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SPECIFICATION
FOR
APPROVAL

Customer：

Description： Micro Speaker

Soberton Part No. ： SP-1304-2

Date：2012-07-31

Customer Model No. ：

Date of Approval	
Authorization Signature	

Soberton Inc.

211 N. First Street
Minneapolis, MN. 55401
612-849-6205
Http://www.soberton.com E-mail： info@soberton.com

Approved	Checked	Design
Ryan 2012/07/31	**Andy** 2012/07/31	**Gary** 2012/07/31

MODEL NUMBER	CUSTOMER NUMBER	PRODUCT TYPE	REVERSION	DATE	PAGE
SP-1304-2		SPEAKER	00	12-07-31	1/5

1 · SCOPE

This specification covers our product of dynamic speaker unit for mobile telephone use.

2 · MECHANICAL LAYOUT&DIMENSIONS:

Shown in page3/5

3 · GENERAL REQUIREMENTS：

3.1 OPERATING TEMPERATURE RANGE：-20℃~+55℃

3.2 STANDARD TEST CONDITIONS：

Temperature: 17℃~25℃

Relative Humidity: 45%~80%(RH)

3.3 JUDGEMENT CONDITIONS:

Temperature: 20±2℃

Relative Humidity: 60%~70%(RH)

4 · ELECTROACOUSTIC CHARACTERISTICS

4.1.1 TEST SET UP：Measuring conditions and procedures shown in fig(2)

4.1.2 IMPEDANCE：8±15%Ω(@2KHz 1V) without baffler.

4.1.3 DC RESISTANCE：7.4±10%Ω

4.1.4 SOUND PRESSURE LEVEL

82±3dB SPL @1.0.1.2,1.5and2.0KHz in average (0dB SPL=20μPa)

Measuring condition: 0.1W (Sine wave) 10cm measured with baffler shown in Fig.1.

4.1.5 FREQUENCYRESPONSE CURVE ：*As shown in fig(3)*

4.1.6 RESPONSE FREQUENCY: 1300±20%Hz @ 1V. (Without Baffler)

4.1.7 INPUT POWER (NOM./MAX.)：

0.5W /0.8W must be normal at a white noise (1W,F_0-20KHz) for one minute

4.1.8 AUDIBLE NOISE：

Must be free audible noise (buzzes and rattles)(300 ~ 8KHz frequency range ,input level up to 2.0Vrms)

4.1.9 DISTORTION: *Less than* 10% @1KHz,0.1M,0.8W

frequency range ,input level up to 2.53Vrms)

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5. RELIABILITY TESTS：

The sound pressure as specified shall neither deviate more than ±3dB form the initial value, nor any significant damage after any of following testing.

5.1 HIGH TEMPERATURE TEST:

High temperature: +70±2℃
Duration: 96 hours

5.2 LOW TEMPERATURE TEST:

Low temperature: -40±2℃
Duration: 96 hour

5.3 HEAT SHOCK TEST：

High temperature: +70±2℃
Low temperature: -40±2℃
Changeover time: <30 seconds
Duration: 1 hours
Cycle: 100

5.4 HUMIDITY TEST:

Temperature: + 40±2℃
Relative Humidity: 90%~95%
Duration: 96 hour

5.5 TEMPERATURE CYCLE TEST:

Temperature: -40℃ +70℃
Duration: 45 minutes 45 minutes
Temperature gradient: 1~3℃/min
Cycle: 25

5.6 DROP TEST:

Mounted with dummy set mass: 100 g
Height: 1.5 m
Cycle: 6(1 each plain)
Onto the concrete board

5.7 LOAD TEST:

Speaker mode: white noise(EIA filter)for 96 hour@0.5W input power.

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6.MEASURING METHOD(SPEAKER MODE)

6-1 .Test Condition

STANDARD

Temperature : 15 ~ 35℃

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3℃

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

6-2 . Standard Test Fixture

1.Input Power : 0.1W(0.89V)

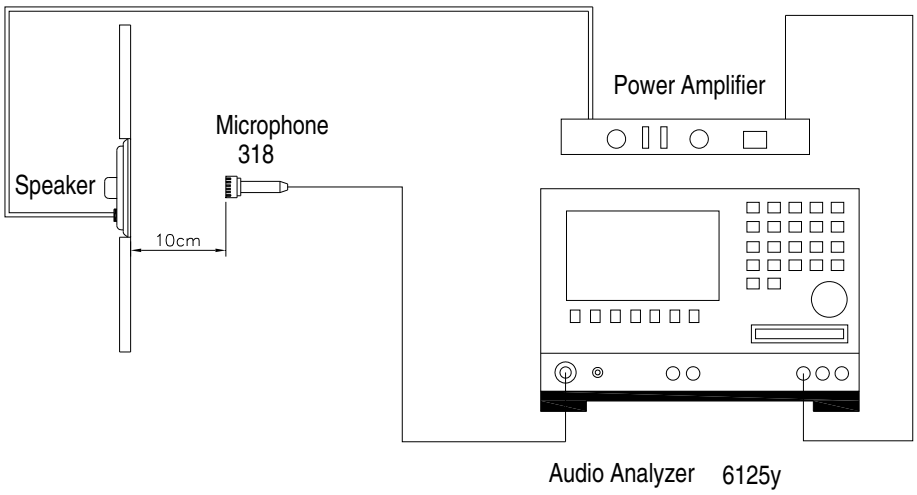
2.Zero Level : -dB

3.Mode : TSR

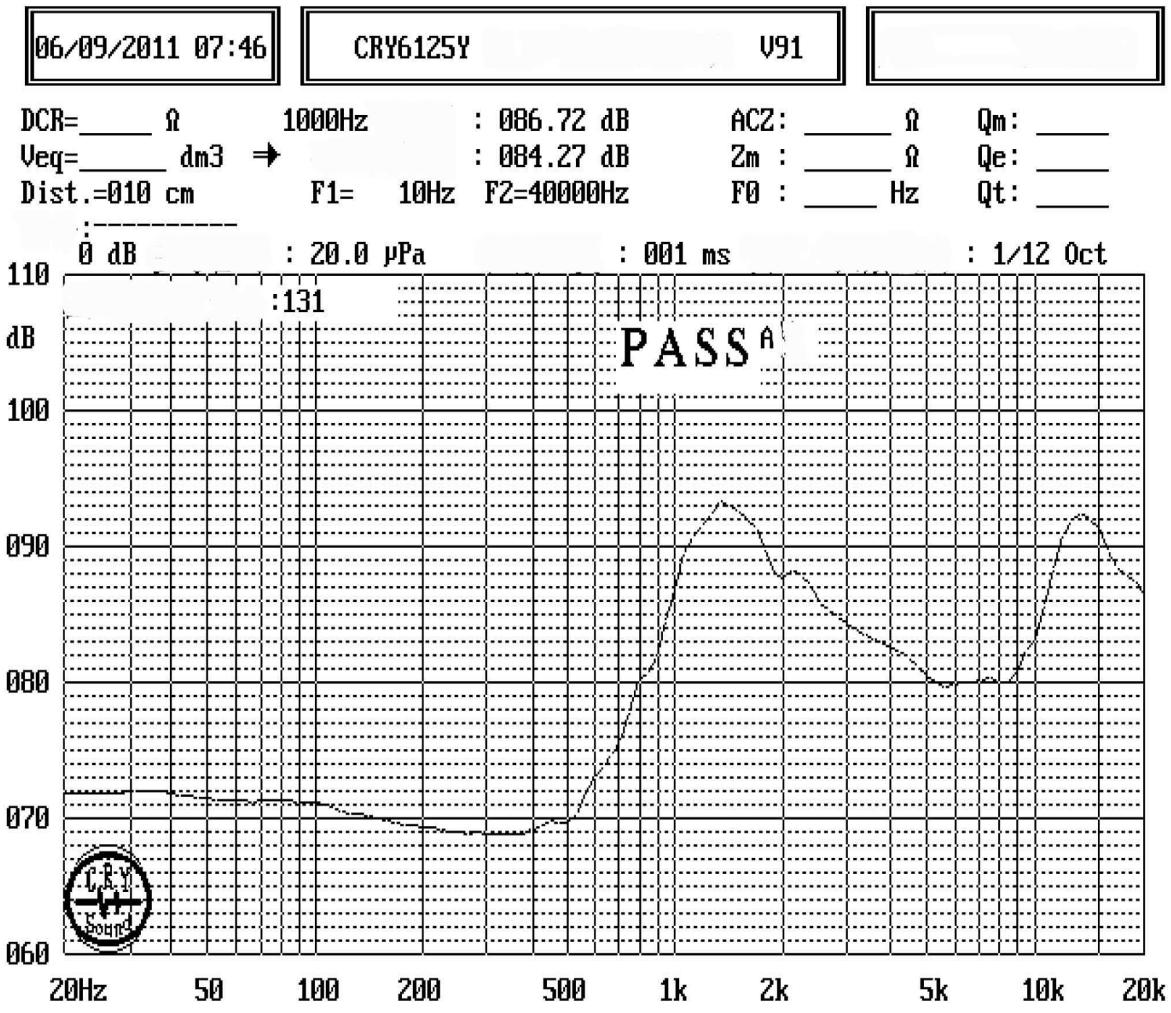
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec

Standard test condition of speaker



7.FREQUENCY RESPONSE CURVE



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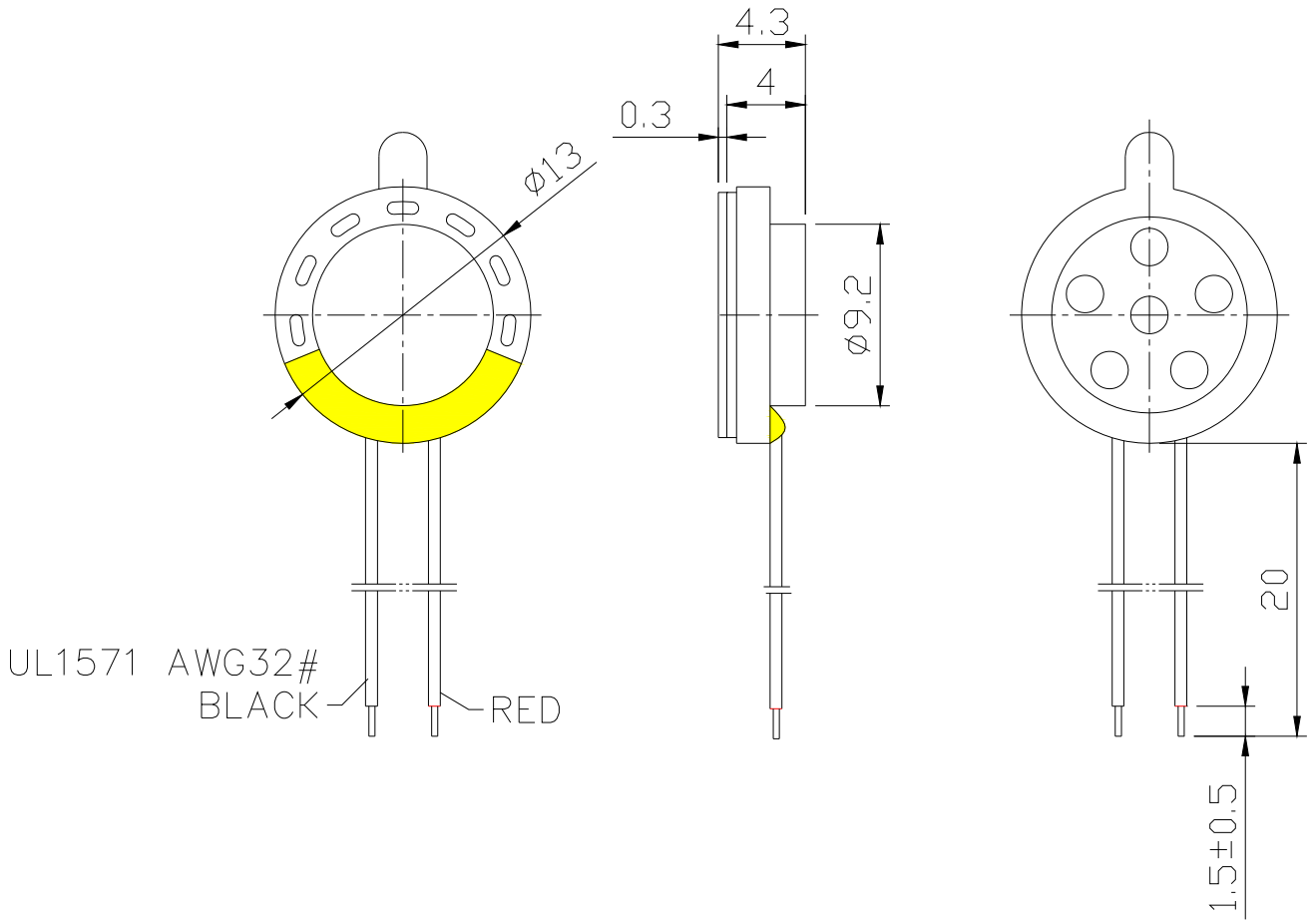
8.DIMENSIONS

Unless otherwise specified,tolerance:±0.5 (unit: mm)



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