



MODEL: SP-4005
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

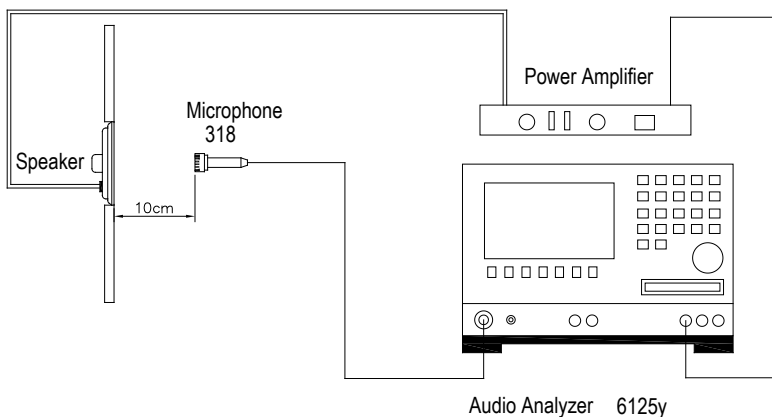
sound pressure level	92±3dB SPL @0.6,1.0,1.5and 2.0KHz in average (0dB SPL=20µPa)
measuring condition	0.1W (Sine wave)10cm measured with baffler shown in Fig.1
ac impedance	8±15%Ω(@1KHz 1V) without baffler.
frequency response curve	As shown in Fig.2
response frequency	550±20%Hz @ 1V. (Without Baffler)
rated noise power	2.0W
short-term max. power	2.5W must be normal at a white noise (1W, F ₀ -20KHz) for one
operation test	Must be free of audible noise (buzzes and rattles) (300~8KHz frequency range, input level up to 4.0Vrms)
distortion	Less than 10% @1KHz, 5cm, 0.1W frequency range, input level up to 0.1W

GENERAL SPECIFICATIONS

operating temperature range	-20°C ~ +65°C
standard test conditions	
temperature	17°C ~ 25°C
relative humidity	45% ~ 80%(RH)
dimension	ø 40 x 5.5mm

MEASURING METHOD (SPEAKER MODE) (Figure 1)

Standard test condition of speaker



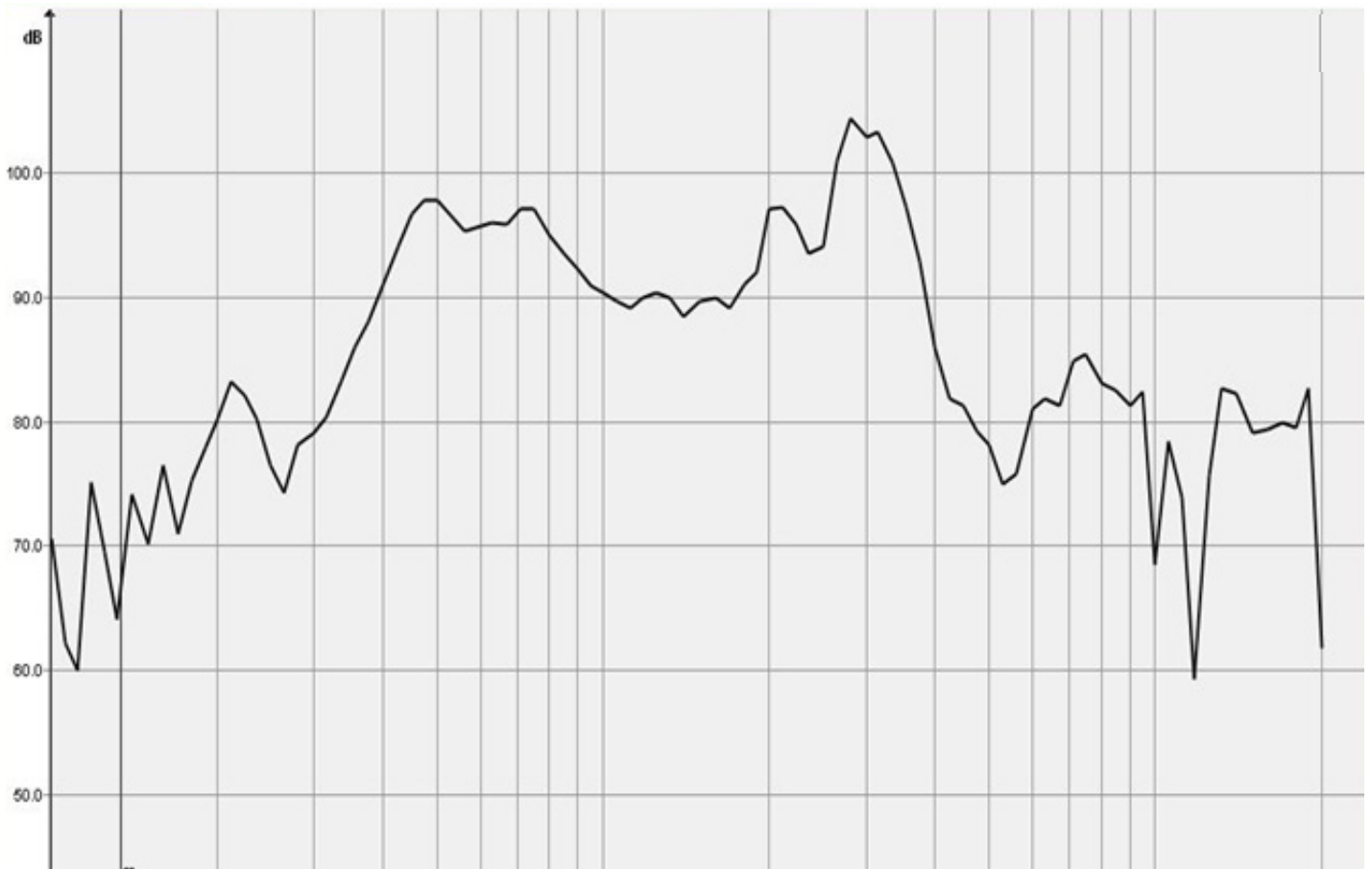
TEST CONDITION	
STANDARD	
temperature	15 ~ 35°C
relative humidity	45% ~ 85%
atmospheric pressure	860mbar to 1060mbar.
STANDARD TEST FIXTURE	
input power	0.1W (0.89V)
zero level	-dB
mode	TSR
potentiometer range	50dB
sweep time	0.5sec



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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	$+65\pm 2^\circ\text{C}$
duration	96 hours

LOW TEMPERATURE TEST

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

HEAT SHOCK TEST

high temperature	$+65\pm 2^\circ\text{C}$
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°C	$+65^\circ\text{C}$
duration	45 minutes	45 minutes
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

noise signal	White noise (EIA filter)
input power	2.0 W
duration	96 hours

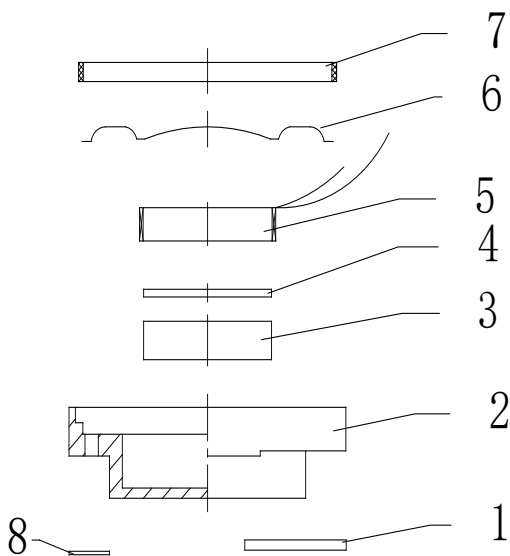
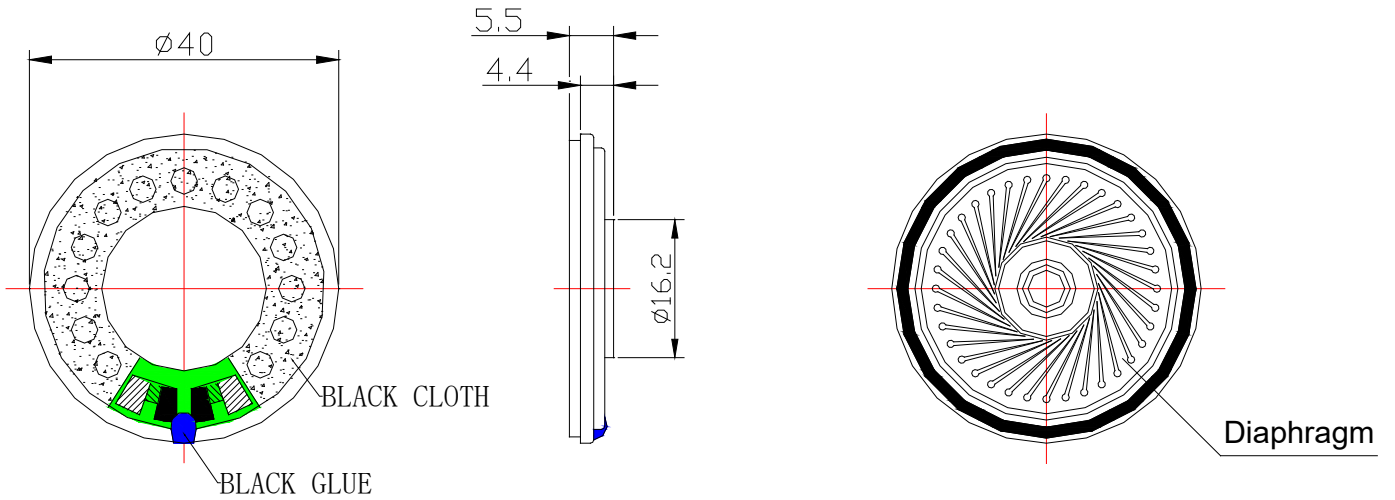


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DIMENSIONS

Tolerance: ±0.5 (unit: mm)



no	item	material	quantity
1	PCB	FR-4	1
2	Frame	SPCC	1
3	Magnet	φ12.5*1.5-N38Nd Fe B	1
4	Plate	φ12.7×0.8 SPCC	1
5	Voice Coil	KSV-13.3-2.4-7.4Ω	1
6	Diaphragm	black PEI	1
7	Gasket	black paper	1
8	Silk Screen	black cloth	1



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PACKING

42 pcs per box

24 units per box

Total:1000 pcs per box

Size:37×28×28cm

$$42\text{PCS} \times 24 = 1008\text{PCS}$$

