Wideband Loudspeaker

Ø32x20.8 mm

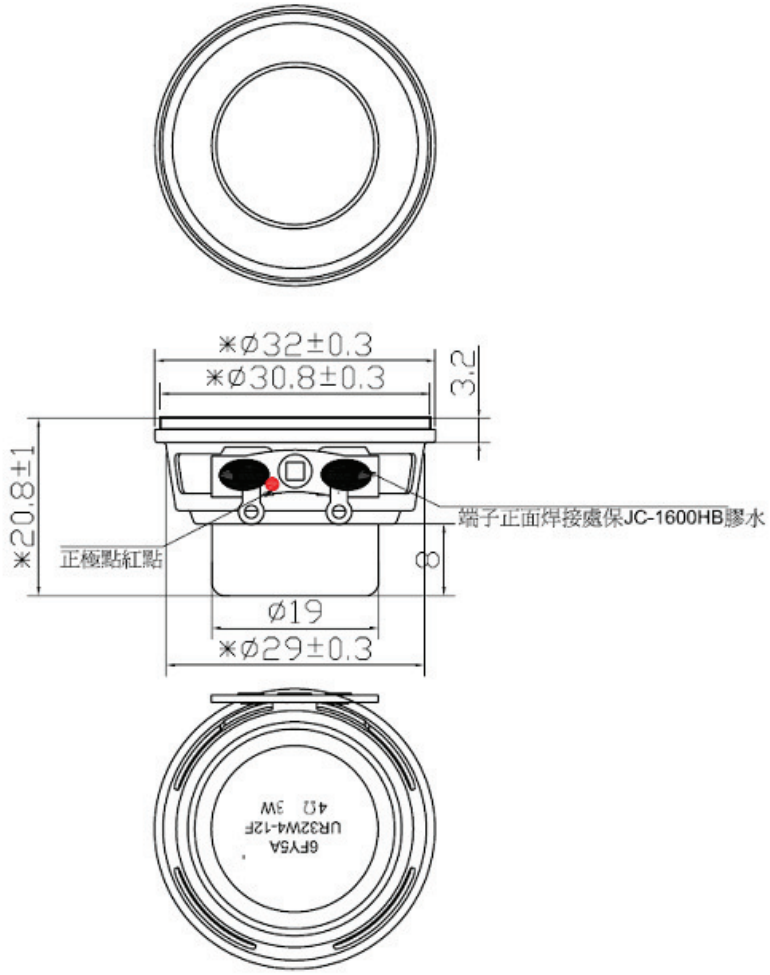
TC32S20DN4

Revision

Date	Version	Status	Changes	Approver
2017/09/06	V0.1	Draft	First release	LC

1. Mechanical Characteristics

1.1. Mechanical Drawing



Key dimension which has symbol *

1.2. Material List

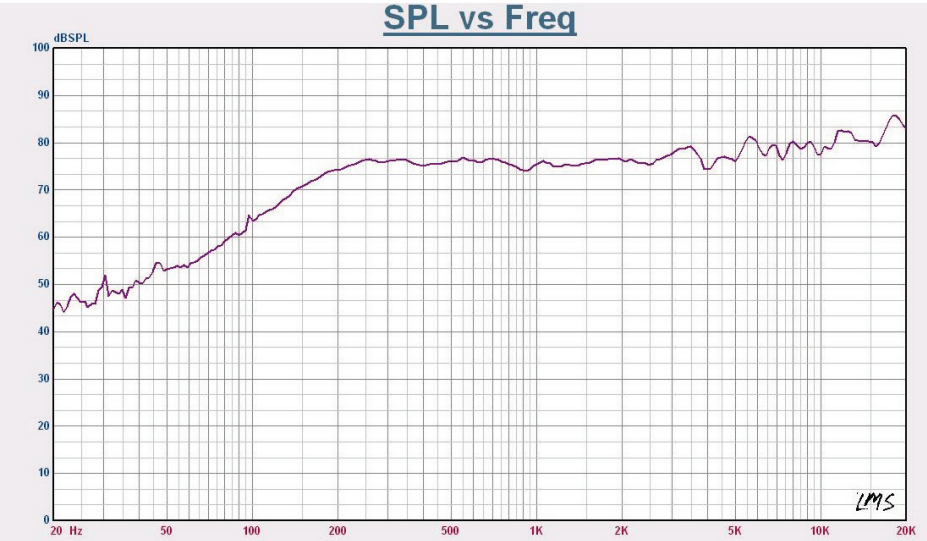
1）	Membrane	Paper + Rubber
2）	Magnet	N35 + N42
3）	Flux Density	11000Gause ± 15%
4）	Voice coil	Φ13mm
5）	Dimension	Φ32 X 20.8mm
6）	Weight	20g

2. Electro-Acoustic Characteristics

2.1. Frequency Response

Typical frequency response measured in free field

(distance d=1m, open back cavity at 1W)



2.2. Electro-acoustic Parameters

SPK mounted in adapter on baffle

1. Rated impedance Z: 4Ω

2. Voice coil resistance R: 3.6Ω ± 15%

3. Resonance frequency F_0: 210Hz ± 20%

(measured at 1Vrms open back cavity)

4. Nominal characteristic sensitivity (measured at 1W 1m baffle) 80 ± 3dB

open back cavity at the frequency points: 400, 500, 600, 800Hz

5. Rated Frequency Range F0~18kHz ± 10dB

6. THD less than 5% at fo, measured at 3W

7. Polarity: When Positive current is supplied from the speaker terminal marked (+),and a negative to the other terminal the diaphragm must move toward the front.

All acoustic measurements at 23±3°C

2.3. Power Handling

Loudspeaker mounted in lifetime test device (open back cavity, open front)

1. Rated Input Power (pink noise , 96h)	3W (RMS)
2. Max. Input Power (pink noise , 1 sec. ON/ 60 sec. OFF)	4.5W(RMS)

2.4. Measured Parameters

2.4.1. Sensitivity

SPL is expressed in dB ref 20μPa, computed according to IEC 268-5

2.4.2. Total Harmonic Distortion (THD)

Total harmonic distortion (THD) is measured according to IEC 268-5 (2nd to 5th harmonics)

2.4.3. Rub& Buzz

150-3kHz at 3.46Vrms open back cavity will not result in any buzzing or extraneous sound.

3. Environmental Tests

Immediately after reliability test, samples should be stored under climatic conditions such as normally exist in ordinary rooms. Unless otherwise noted, the recovery period should be 2 hours at least before performance test.
All samples after environmental test should meet the requirements specified in chapter 2.2.3, 2.2.4 and 2.4.3.

3.1. Long Term Operation Test

Pink noise, duration 96h, input voltage 3.46Vrms, open back cavity.

3.2. Low Temperature Storage Test

-25 ±2°C, duration 48h, 2 hours recovery time.

3.3. High Temperature Storage Test

+70±2°C, 20~25% R.H. duration 48h, 2 hours recovery time.

3.4. High Temperature & Humidity Storage Test

+40±2°C, 90~95% R.H. duration 96h, 2 hours recovery time.

3.5. Drop Test

The Speaker Should Be Dropped Along At lot Plate75^0 Inclined From The Vertical 1m Height And The Magnet Part Should Be Impacted To The Stopper.