



MODEL: SP-1609
PRODUCT: Dynamic Speaker
EDITION: A/2016

THIS SPECIFICATION COVERS OUR PRODUCT OF DYNAMIC SPEAKER UNIT FOR MOBILE PHONE USE

SPEAKER ELECTROACOUSTIC CHARACTERISTICS

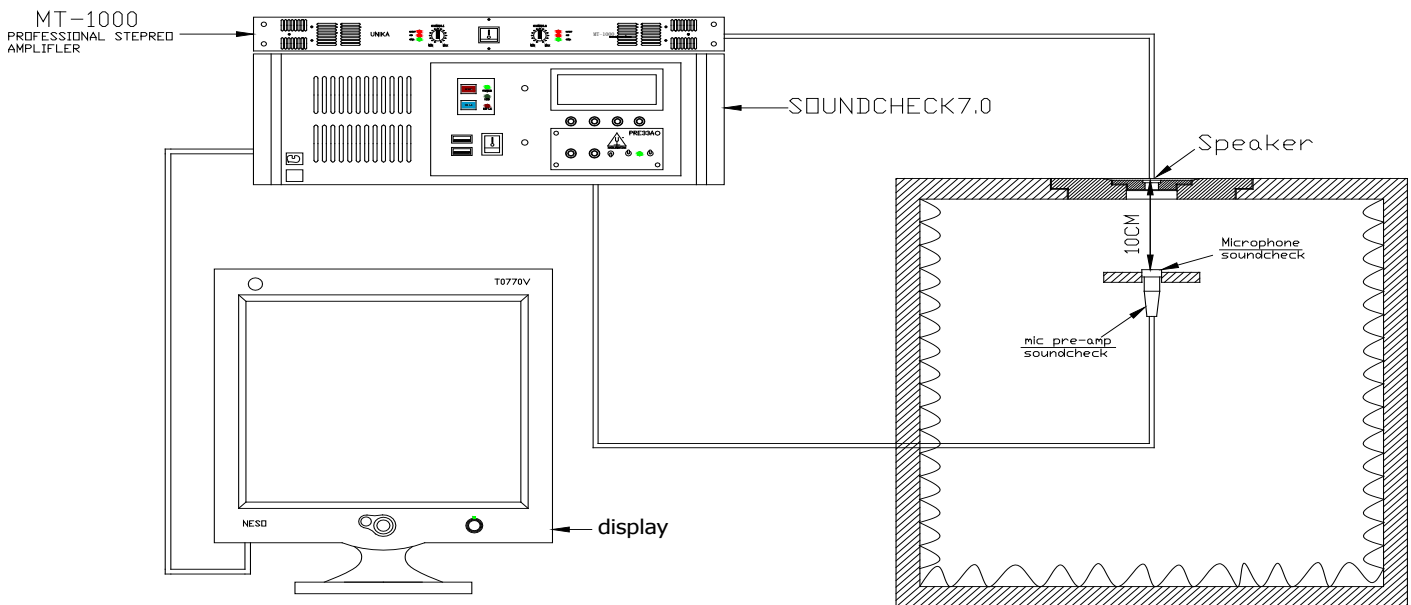
| | |
|----------------------------------|--|
| sound pressure level | 82±3dB Spl @ 2KHz 1.0V(Sine wave) 0.1m measured with baffle shown in Fig.1. (1CC BOX) |
| resonance frequency (FO) | 850±20%Hz @ 1Vrms. (In 1CC BOX) |
| measuring diagram | Shown in Fig.1 |
| typical frequency response curve | Shown in Fig.2. |
| rated noise power | 0.5W (In 1CC Box) |
| short-term max. power | 0.7W (In 1CC Box) |
| distortion | Less than 10% at 1KHz 1V |
| operation test | Must be free of audible noise (buzzes and rattles) (200 ~ 3400Hz frequency range, input level up to 2.0Vrms (In 1CC BOX)) |

GENERAL SPECIFICATIONS

| | |
|-----------------------------|------------------------|
| operating temperature range | -25°C ~ +65°C |
| storage temperature range | -40°C ~ +75°C |
| ac impedance | 8.0Ω±15% (@2KHz 1Vrms) |
| dimension | 16 x 9 x 4.2 mm |

TYPICAL FREQUENCY RESPONSE CURVE

FREQUENCY MEASURING CIRCUIT (SPEAKER MODE) (Fig.1)



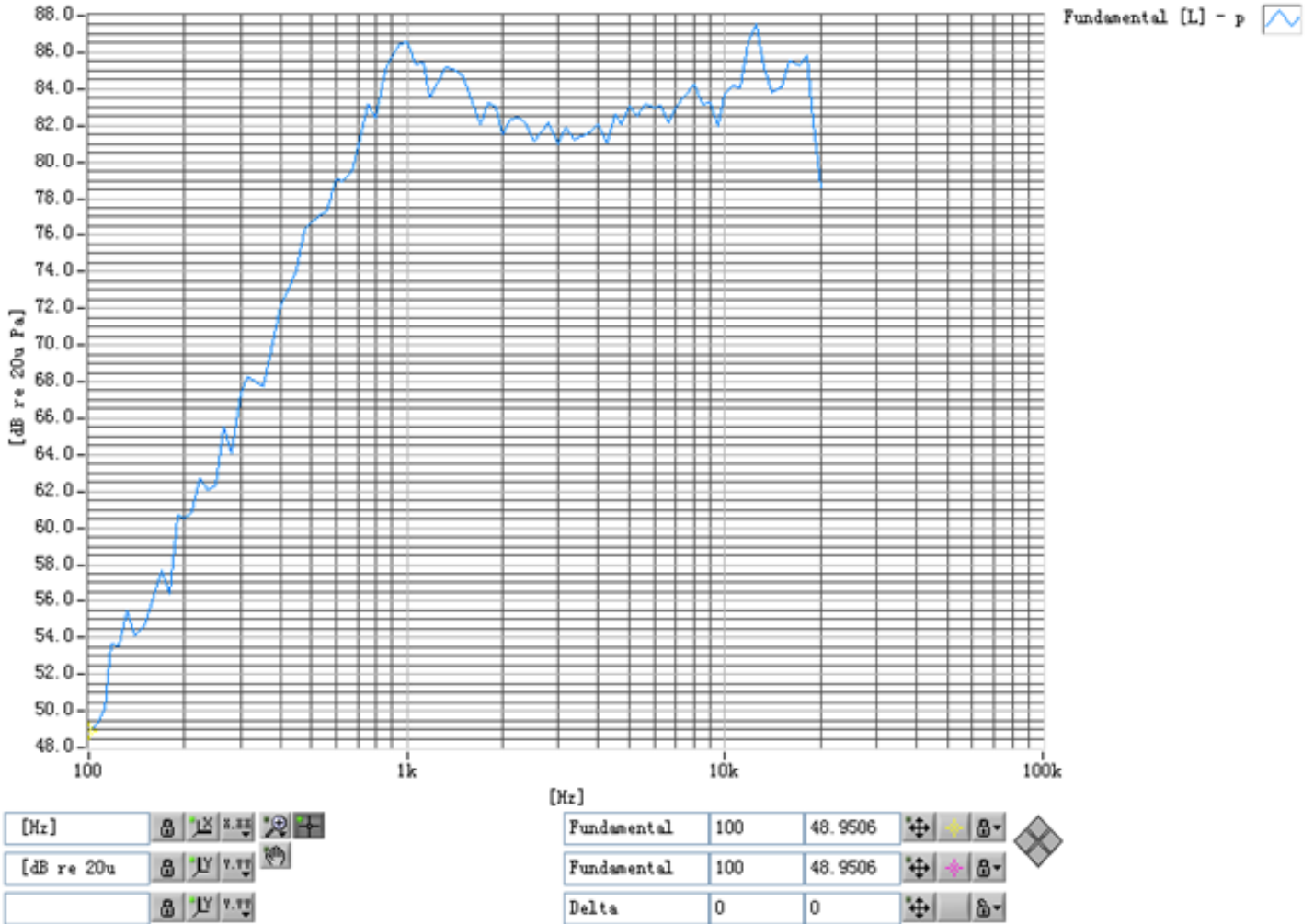


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TYPICAL FREQUENCY RESPONSE CURVE (Continued)

TYPICAL FREQUENCY RESPONSE CURVE (SPEAKER MODE) (Fig.2)

XY Graph 1



TEST CLIMATIC CONDITIONS

STANDARD TEST CONDITIONS

| | |
|-------------------|--------------|
| temperature | 17~25°C |
| relative humidity | 45%~80%(RH) |
| air pressure | 860~1060 hPa |



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RELIABILITY TESTS

The sound pressure as specified shall neither deviate more than $\pm 3\text{dB}$ from the initial value, nor have any significant damage after any of following testing.

HIGH TEMPERATURE TEST

| | |
|------------------|--------------------------|
| high temperature | $+75\pm 2^\circ\text{C}$ |
| duration | 96 hours |

LOW TEMPERATURE TEST

| | |
|-----------------|--------------------------|
| low temperature | $-25\pm 2^\circ\text{C}$ |
| duration | 96 hours |

HEAT SHOCK TEST (See in Fig.3)

| | |
|------------------|-----------------------------|
| high temperature | $+75\pm 2^\circ\text{C}$ |
| low temperature | $-40\pm 2^\circ\text{C}$ |
| duration | 1 hour (high), 1 hour (low) |
| changeover time | < 30 seconds |
| cycle | 10 |

HUMIDITY TEST

| | |
|-------------------|--------------------------|
| temperature | $+40\pm 2^\circ\text{C}$ |
| relative humidity | 90~95% |
| duration | 48 hours |

TEMPERATURE CYCLE TEST (See in Fig.4)

| | |
|----------------------|---|
| temperature | -40°C $+75^\circ\text{C}$ |
| duration | 45 minutes 45 minutes |
| temperature gradient | 1~3°C/min. |
| cycle | 10 |

DROP TEST

| | |
|--------------------------------|--|
| mounted with dummy set mass | 100 g |
| height | 1.5 m |
| cycle | 6 (1 each plain) onto the concrete board |

LOAD TEST

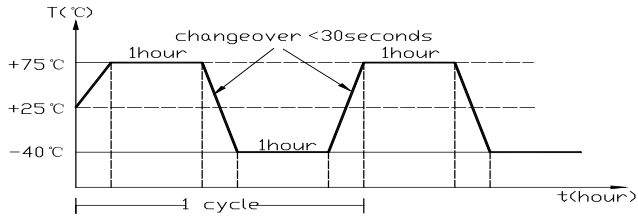
| | |
|--------------|---------------------------|
| noise signal | White noise (EIA filter) |
| input power | 0.5W (1CC BOX) (2.37Vrms) |
| duration | 96 hours |



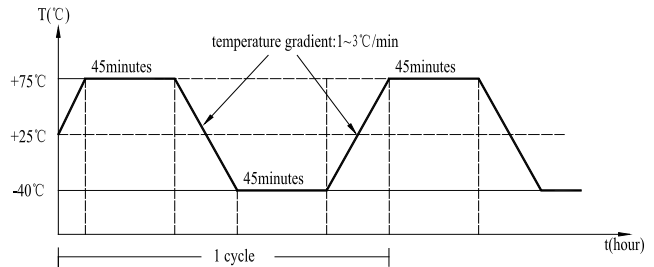
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TEST METHOD

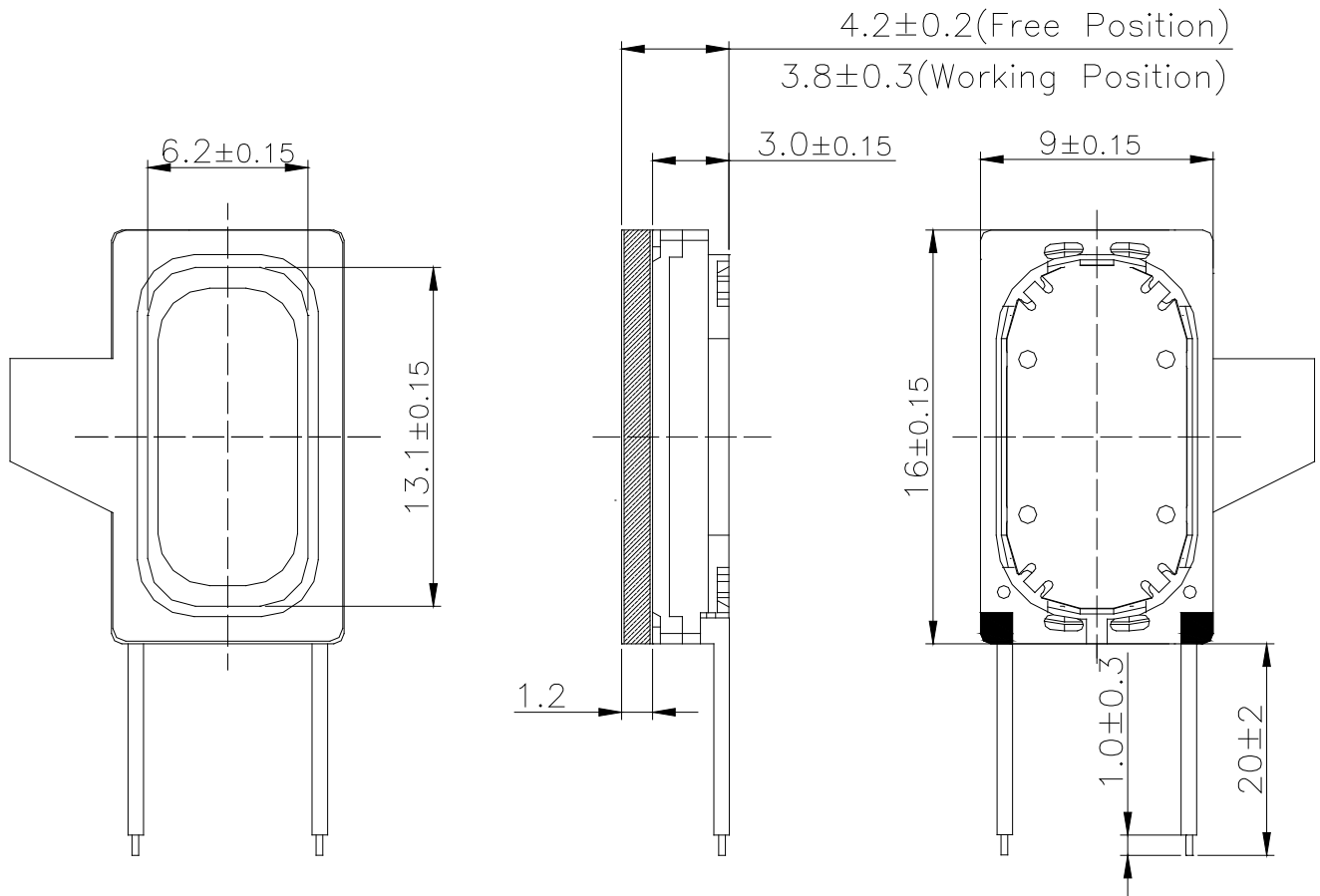
HEAT SHOCK TEST (Fig.3)



TEMP. CYCLE TEST (Fig.4)



PRODUCT EXTERNAL VIEW AND DIMENSIONS (Fig.5)



| no | item | material | quantity |
|----|------------|----------|----------|
| 1 | Magnet | Nd-Fe-B | 1 |
| 2 | U-Yoke | Iron | 1 |
| 3 | Pole Piece | Iron | 1 |
| 4 | Voice coil | Copper | 1 |
| 5 | Frame | PPA | 1 |
| 6 | Gasket | PE | 1 |



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Soberton Inc.

PACKING

