

MODEL: SP-4005S
PRODUCT: Dynamic Speaker
EDITION: A/2017

Soberton Inc.

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

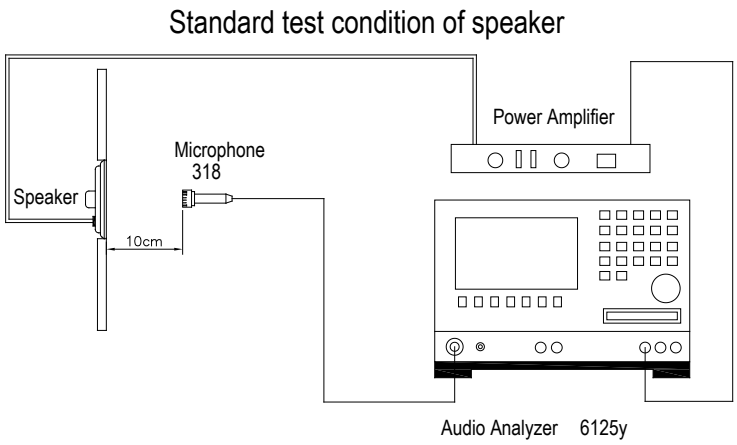
DYNAMIC SPEAKER ELECTROACOUSTIC CHARACTERISTICS

sound pressure level	93±3dB (0.1W/0.1M) @AVE 0.8KHz,1.0KHz,1.5KHz, 2.0KHz (0dB SPL=20μPa)
frequency response curve	As shown in Fig. 2
resonance frequency	500±20% Hz @1.0V (without Baffler)
rated noise power	1.0 W
short-term max power	2.0W must be at a white noise (F0~20KHz) for one minute
frequency range	F0~ 20KHz
test set up	Measuring conditions and procedures shown in Fig.1
AC impedance	8Ω±15%
distortion	Less Than 10% @1KHz, 10cm, 0.1W
buzz, rattle,etc	Not audible from 300Hz to 8KHz with 2.83V sine wave input

GENERAL SPECIFICATIONS

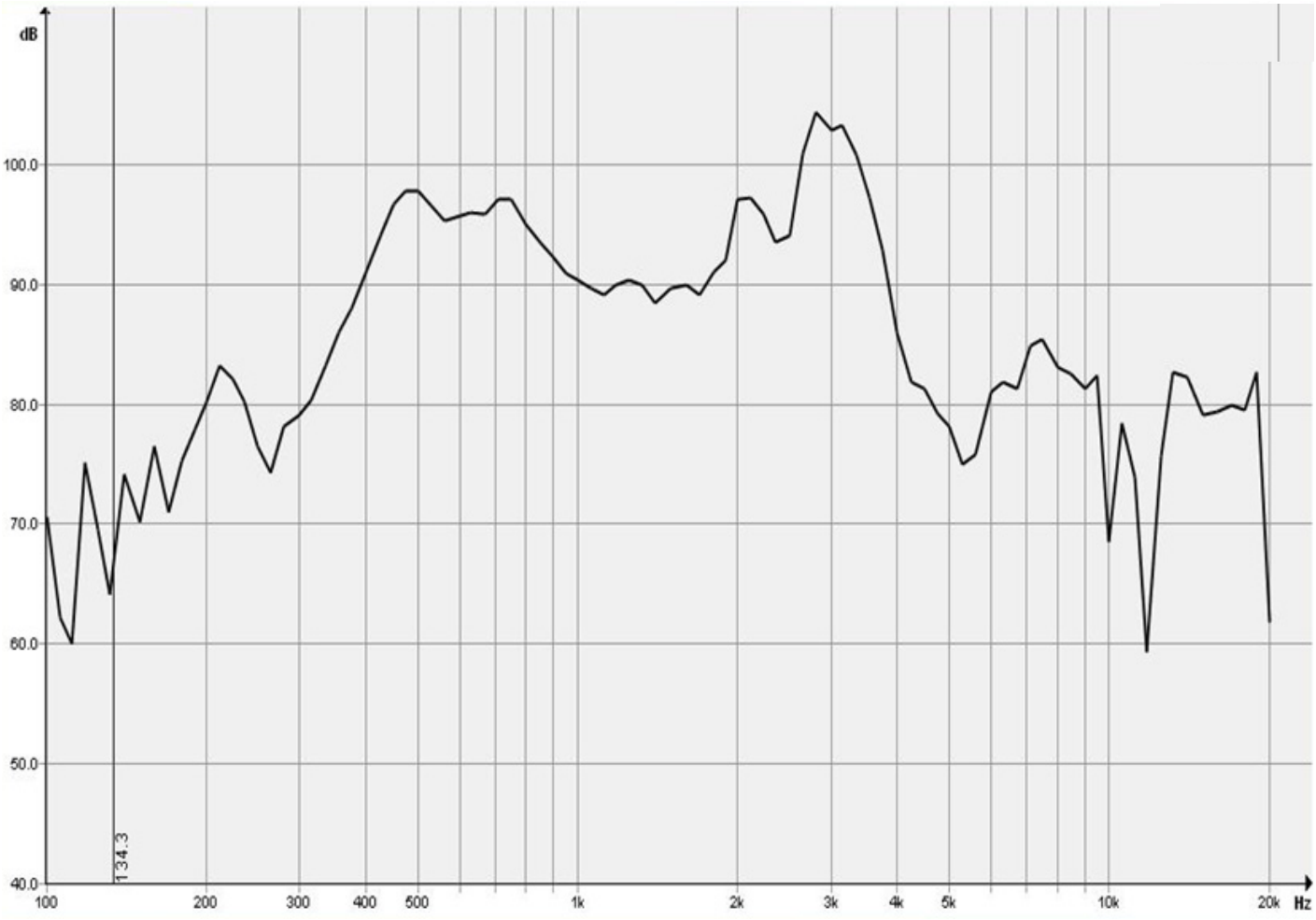
operating temperature range		-20°C ~ +60°C
storage temperature range		-25°C ~ +65°C
standard test conditions		
	temperature	17°C ~ 25°C
	relative humidity	45% ~ 80%(RH)
dimension		ø40 x 8.4mm

MEASURING METHOD (SPEAKER MODE) (Figure 1)



TEST CONDITION	
STANDARD	
temperature	15 ~ 35°C
relative humdity	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

TYPICAL FREQUENCY RESPONSE CURVE (Figure 2)



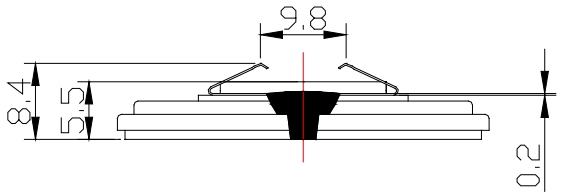
RELIABILITY TESTS

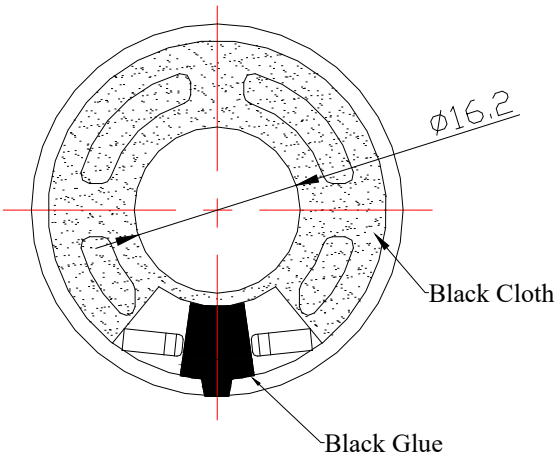
The sound pressure as specified shall neither deviate more than ±3dB from the initial value, nor have any significant damage after any of following testing.

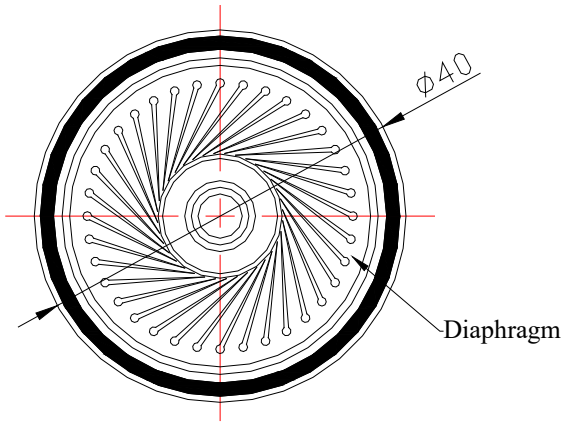
HIGH TEMPERATURE TEST	
high temperature	+65°C±2°C
duration	96 hours
LOW TEMPERATURE TEST	
low temperature	-20°C±2°C
duration	96 hours
HEAT SHOCK TEST	
high temperature	+65°C±2°C
low temperature	-20°C±2°C
duration	1 hour
changeover time	< 30 seconds
cycle	100
HUMIDITY TEST	
temperature	+40°C±2°C
relative humidity	90~95%
duration	96 hours
TEMPERATURE CYCLE TEST	
temperature	-20°C +65°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	1.0W
duration	96 hours

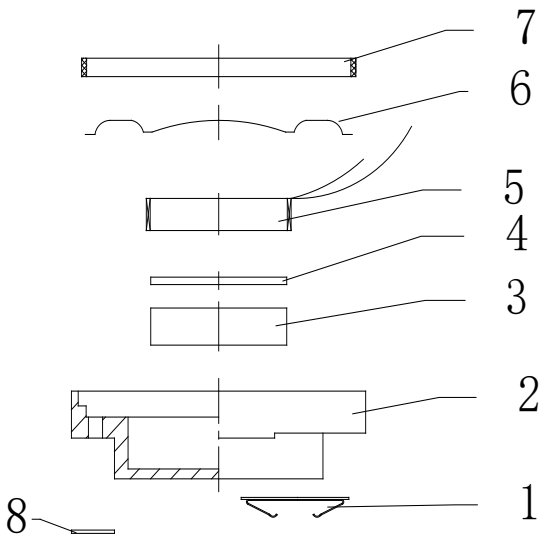
DIMENSIONS

Tolerance: ±0.5 (unit: mm)









no	item	material	quantity
1	PCB + PIN	FR-4 + Stainless	1
2	Frame	SPCC	1
3	Main Magnet	Φ12.5×1.5-N38	1
4	Plate	SPCC	1
5	Voice Coil	Polyurethane Enamelled Wire	1
6	Diaphragm	PET	1
7	Gasket	black paper	1
8	Silk Screen	black cloth	1

PACKING

