



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!



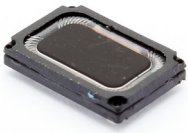
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MODEL: SP-1208
PRODUCT: Dynamic Speaker
EDITION: A/2016

SPEAKER ELECTROACOUSTICAL CHARACTERISTICS

sound pressure level	63±3dB at 0.8Vrms/10cm at 2KHz (Mounted in free air without baffle)
resonance frequency	500 +/- 15% Hz, 1 Vrms input in free air 800 +/- 15% Hz, 1 Vrms input in 0.5cc Box
rated frequency range	100-10KHz
frequency response	See Figure 1
THD	See Figure2, Table 2 (Mounted in Free air 0.5 at without baffle) Test at 0.25w/10cm
rub & buzz	A sine sweep among 100-1500Hz at rated noise power with 0.5cc back cavity will not result in any buzzing or extraneous sound.
ac impedance	8±15% Ω@2KHz, 1Vrms input
rated noise power	0.25Watts (in 0.5cc box)
short term power	0.5Watts (in 0.5cc box)
dimension	12 x 8 x 2.63 mm

POLARITY REQUIREMENTS

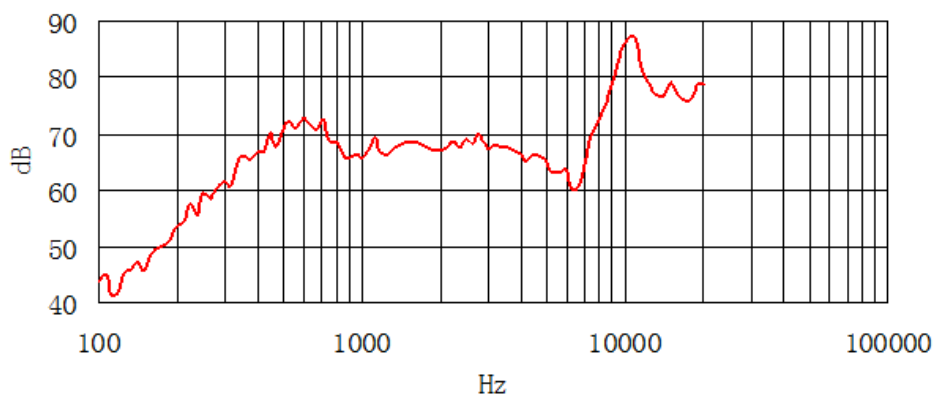
polarity	When a DC source's "+" polarity is attached to speaker's "+" polarity, "-" polarity is attached speaker's "-" polarity, the membrane will move forward.
magnetic polarity	Top of the magnet is the north pole.

TYPICAL FREQUENCY RESPONSE (Fig. 1)

Magn dB re 20µPa

SPL at 10cm 0.8v in free air

Freq.(Hz)	Limit (%)
500	30
600	20
1500	10
15000	5

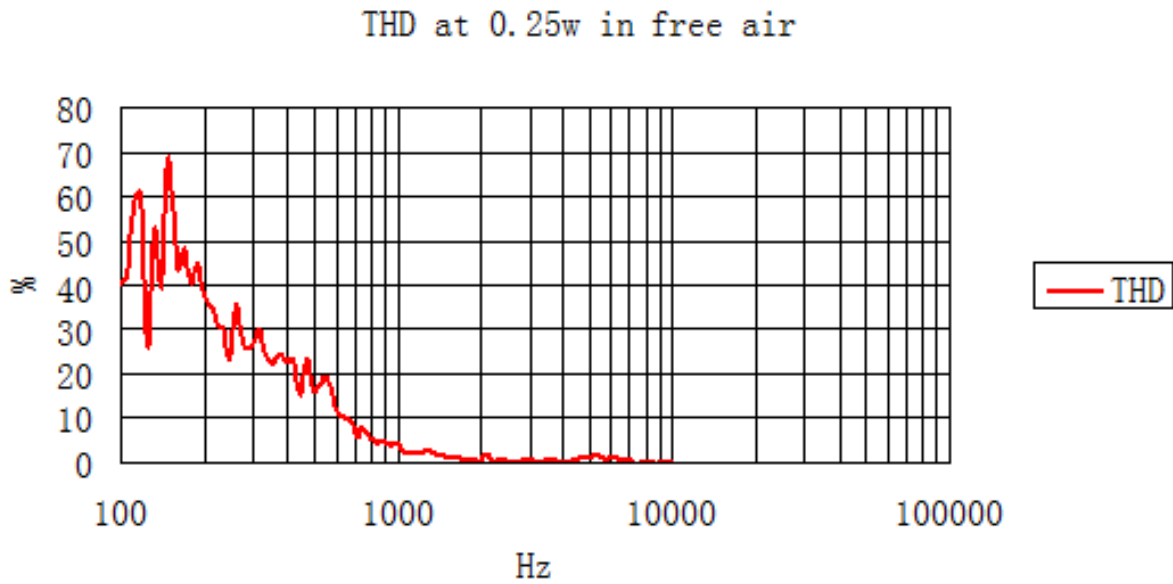




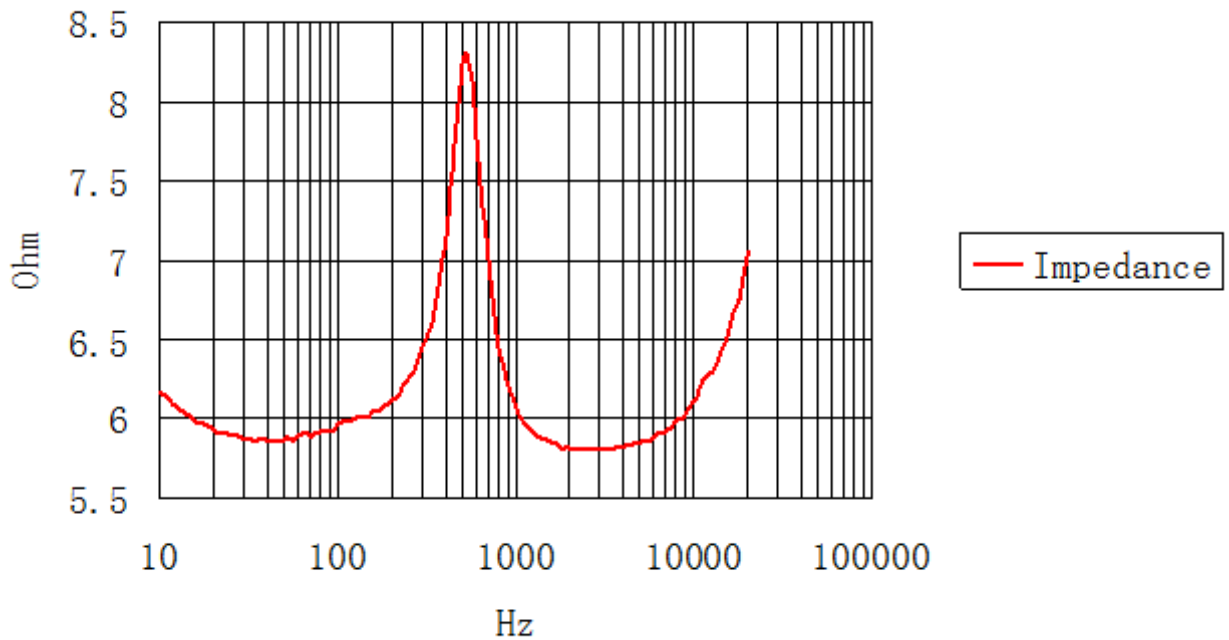
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TYPICAL FREQUENCY RESPONSE (Fig.2)

TYPICAL THD

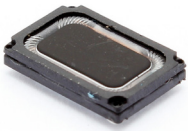


TYPICAL IMP CURVE, 0812,1 VRMS INPUT



TEST CLIMATIC CONDITION

ambient temperature	15°C- 35°C, preferably at 20°C
relative humidity	25% to 75%
air pressure	86kPa - 106kPa
Refer to IEC 268-1	



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TEST METHOD

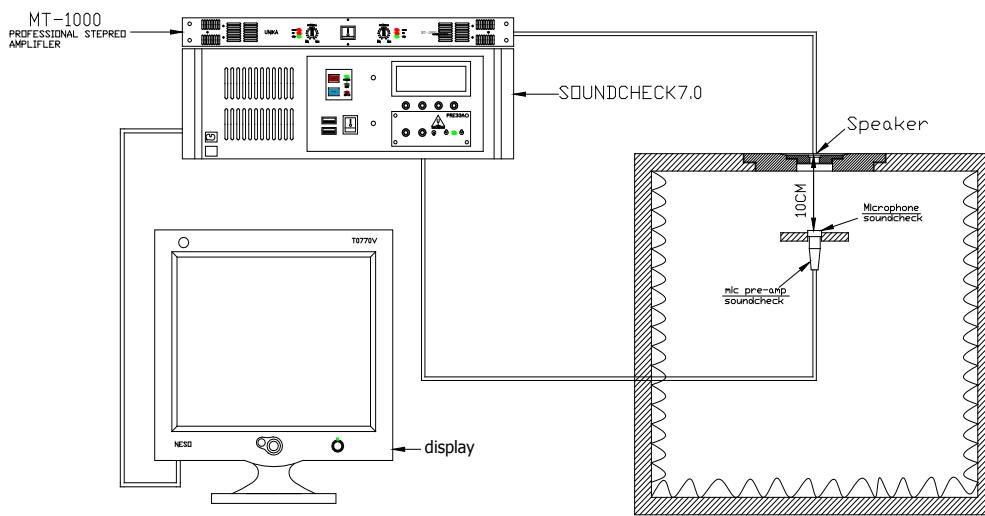
SPL AND FREQUENCY RESPONSE CURVE

The loudspeaker in 0.5cc box shall be mounted in specified baffle, the measuring microphone shall be free-field microphone and placed at specified distance from DUT, on axis. The drive power is 0.4Watts, and swept sine-wave range is 20Hz to 20kHz with a R40 of test sequence.

THD

Tested per Section 9.1 and driven at 0.25Watts , sweep at specified frequency range with R40 test sequence.

**Figure 3 Test setup
Speaker Measurement Circuit**



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 $+75\pm 2^\circ\text{C}$

duration 96 hours

LOW TEMPERATURE TEST

low temperature $25\pm 2^\circ\text{C}$

duration 96 hours

HEAT SHOCK TEST (See in Fig. 4)

high temperature $+75\pm 2^\circ\text{C}$

low temperature $-40\pm 2^\circ\text{C}$

changeover time < 30 seconds

duration 1 hour

cycle 10

HUMIDITY TEST

temperature $+40\pm 2^\circ\text{C}$

relative humidity 90~95%

duration 48 hours



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RELIABILITY TESTS (Continued)

TEMPERATURE CYCLE TEST (See in Fig.5)

temperature	-40°C	+75°C
duration	45 minutes	45 minutes
temperature gradient	1~3°C/min.	
cycle	10	

DROP TEST

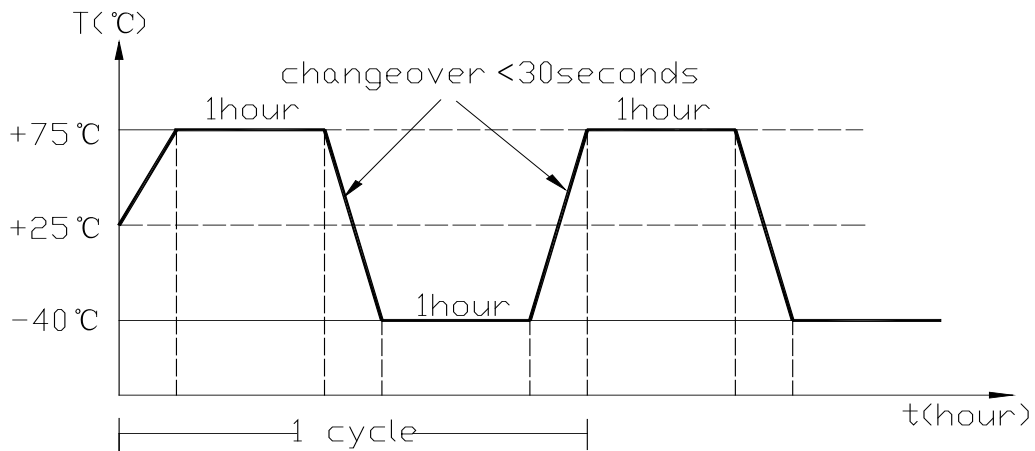
mounted with dummy set mass	100 g
height	1.5 m
cycle	6 (1 each plain) On to the concrete board

LOAD TEST

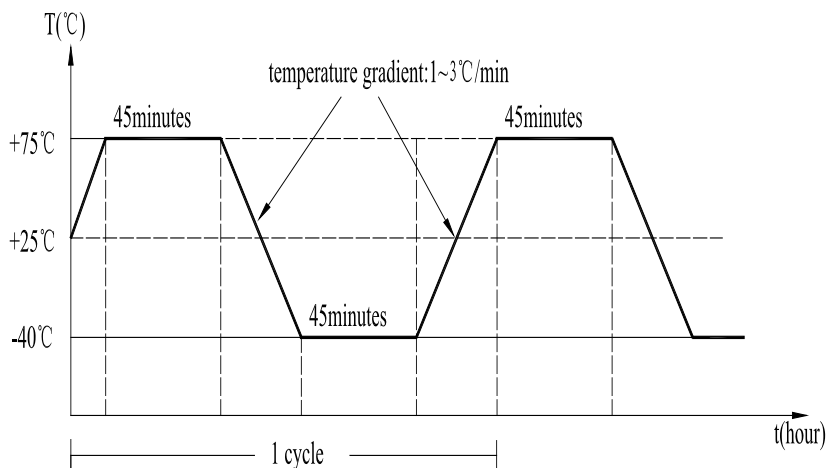
noise signal	Pink noise (EIA filter)
input power	0.25W (1.4Vrms)
duration	96 hours

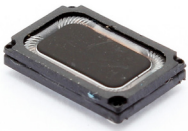
TEST METHOD

HEAT SHOCK TEST (Fig.4)



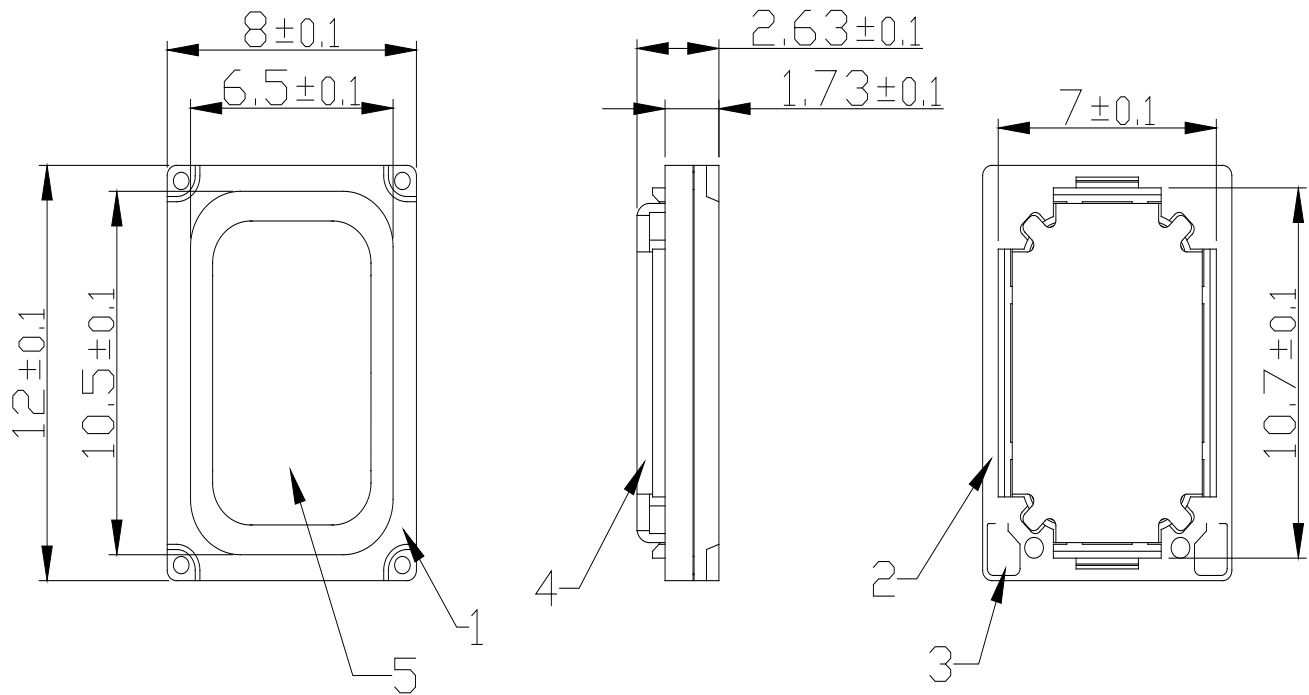
TEMPERATURE CYCLE TEST (Fig.5)



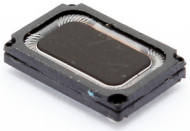


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PRODUCT EXTERNAL VIEW AND DIMENSIONS



no.	part name	material
1	Front Cap	PEEK
2	Frame	Iron
3	Terminal	SPCC
4	Magnetic Cover	PPA
5	Diaphragm	PPA



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Soberton Inc.

PACKING

