Miniature Speaker 50mm, 8ohm, 1W	Part No.	ABS-210-RC
	Page	1/5

1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

	Item	Specifications
1-1	Dimension	Φ50×7.6t
1-2	Rated Input Power	1.0W
1-3	Max Input Power	1.5W
1-4	Rated Impedance	8±15% Ω /2KHz/1V
1-5	Resonance Frequency(f0)	350±20% Hz/1V
1-6	Sound Pressure Level	92±3 dB at (AVG 0.6,0.8,1.0,1.2)KHz 0.1W/0.1m baffleboard (IEC)
1-7	Frequency Range	f0HZ ~ 20KHz
1-8	Total Harmonic Distortion	5%MAX. at 1KHz, 0.89V
1-9	Flux Density	0.6T
1-10	Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red ,the diaphram shall move forward
1-11	OperationTest	Must be normal at sine wave and program source 1.0W.
1-12	Buzz,Rattle,etc.	Should not be audible at 2.83 V sine wave between (f0 Hz ~ 20kHz)
1-13	Weight	13.2g
1-14	Voice Coil Diameter	Φ13.28 mm
1-15	Magnet (NdFeB)	Φ12.5×1.5t mm
1-16	Appearance	Should not exist any obstacle to be harmful to normal operation;damages,cracks,rusts and distortions,etc.
1-17	Operating Temp. Range	-20℃～+60℃
1-18	Storage Temp. Range	-30℃～+60℃

Alan Butcher Components
Alan Butcher Components Ltd
Unit 1 Beechwood Clump Farm Industrial Estate Tin Pot Lane Blandford Dorset DT11 7TD
Telephone 01258 456360 Email sales@abcomponents.co.uk
www.abcomponents.co.uk

2.ENVIRONMENTAL TEST

	Item	Specifications
2-1	High temp. Test	Keep 96 hours at +60℃±3℃ and leave 3 hours in normal temperature and then check
2-2	Low temp. Test	Keep 96 hours at -30℃±3℃ and leave 3 hours in normal temperature and then check
2-3	Humidity test	Keep 96 hours at + 40℃±3℃ relative humidity 95% and leave 3 hours in normal temperature and then checked.
2-4	Thermal cycle test.	Low temperature: -30℃±3℃, temperature:+60℃±3℃, cycle: 1 hour/cycle each, and then keep 5 cycles in a room.
2-5	Vibration	Frequency:10~55~10Hz Oct/mm Amplitude:1.5mm X,Y,Z 3 direction.2 hours each, total 6 hours.
2-6	Drop test	The speaker shall be fixed in cabinet, packed with carton and dropped 70cm height vertically to 10cm wooden board.(one point ,three corners ,six sides. 1 times each, total 10 times.)
2-7	Load test	Rated Power white noise is applied for 96 hours
2-8	Max Power test	Max power 1 min on – 2 min off 10 cycles.
2-9	Terminal strength test	Capable of withstand 1kg load for 15seconds without resulting in any damage or rejection.

PASS CRITERION :

After these test , the change of S.P.L shall be within ±3 dB .

Alan Butcher Components

Alan Butcher Components Ltd
Unit 1 Beechwood Clump Farm Industrial Estate Tin Pot Lane Blandford Dorset DT11 7TD
Telephone 01258 456360 Email sales@abcomponents.co.uk
www.abcomponents.co.uk

3.MEASURING METHOD(SPEAKER MODE)

3-1 .Test Condition

STANDARD

Temperature : 15 ~ 35℃

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3℃

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

3-2 . Standard Test Fixture

1.Input Power : 0.1W(0.89V)

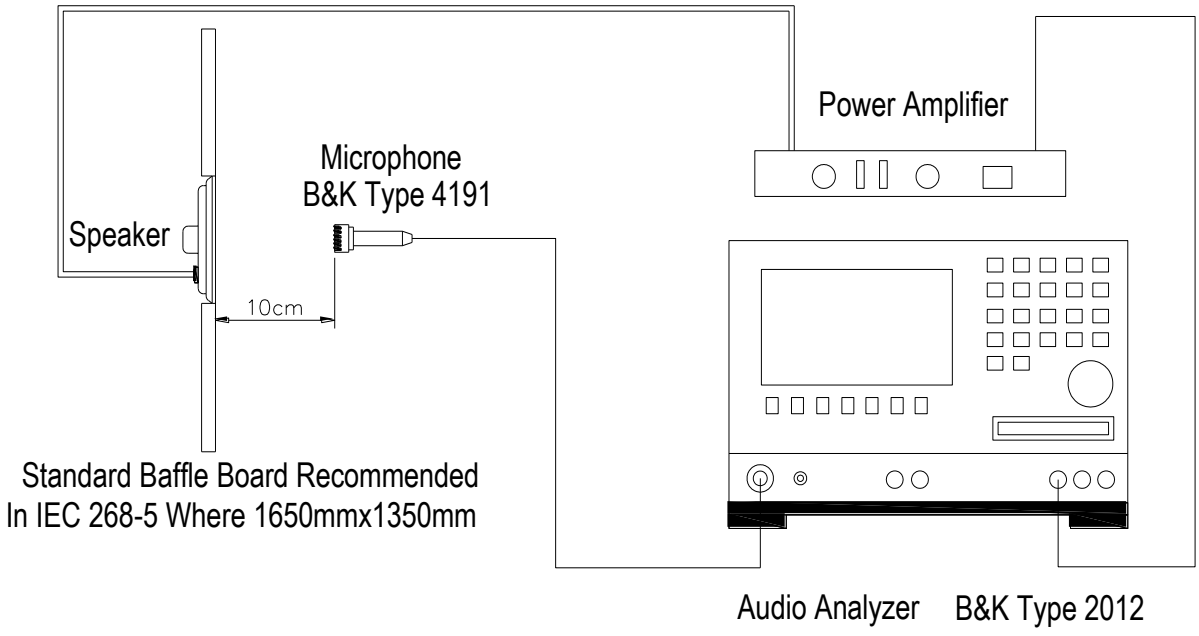
2.Zero Level : -dB

3.Mode : TSR

4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec

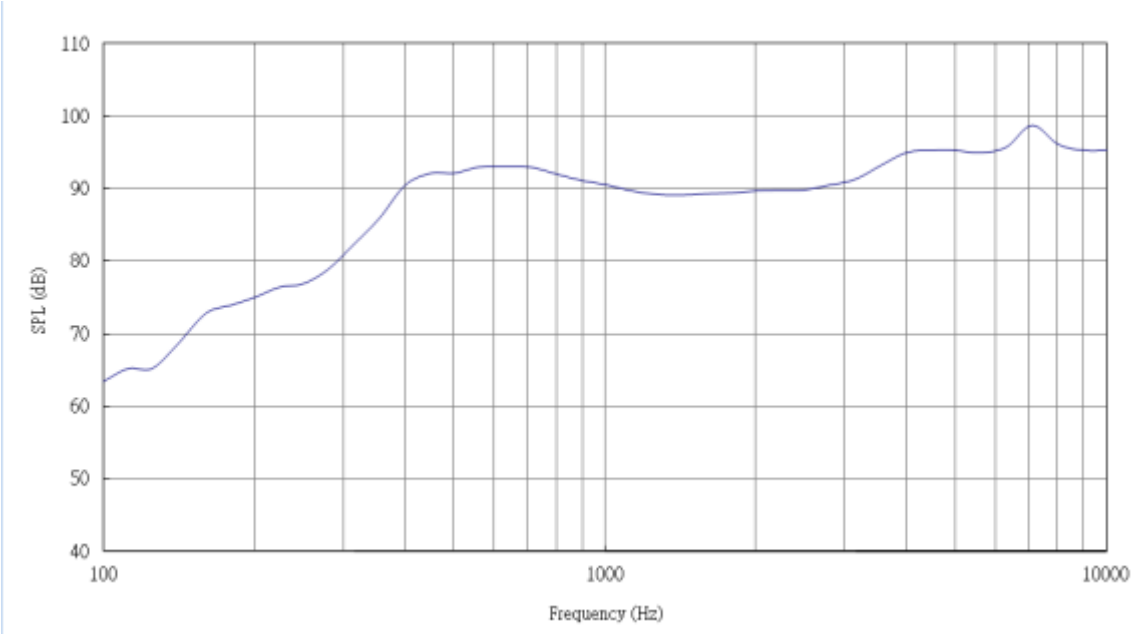
Standard test condition of speaker



Alan Butcher Components

Alan Butcher Components Ltd
Unit 1 Beechwood Clump Farm Industrial Estate Tin Pot Lane Blandford Dorset DT11 7TD
Telephone 01258 456360 Email sales@abcomponents.co.uk
www.abcomponents.co.uk

4.FREQUENCY RESPONSE CURVE



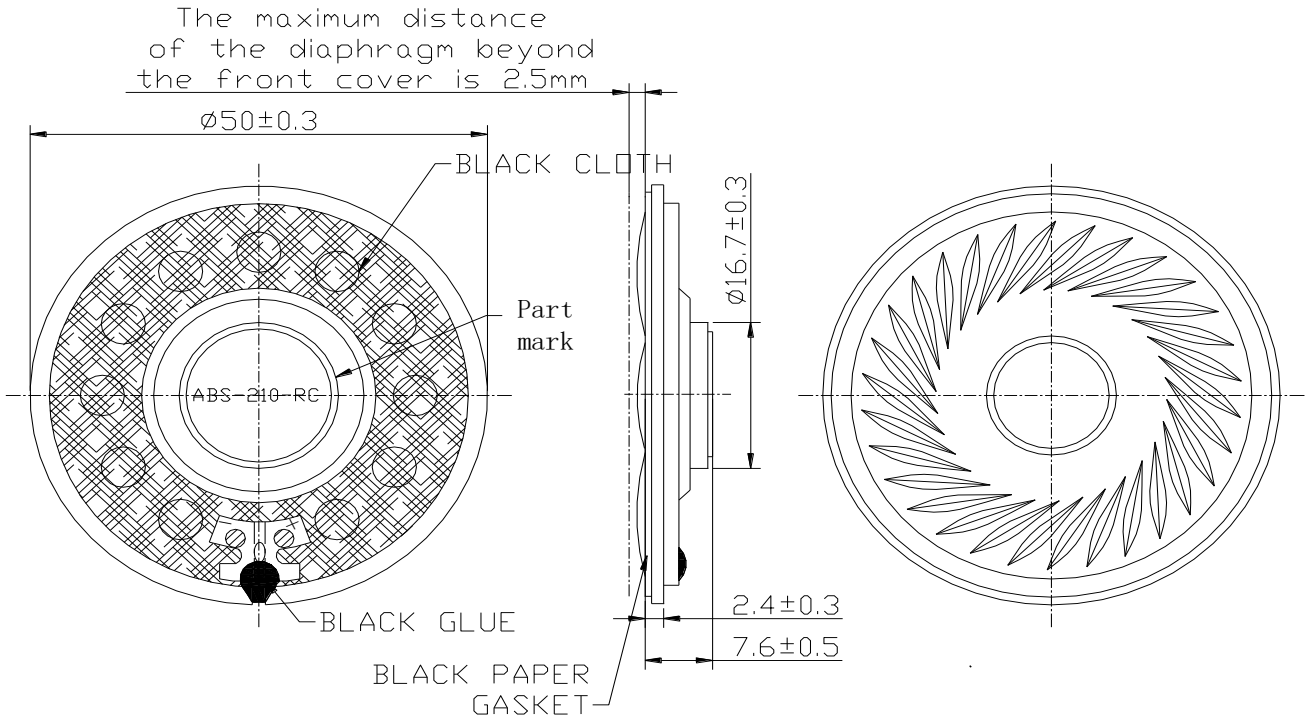
Alan Butcher Components

Alan Butcher Components Ltd
Unit 1 Beechwood Clump Farm Industrial Estate Tin Pot Lane Blandford Dorset DT11 7TD
Telephone 01258 456360 Email sales@abcomponents.co.uk
www.abcomponents.co.uk

SPECIFICATIONS	Part No.	ABS-210-RC
	Page	5/5

5.DIMENSIONS

Unless otherwise specified,tolerance:±0.5(unit:mm)



7	Front gasket	1	Paper	GU-001
6	PCB	1	FR4	GU-001
5	Magnet	1	NdFeB	GU-001
4	Plate	1	SPCC	GU-001
3	Voice coil	1		GU-001
2	Diaphragm	1	PET	GU-001
1	Frame	1	SPCC	GU-001
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK

Alan Butcher Components

Alan Butcher Components Ltd
Unit 1 Beechwood Clump Farm Industrial Estate Tin Pot Lane Blandford Dorset DT11 7TD
Telephone 01258 456360 Email sales@abcomponents.co.uk
www.abcomponents.co.uk