



**MODEL:** SP-1609S-2  
**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	82±3dB SPL @0.6,0.8 ,1.0,1.5and2.0KHz in average (0dB SPL=20µPa)
measuring condition	0.5W (Sine wave) 10cm in 1cc closed box measured with baffler shown in Fig.1.
frequency response curve	As shown in fig(3)
response frequency	670±20%Hz @ 1V in free air 900±20%Hz @ 1V in 1cc closed box
rated noise power	0.5W (in 1cc closed box)
short term max. power	0.8W (in 1cc closed box)
operation test	Must be free of audible noise (buzzes and rattles) (300 ~ 5KHz frequency range ,input level up to 2.0Vrms in 1cc box)
distortion	Less than 10% @1KHz,0.1M,0.1W frequency range ,input level up to 0.1W

**GENERAL SPECIFICATIONS**

operating temperature range	-20°C ~+60°C
standard test conditions	
temperature	17°C ~25°C
relative humidity	45%~80%(RH)
ac impedance	8Ω ±15%(@2KHz 1V) without baffler
dimension	16 x 9 x 4.5 mm

**RELIABILITY TESTS**

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

**HIGH TEMPERATURE TEST**

high temperature	+60±2°C
duration	96 hours

**LOW TEMPERATURE TEST**

low temperature	-20±2°C
duration	96 hours

**HEAT SHOCK TEST**

high temperature	+60±2°C
low temperature	-20±2°C
changeover time	<30 seconds
duration	1 hour
cycle	100



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**RELIABILITY TESTS** (Continued)

**HUMIDITY TEST**

temperature	+ 40±2°C
relative humidity	90%~95%
duration	96 hours

**TEMPERATURE CYCLE TEST**

temperature	-20°C +60°C
duration	45minutes 45minutes
temperature gradient	1~3°C/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**

Speaker mode	white noise(EIA filter)for 1 hour@0.5W(in 1CC box) input power
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**MEASURING METHOD (SPEAKER MODE)**

**TEST CONDITION**

**STANDARD**

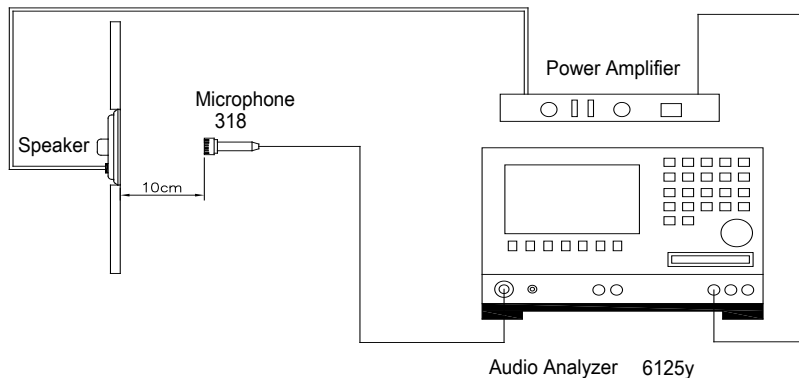
temperature	15 ~ 35°C
relative humidity	45% ~ 85%
atmospheric pressure	860mbar to 1060mbar

**STANDARD TEST FIXTURE**

input power	0.1W(0.89V)
zero level	-dB
mode	TSR
potentiometer range	50dB
sweep time	0.5sec

(Fig. 1)

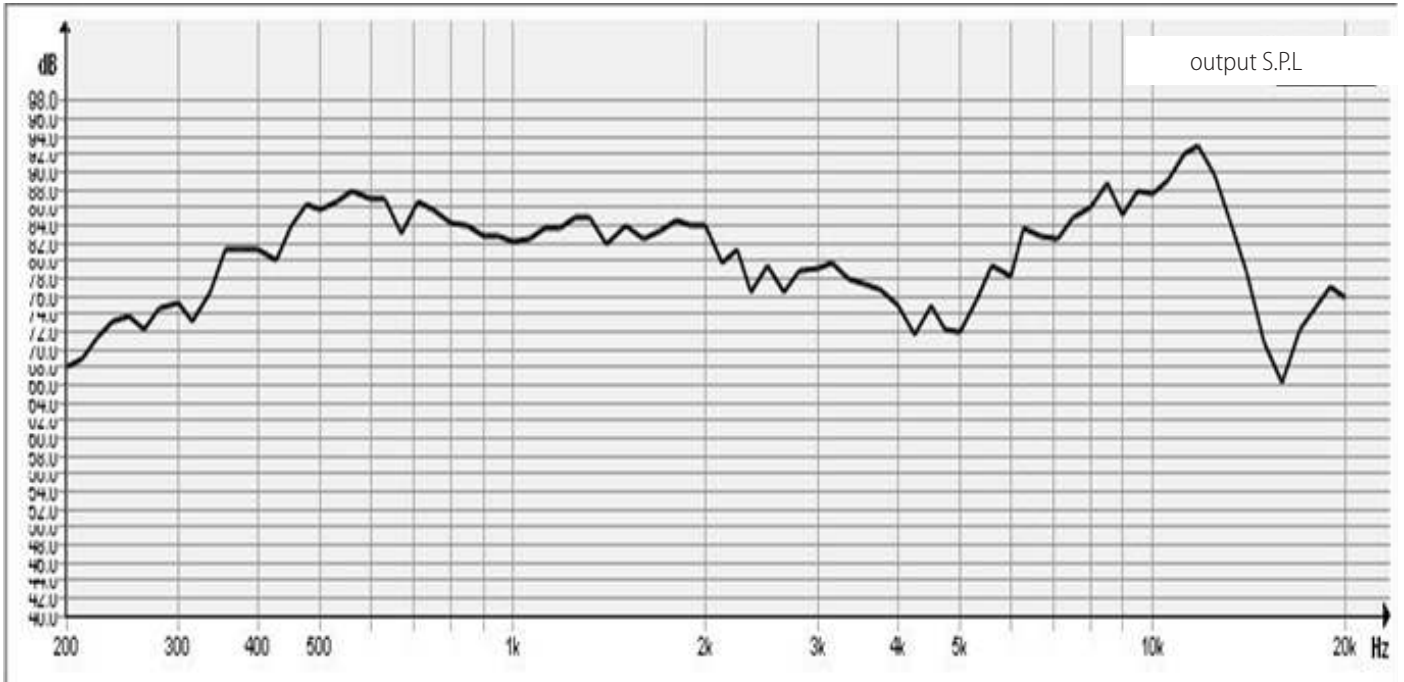
Standard test condition of speaker



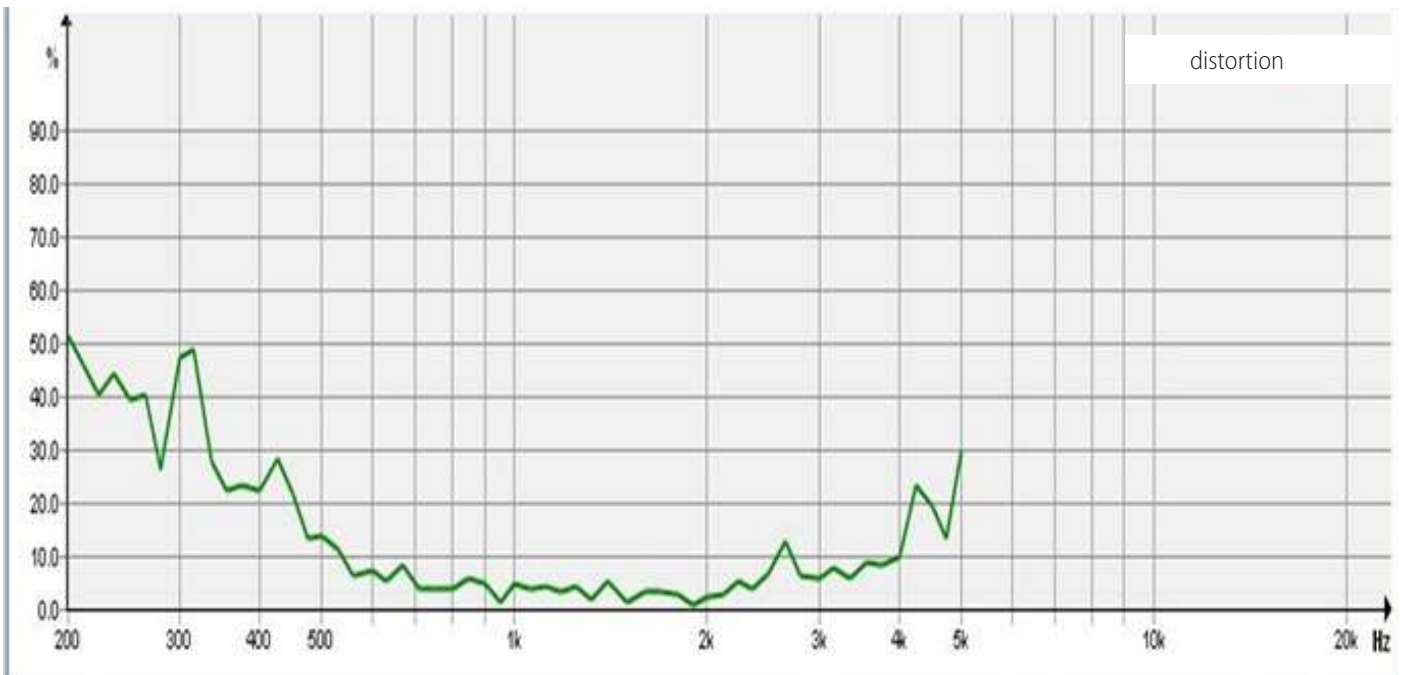


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**FREQUENCY RESPONSE CURVE** (Fig. 2)



32  $\Omega$  dynamic speaker test



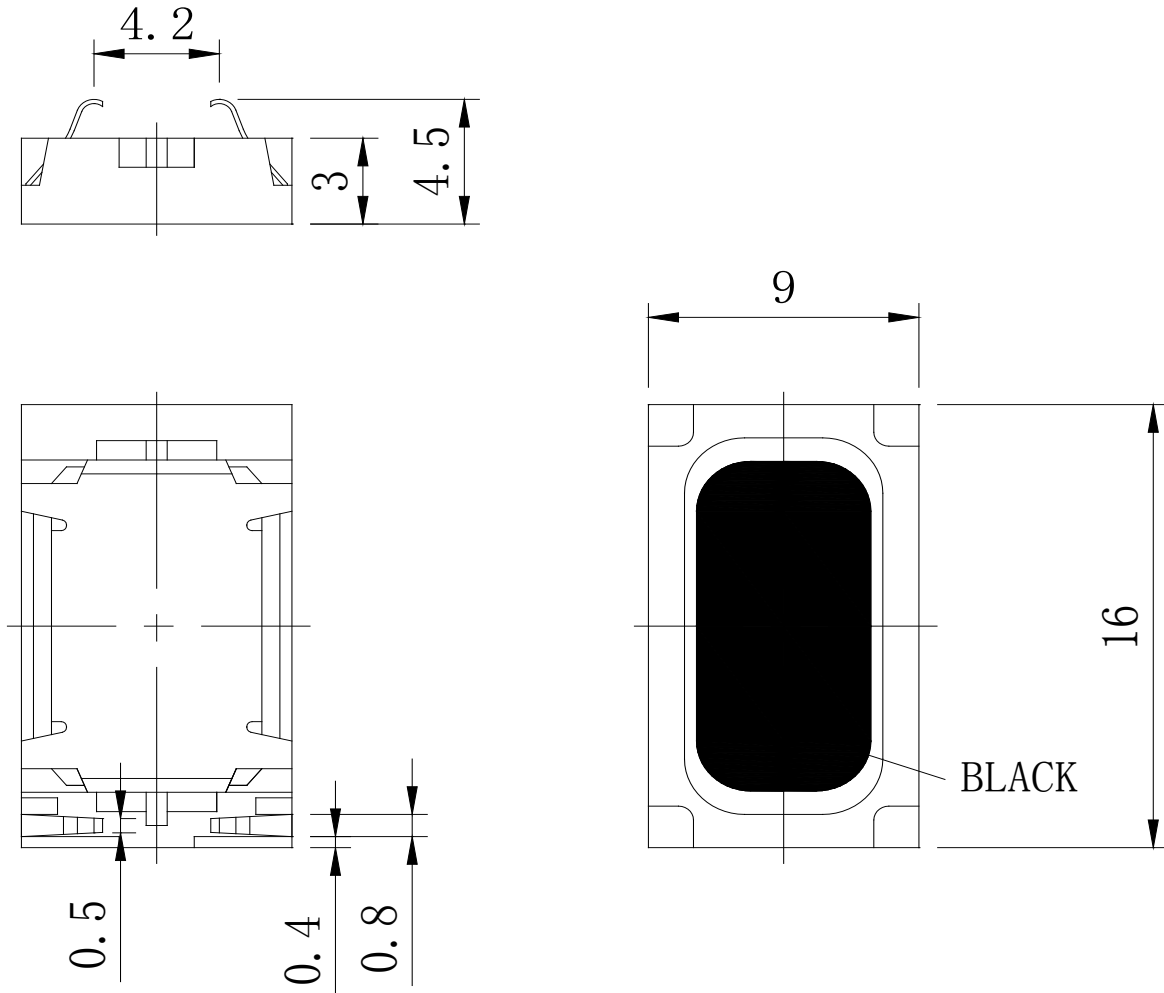


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Soberton Inc.

## DIMENSIONS

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



no.	part name	material	quantity
1	Cap	Scotch ABS	1
2	Diaphragm	PEEK	1
3	Magnet	Nd Fe B 9.15*5*1	1
4	Plate3	SPCC 9.2*5.1*0.4	1
5	Voice Coil	POLYURETHANEENAMELLED	1
6	Frame	BLACK PBT	1



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**PACKING**

