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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China





MODEL: SP-1511S
PRODUCT: Dynamic Speaker
EDITION: A/2016

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

SPEAKER ELECTROACOUSTIC CHARACTERISTICS

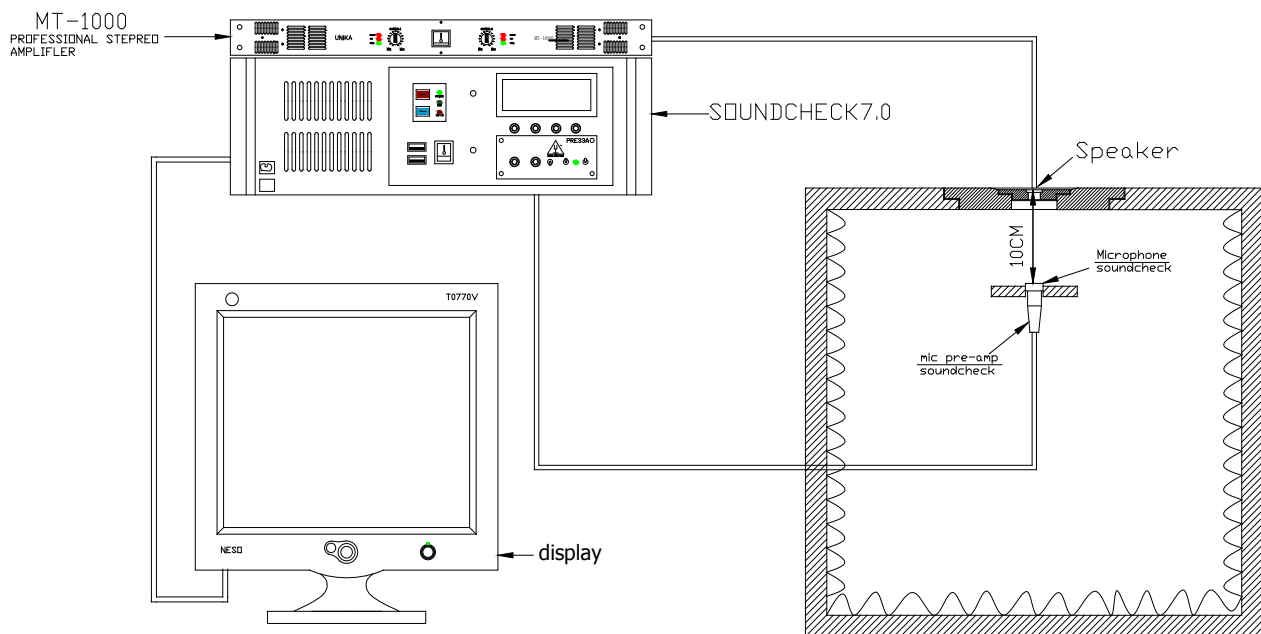
| | |
|----------------------------------|---|
| sound pressure level | 83±3dB Spl @ 2KHZ 1.0V(Sine wave) 0.1m measured with baffle shown in Fig.1. (1CC BOX) |
| resonance frequency (FO) | 850±20%Hz @ 1Vrms. (In 1CC BOX) |
| measuring diagram | Shown in Fig.1 |
| typical frequency response curve | Shown in Fig.2. |
| rated noise power | 0.7W (In 1CC Box) |
| short-term max.power | 1.0W (In 1CC Box) |
| distortion | Less than 5% at 1KHz 1V |
| operation test | Must be free of audible noise (buzzes and rattles) (200 ~ 3400Hz frequency range ,input level up to 2.37Vrms (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 | 15 x 11 x 4.2 mm |

TYPICAL FREQUENCY RESPONSE CURVE

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



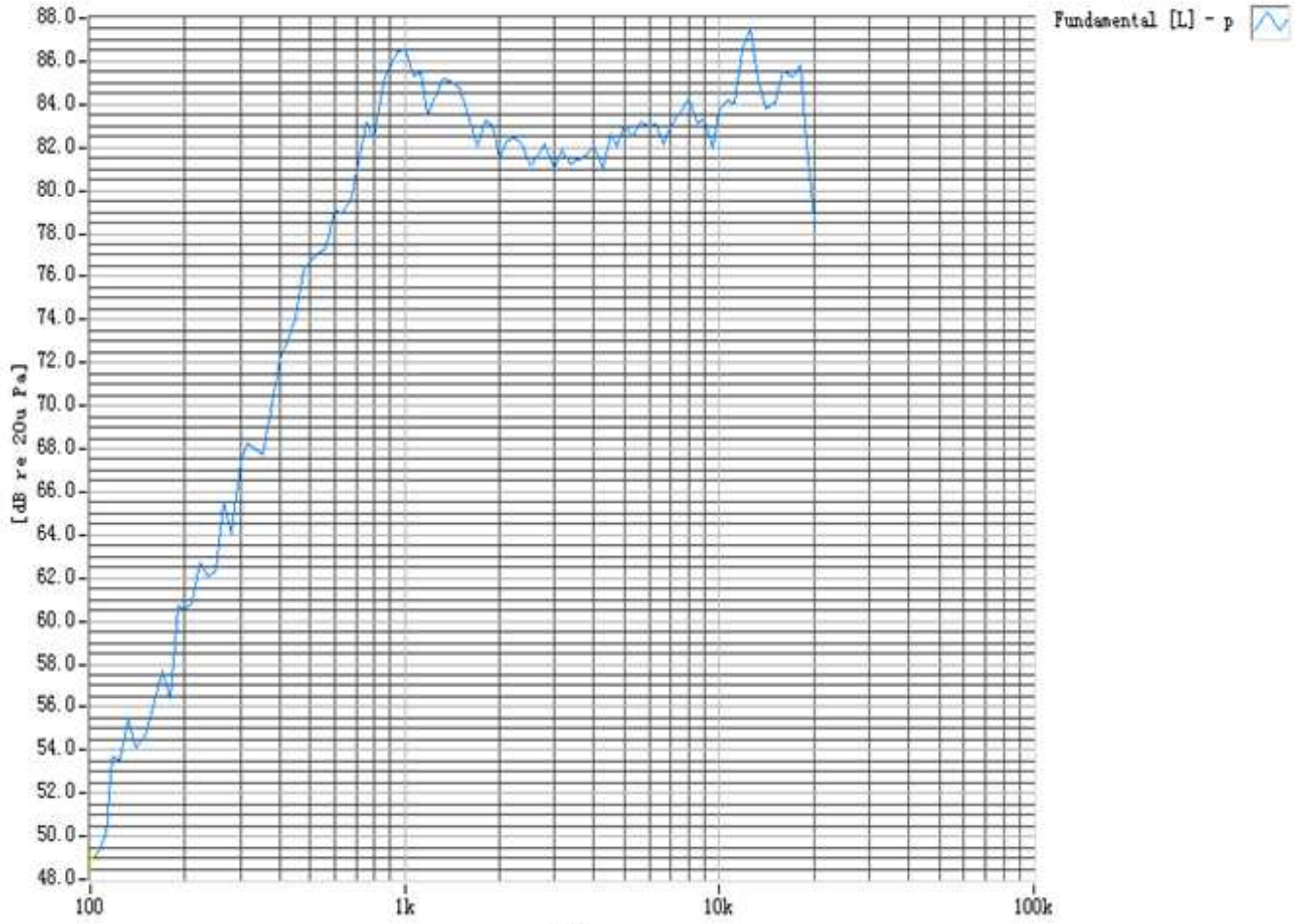


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TYPICAL FREQUENCY RESPONSE CURVE (Continued)

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

XY Graph 1



| | | | | |
|----------------|--|--|--|--|
| [Hz] | | | | |
| [dB re 20u Pa] | | | | |
| | | | | |

| [Hz] | | | |
|-------------|-----|---------|--|
| Fundamental | 100 | 48.9506 | |
| Fundamental | 100 | 48.9506 | |
| Delta | 0 | 0 | |

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 | $-40\pm 2^\circ\text{C}$ |
| duration | 96 hours |

HEAT SHOCK TEST (See in Fig.3)

| | |
|------------------|--------------------------|
| high temperature | $+85\pm 2^\circ\text{C}$ |
| low temperature | $-40\pm 2^\circ\text{C}$ |
| changeover time | < 15 seconds |
| duration | 1 hour |
| cycle | 32 |

HUMIDITY TEST

| | |
|-------------------|--------------------------|
| temperature | $+70\pm 2^\circ\text{C}$ |
| 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 | 0.7W (1CC BOX) (2.37Vrms) |
| duration | 96 hours |

SALT SPRAY TEST

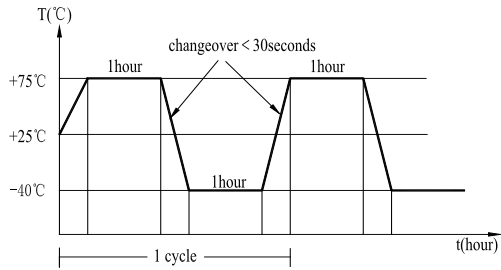
| | |
|---------------|---------------------|
| temperature | $+35^\circ\text{C}$ |
| concentration | 5% |
| duration | 24 hours |



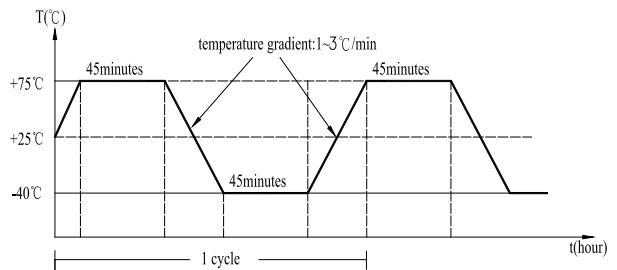
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TEST METHOD

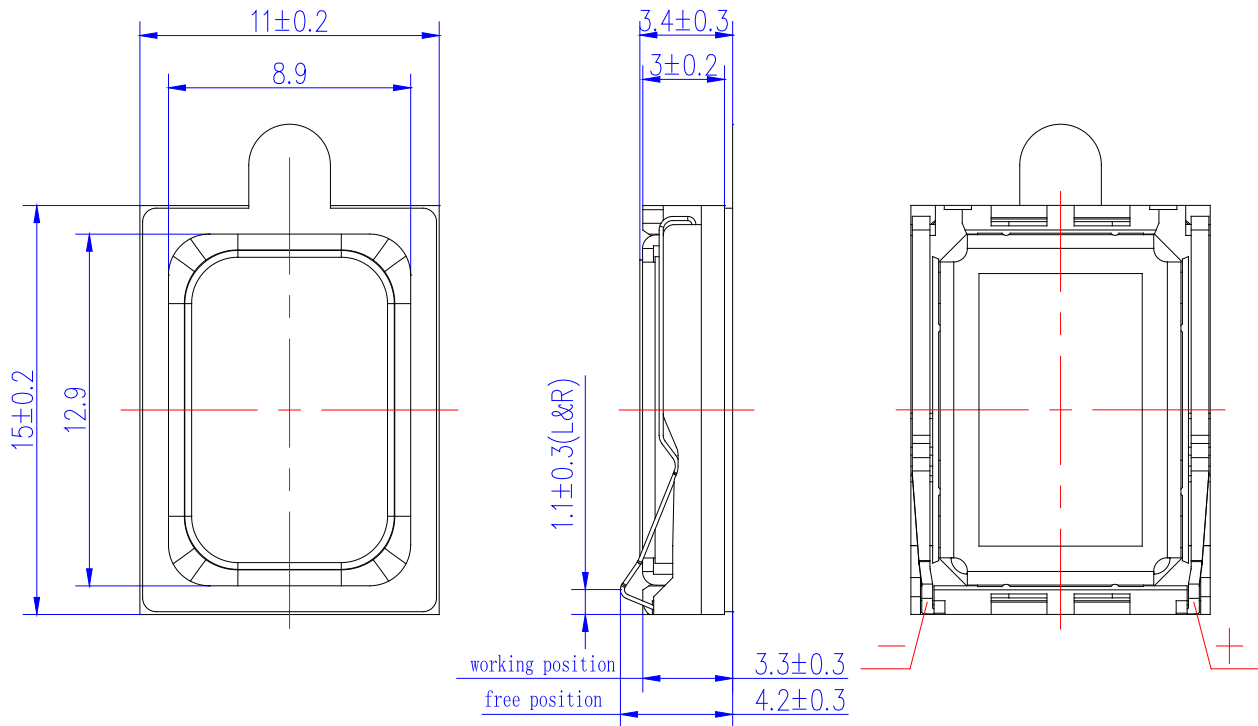
HEAT SHOCK TEST (Fig. 3)



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

