

Features

- Miniature speaker
- 4ohm
- 2W rated input power
- 3W max. input power
- SPL \geq 83dB
- 40 x 20 x 5.8mm

RS PRO Miniature Speaker Rectangular, 4ohm, 2W

RS Stock No.: 7564615



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

Miniature speakers are used in products that require voice, music & sound reproduction. They generally have a wide frequency range making them versatile in terms of the sound they produce. This is a small, rectangular, 4 ohm speaker which generates a minimum SPL of 83dB. It has a paper cone and mounting holes within a metal surround. Applications include:

APPLICATIONS:

- Headsets
- Access and security
- Lift panels
- Parking metres
- Medical products
- PDAs
- Computers
- Smart phones
- Model railways
- Toys & games
- Sensing & instrumentation
- Communications equipment
- Remote monitoring systems
- Safety products

Electrical Specifications

1. ELECTRICAL AND ACOUSTICAL SPECIFICATION

	Item	Specifications
1-1	Dimension	40.0×20.0×5.8t
1-2	Rated Input Power	2.0W
1-3	Max Input Power	3.0W
1-4	Rated Impedance	4±15% Ω /1KHz/1V
1-5	Resonance Frequency(f0)	400±20% Hz/1V
1-6	Sound Pressure Level	83±3 dB at (AVG 0.8,1.0,1.2,1.5)KHz 0.1W/0.1M
1-7	Frequency Range	200HZ ~ 20KHz
1-8	Total Harmonic Distortion	10%MAX. at 1KHz, 0.63V
1-9	Flux Density	1.0T
1-10	Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red ,the diaphrag shall move forward
1-11	OperationTest	Must be normal at sine wave and program source 2.0W.
1-12	Buzz,Rattle,etc.	Should not be audible at 2.83 V sine wave between (200 Hz ~ 20KHz)
1-13	Weight	7.6g
1-14	Voice Coil Diameter	φ 11.75mm
1-15	Magnet (NdFeB)	φ 11×1.5t 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℃

2.ENVIRONMENTAL TEST

	Item	Specifications
2-1	High temp. Test	Keep 96 hours at $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
2-2	Low temp. Test	Keep 96 hours at $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$ and leave 3 hours in normal temperature and then check
2-3	Humidity test	Keep 96 hours at $+40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ relative humidity 90%~95% and leave 3 hours in normal temperature and then checked.
2-4	Thermal cycle test.	Low temperature: $-30^{\circ}\text{C} \pm 3^{\circ}\text{C}$, temperature: $+60^{\circ}\text{C} \pm 3^{\circ}\text{C}$, 1 cycle: total 5cycles and then keep 6 hours 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 comers ,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.
<p>PASS CRITERION :</p> <p>After these test , the change of S.P.L shall be within ± 3 dB .</p>		

3.MEASURING METHOD

3-1 .Test Condition

STANDARD

Temperature : 23 ~ 25°C

Relative humidity : 55% MAX,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature : 20±3°C

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

3-2 . Standard Test Fixture

1.Input Power :0.1W(0.63V)

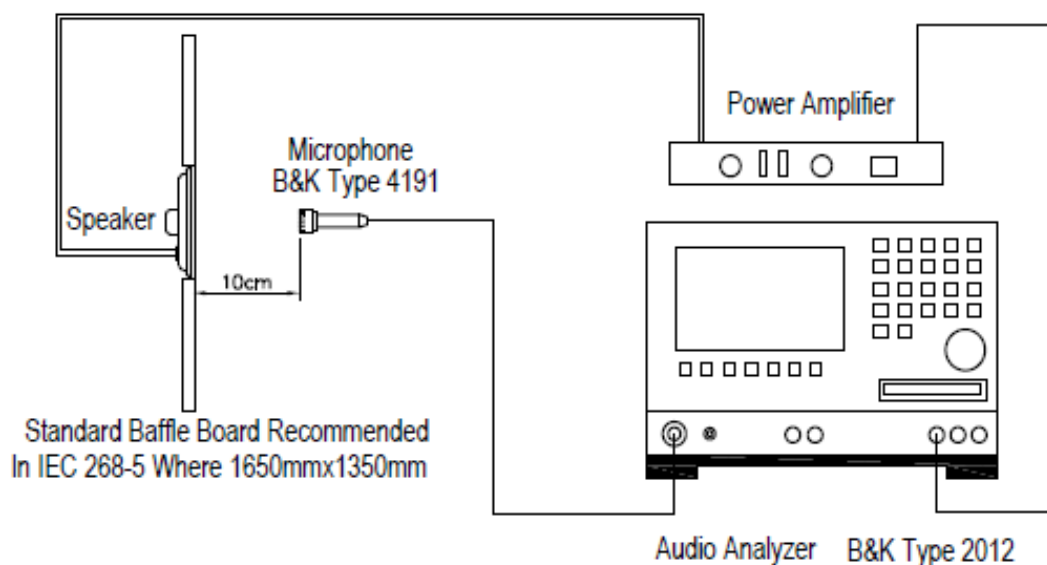
2.Zero Level : -dB

3.Mode : TSR

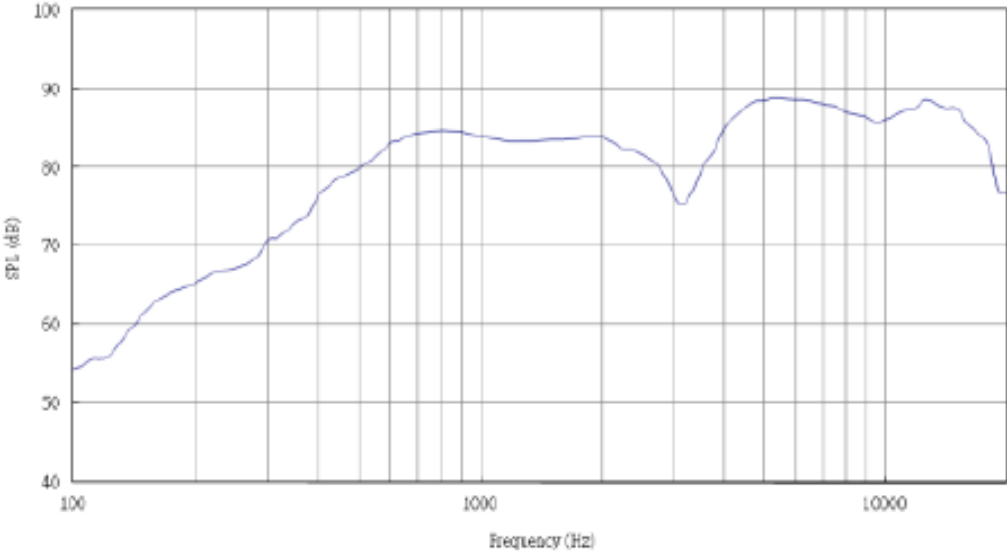
4.potentiometer Range : 50dB

5.Sweep Time : 0.5sec

Standard test condition of speaker



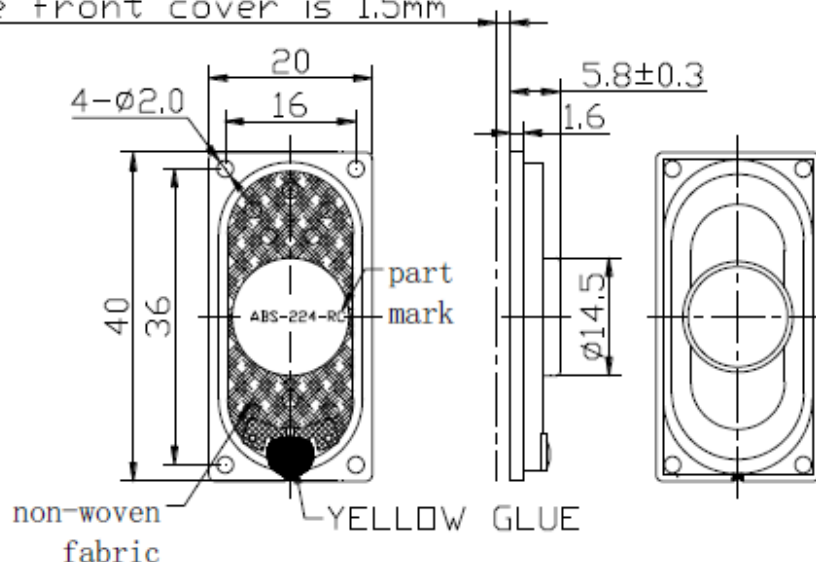
4.FREQUENCY RESPONSE CURVE



5. DIMENSIONS

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

The maximum distance of the diaphragm beyond the front cover is 1.5mm



8	Shrapne	1	Silk cloth	GU-001
7	PCB	1	EPOXY	GU-001
6	Plate	1	0.8t	GU-001
5	Magnet	1	NdFeB	GU-001
4	Voice coil	1	Self bonding wire	GU-001
3	Yoke	1	1.0T	GU-001
2	Cloth conel	1	Cloth	GU-001
1	Frame	1	FE	GU-001
The material must be meet to GU-001				
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK

Similar Products

Stock No.	Brand	Product Name	Attribute 1	Attribute 2	Attribute 3
7564609	RS PRO	Miniature Speaker	8 ohm	20x40mm	Paper cone