



MODEL: SP-1813
PRODUCT: Dynamic Speaker
EDITION: A/2016

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

DYNAMIC SPEAKER ELECTORACOUSTIC CHARACTERISTICS

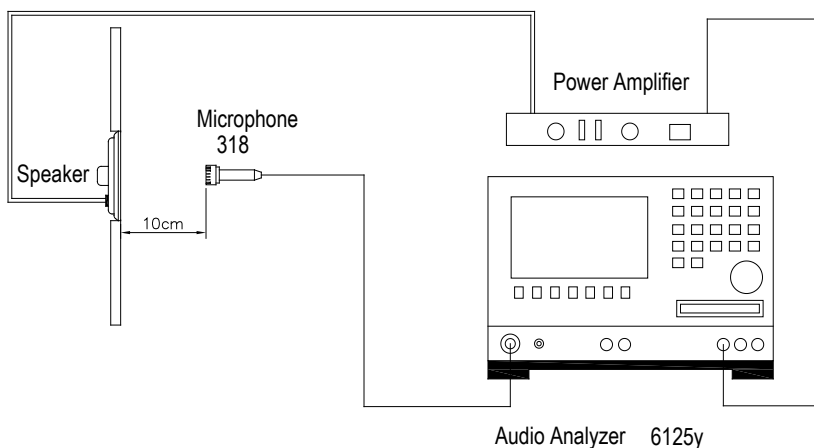
sound pressure level	89±3dB SPL @0.8, 1.0, 1.2, 1.5, 1.8 and 2.0KHz in average (0dB SPL=20μPa)
measuring condition	0.1W (Sine wave) 10cm measured with baffler
frequency response curve	As shown in Fig.2
response frequency	900±20%Hz @ 1V. (without baffler)
rated noise power	0.5W
short-term max. power	0.8W must be normal at a white noise (1W, F0-20KHz) for 1 minute
distortion	Less than 10% @1KHz, 0.1M, 0.5W frequency range, input level up to 0.2Vrms
operation test	Must be free audible noise (buzzes and rattles) 300 ~8KHz frequency range, input level up to 2.0Vrms

GENERAL SPECIFICATIONS

operating temperature range	-20°C ~ +60°C
standard test conditions	
temperature	17°C ~ 25°C
relative humidity	45% ~ 80%(RH)
ac impedance	8±15%Ω (@1.5KHz 1V) without baffler
dimensions	Ø9.8*4.2

MEASURING METHOD (SPEAKER MODE) (Figure 1)

Standard test condition of speaker



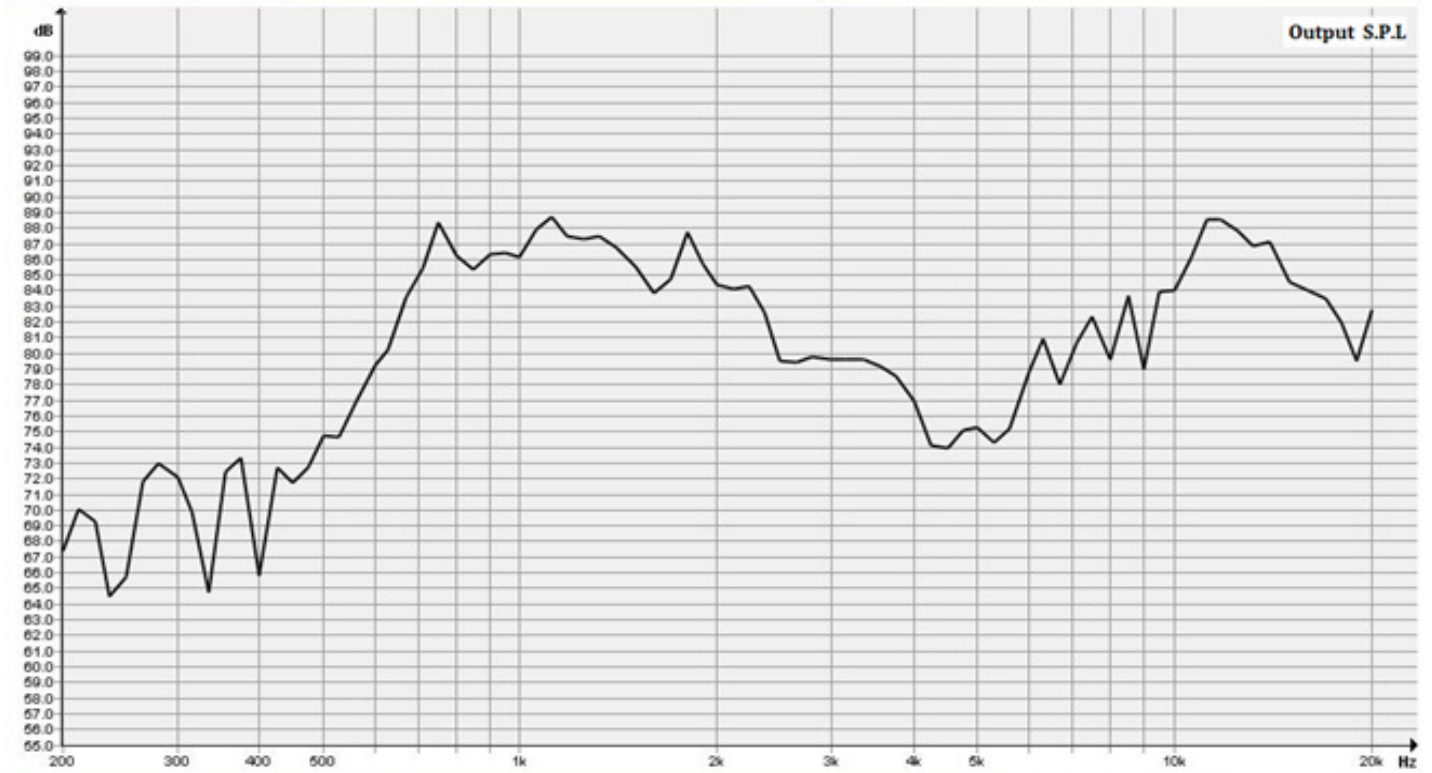
TEST CONDITION	
STANDARD	
temperature	15 ~ 35°C
relative humidity	45% ~ 85%
atmospheric pressure	860mbar to 1060mbar.
STANDARD TEST FIXTURE	
input power	0.1W (0.89V)
zero level	-dB
mode	TSR
potentiometer range	50dB
sweep time	0.5sec



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Soberton Inc.

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°C	$+60^\circ\text{C}$
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

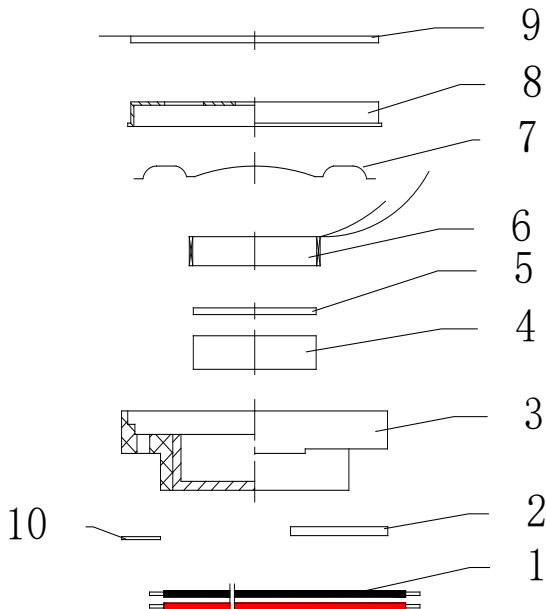
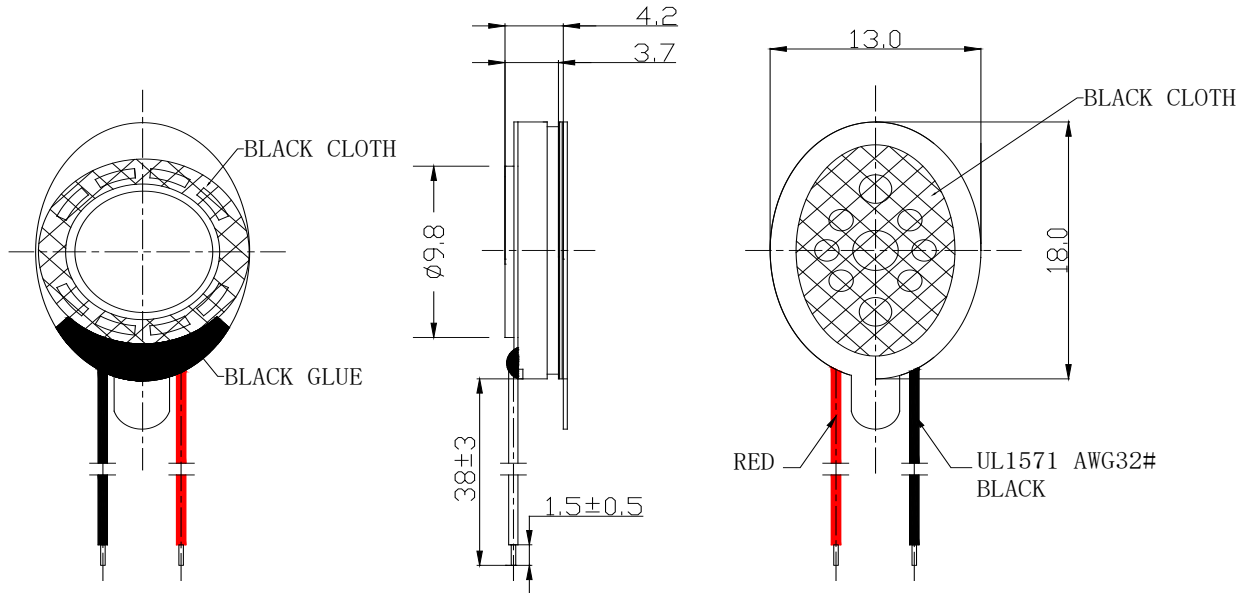
noise signal	White noise (EIA filter)
input power	0.5W
duration	96 hours



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DIMENSIONS

Tolerance: ± 0.5 (unit: mm)



no	item	material	quantity
1	UL1571 AWG32#	Wire Red/Black	2
2	PCB	Epoxy glass fiber	1
3	Frame	PBT	1
4	Magnet	ND Fe B-N38	1
5	Plate	SPCC	1
6	Voice Coil	Copper	1
7	Membrane	PEN	1
8	Cap	SUS 304	1
9	Gasket	Polyester fiber	1
10	Damping cloth	Non-woven fabrics	1



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PACKING

100PCS×10=1000PCS

1000PCS×5=5000PCS

