.4. Rub & Buzz

For receiver

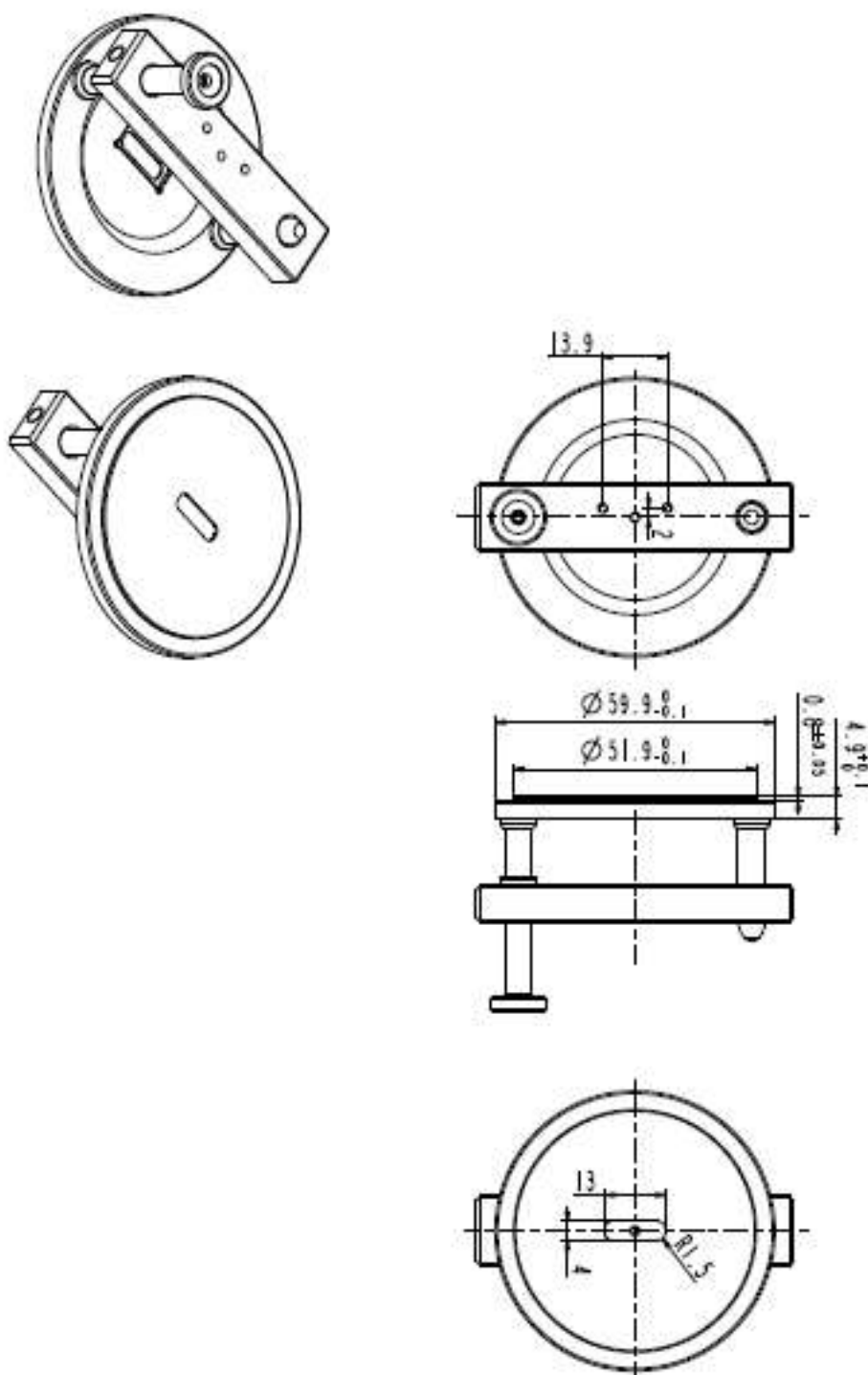
Specifications

300-7000Hz at 566mVrms for a period of 1 second will not result in any buzzing or extraneous sound.

For Speaker

1000-10KHz at 2.19Vrms for a period of 1 second will not result in any buzzing or extraneous sound.

2.6. Acoustic measurement Adapter



3. Environmental Tests

20pcs products for each environmental test.

Immediately after reliability test, products should be stored under room. Unless otherwise noted, the recovery period should be 2 hours at least before performance test.

All products after environmental test should meet the requirements specified in chapter 2.1 and 2.2 with 50% widened tolerances.

3.1. Low Temperature Storage Test

Ref. EN 60068-2-1, $-40 \pm 2^{\circ}\text{C}$, duration 168h, 2 hours recovery time.

3.2. High Temperature Storage Test

Ref. EN 60068-2-2, $+85 \pm 2^{\circ}\text{C}$, duration 168h, 2 hours recovery time.

3.3. Long Term Operation Test

Ref. IEC60068-2-2. 168h. 1cc box Signal according to part 2 in chapter 2.3.

3.4. Short Term Maximum Power Test

60 cycles. 1cc box Signal according to part 1 in Chapter 2.3.

4. Related Documents

Refer to general terms.

5. Legal Information

Refer to general terms.