



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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MODEL: SP-3605
PRODUCT: Dynamic Speaker
EDITION: A/2016

Soberton Inc.

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

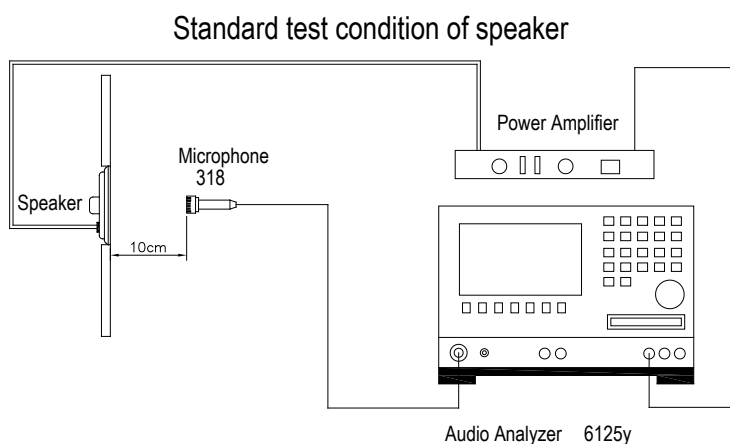
DYNAMIC SPEAKER ELECTROACOUSTIC CHARACTERISTICS

sound pressure level	90±3dB SPL @ 0.6, 0.8, 1.0, 1.2, 1.5 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	1W
short-term max. power	1.5W must be normal at a white noise (1W, F ₀ -20KHz) for 1 minute
operation test	Must be free audible noise (buzzes and rattles) (300 ~5KHz frequency range, input level up to 2.83Vrms)
distortion	Less than 5% @1KHz , 0.1M , 0.1W frequency range, input level up to 0.1W
dimension	ø36 x 5.0mm

GENERAL SPECIFICATIONS

operating temperature range	-20°C ~ +60°C
standard test conditions	
temperature	17°C ~ 25°C
relative humidity	45% ~ 80%(RH)

MEASURING METHOD (SPEAKER MODE) (Figure 1)



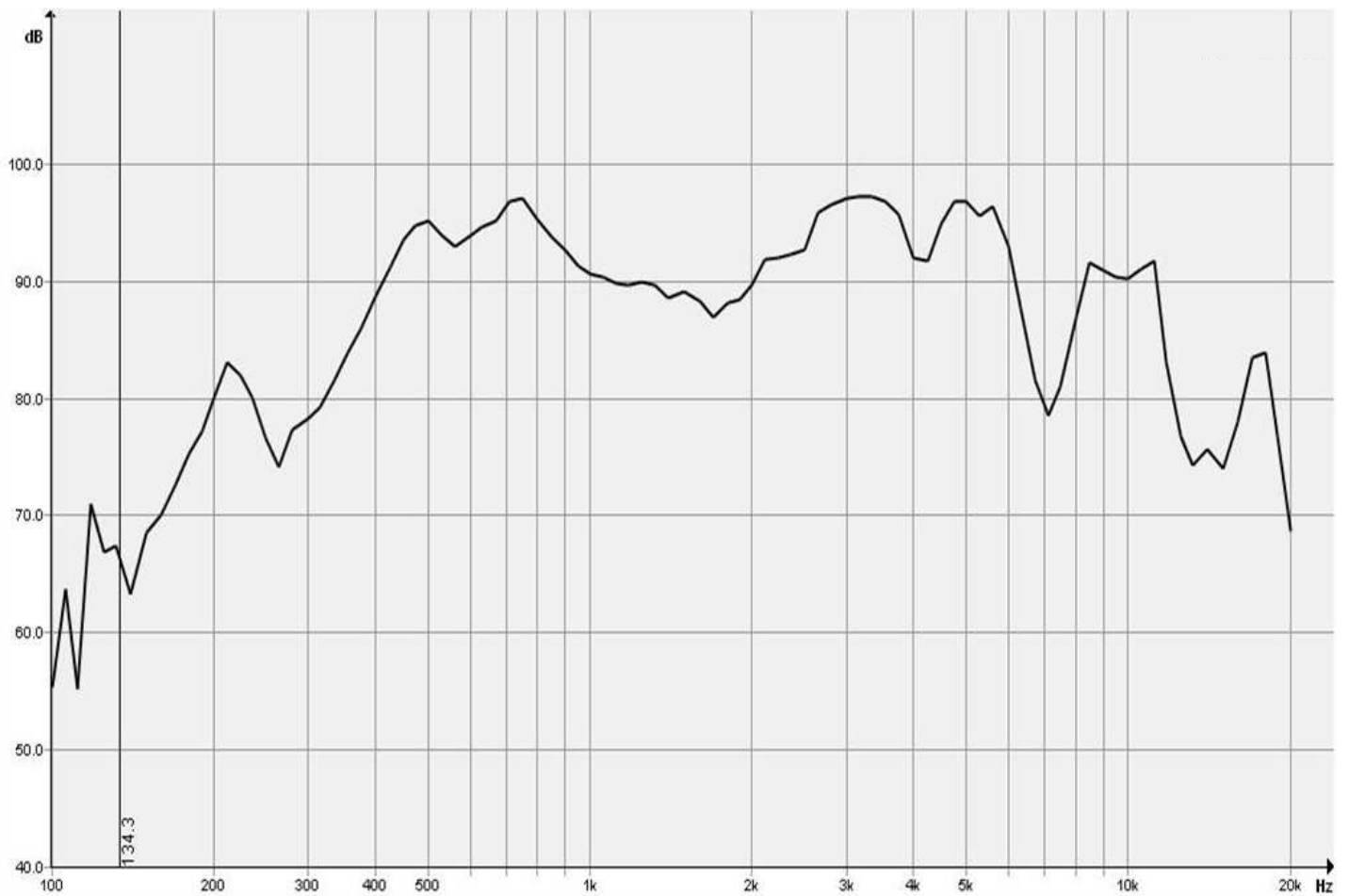
TEST CONDITION	
STANDARD	
temperature	15 ~ 35°C
relative humidity	45% ~ 85%
atmospheric pressure	860mbar to 1060mbar.
STANDARD TEST FIXTURE	
input power	0.1W (0.89V)
zero level	-dB
mode	TSR
potentiometer range	50dB
sweep time	0.5sec



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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°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	1W
duration	1 hour

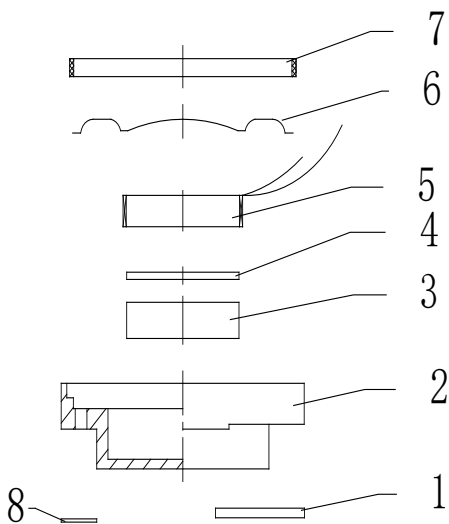
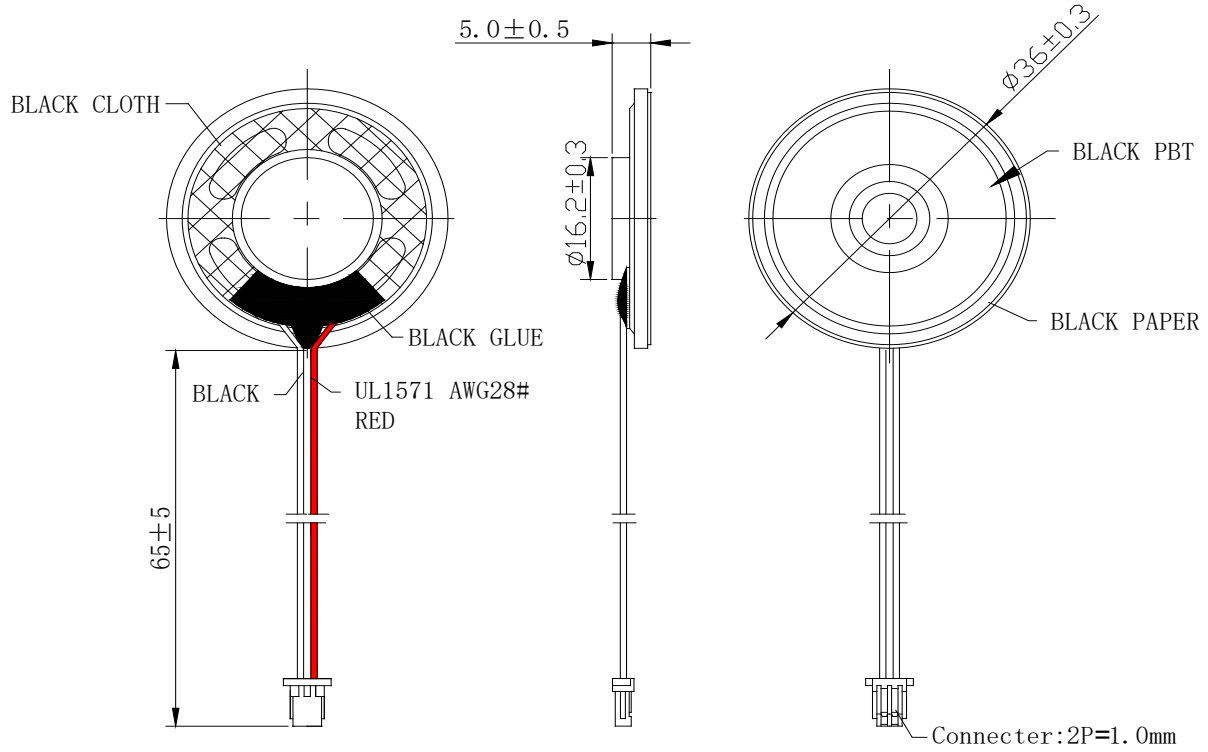


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DIMENSIONS

Tolerance: ± 0.5 (unit: mm)



no	item	material	quantity
1	PCB	FR-4	1
2	Frame	SPCC	1
3	Magnet	$\phi 12.5 * 1.5$ -N38Nd Fe B	1
4	Plate	$\phi 12.7 * 0.8$ SPCC	1
5	Voice Coil	13.3-2.4-7.4 Ω	1
6	Diaphragm	black PET	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:37x28x28cm

$$42PCS \times 24 = 1008PCS$$

