

**MODEL:** SP-3205  
**PRODUCT:** Dynamic Speaker  
**EDITION:** A/2016

Soberton Inc.

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

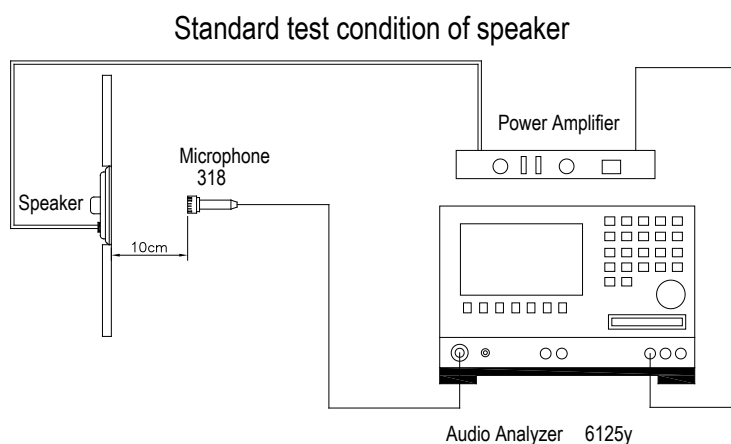
### DYNAMIC SPEAKER ELECTROACOUSTIC CHARACTERISTICS

|                          |  |
|--------------------------|--|
| sound pressure level     | 92±3dB SPL @0.5, 0.8, 1.0 and 2.0KHz in average (0dB SPL=20μPa)  |
| measuring condition      | 0.1W (Sine wave) 10cm measured with baffler shown in Fig.1   |
| ac impedance             | 8±15%Ω (@ 2 KHz 1V) without baffler  |
| frequency response curve | As shown in Fig.2  |
| response frequency       | 550 ± 20%Hz @ 1V. (Without Baffler)  |
| rated noise power        | 0.8W   |
| short-term max. power    | 1.2W must be normal at a white noise (1W, F <sub>0</sub> -20KHz) for 1 minute                              |
| operation test           | Must be free audible noise (buzzes and rattles)<br>(300 ~8KHz frequency range, input level up to 2.53Vrms) |
| distortion               | Less than 10% @1KHz , 0.1M , 0.8W frequency range, input level up to 0.8W                                  |
| dimension                | ø32 x 5.2mm  |

### GENERAL SPECIFICATIONS

|                             |               |
|-----------------------------|---------------|
| operating temperature range | -20°C ~ +55°C |
| standard test conditions    |               |
| temperature                 | 17°C ~ 25°C   |
| relative humidity           | 45% ~ 80%(RH) |

### MEASURING METHOD (SPEAKER MODE) (Figure 1)



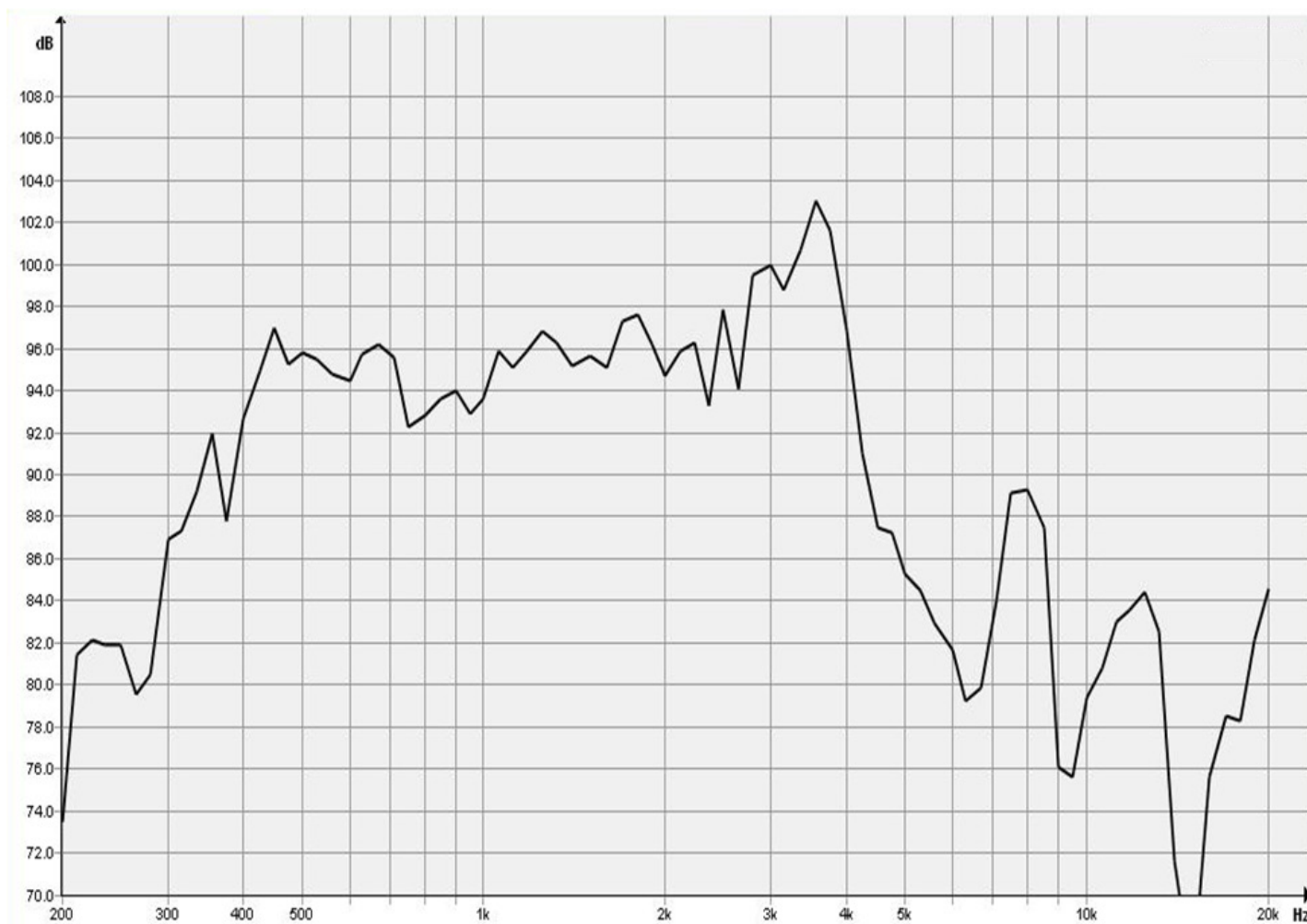
| TEST CONDITION        |                      |
|-----------------------|----------------------|
| STANDARD              |                      |
| temperature           | 15 ~ 35°C            |
| relative humidity     | 45% ~ 85%            |
| atmospheric pressure  | 860mbar to 1060mbar. |
| STANDARD TEST FIXTURE |                      |
| input power           | 0.1W (0.89V)         |
| zero level            | -dB                  |
| mode                  | TSR                  |
| potentiometer range   | 50dB                 |
| sweep time            | 0.5sec               |

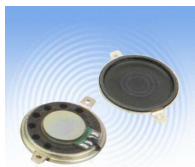


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## TYPICAL FREQUENCY RESPONSE CURVE (Figure 2)





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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 | $+60\pm 2^{\circ}\text{C}$ |
| duration         | 96 hours                   |

### LOW TEMPERATURE TEST

|                 |                            |
|-----------------|----------------------------|
| low temperature | $-20\pm 2^{\circ}\text{C}$ |
| duration        | 96 hours                   |

### HEAT SHOCK TEST

|                  |                            |
|------------------|----------------------------|
| high temperature | $+60\pm 2^{\circ}\text{C}$ |
| low temperature  | $-20\pm 2^{\circ}\text{C}$ |
| duration         | 1 hour                     |
| changeover time  | < 30 seconds               |
| cycle            | 100                        |

### HUMIDITY TEST

|                   |                            |
|-------------------|----------------------------|
| temperature       | $+40\pm 2^{\circ}\text{C}$ |
| relative humidity | 90~95%                     |
| duration          | 96 hours                   |

### TEMPERATURE CYCLE TEST

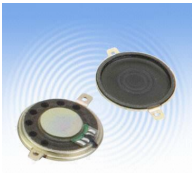
|                      |                                       |                       |
|----------------------|---------------------------------------|-----------------------|
| temperature          | $-20^{\circ}\text{C}$                 | $+60^{\circ}\text{C}$ |
| duration             | 45 minutes                            | 45 minutes            |
| temperature gradient | $1\sim 3^{\circ}\text{C}/\text{min.}$ |                       |
| cycle                | 25                                    |                       |

### 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  | 0.8W                     |
| duration     | 96 hours                 |

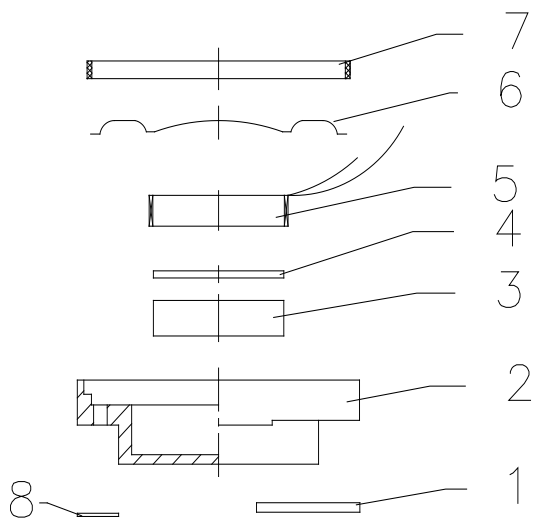
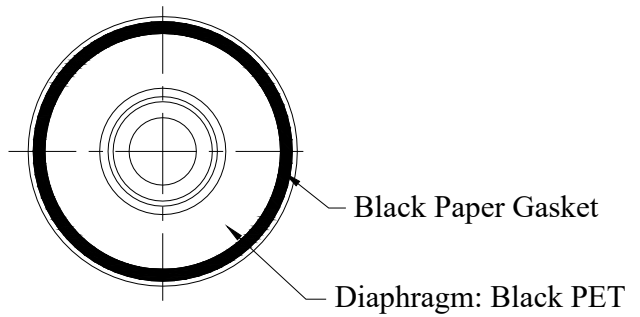
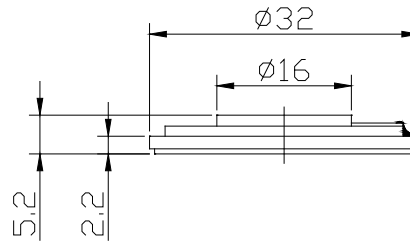
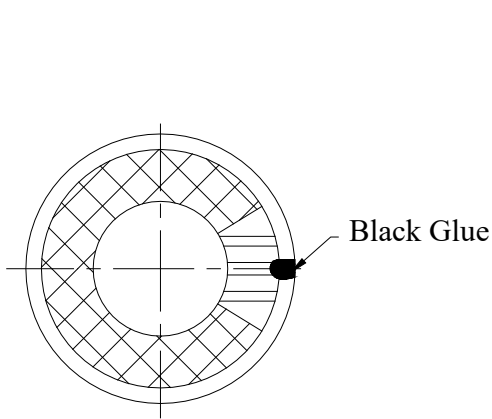


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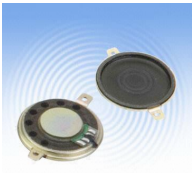
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## DIMENSIONS

Tolerance:  $\pm 0.5$  (unit: mm)



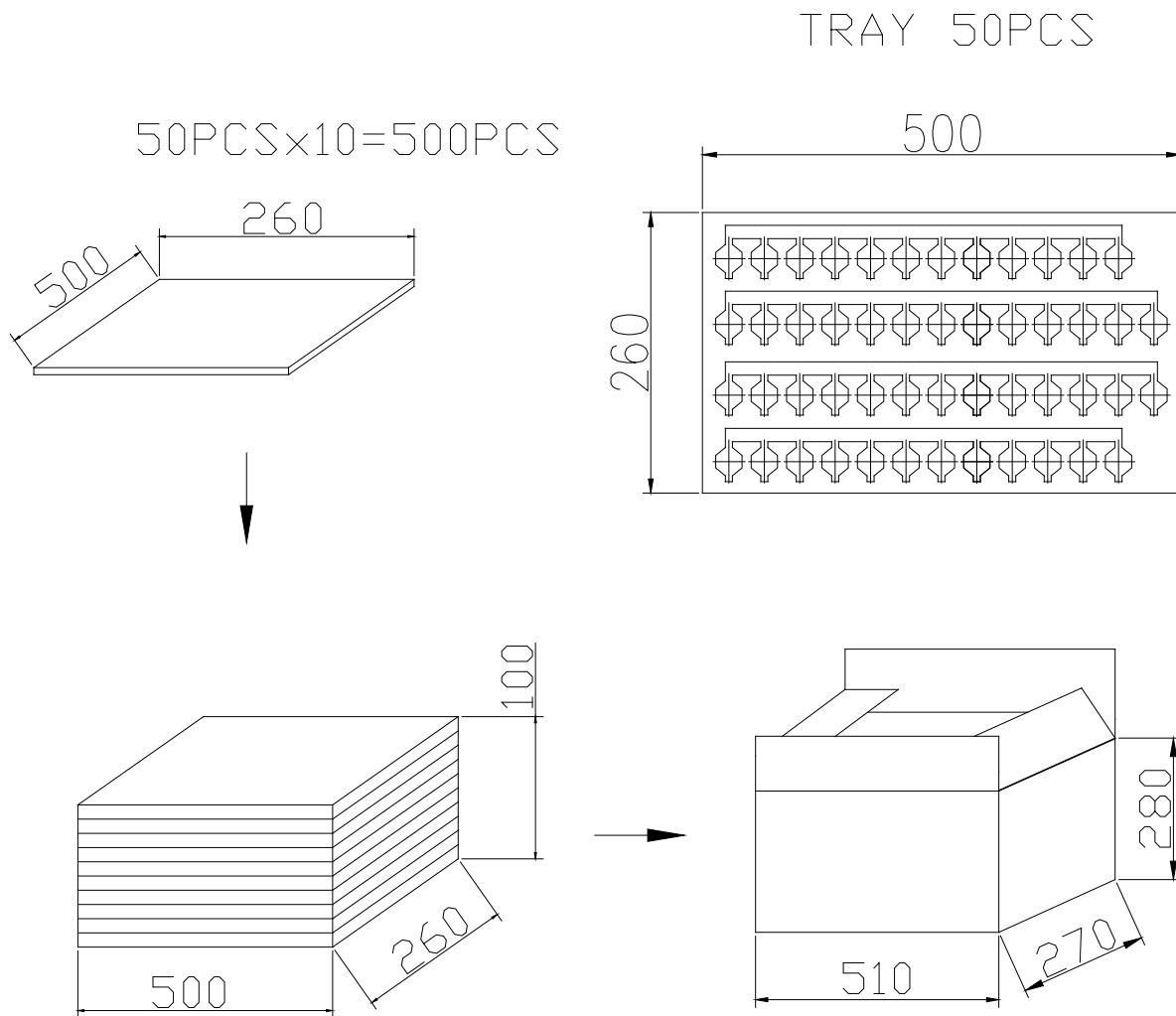
| no | item        | material                           | quantity |
|----|-------------|------------------------------------|----------|
| 1  | PCB         | FR-4                               | 1        |
| 2  | Frame       | SPCC                               | 1        |
| 3  | Main Magnet | $\varnothing 12.5 \times 1.5$ -N38 | 1        |
| 4  | Plate       | $\varnothing 12.7 \times 0.8$ SPCC | 1        |
| 5  | Voice Coil  | 13.3-2.0-7.4                       | 1        |
| 6  | Diaphragm   | PET                                | 1        |
| 7  | Gasket      | black paper                        | 1        |
| 8  | Silk Screen | black cloth                        | 1        |



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## PACKING



|            |               |                  |
|------------|---------------|------------------|
| TRAY       | 500X260X10mm  | 1X50PCS=50PCS    |
| CARTON BOX | 510X270X280mm | 20X50PCS=1000PCS |