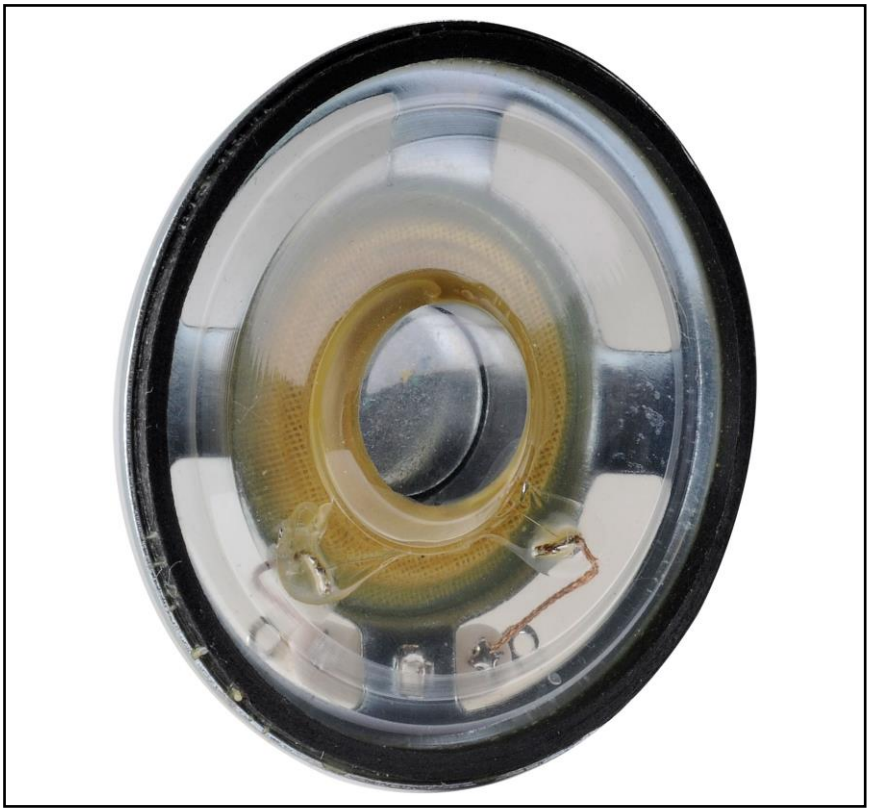
Features

- Miniature speaker
- Mylar cone
- 1W rated input power
- 2W max. input power
- SPL ≥89dB
- Frequency range 0-20,000Hz
- Diameter 50mm, Height 12.5tmm

RS PRO 50mm Miniature Speaker 8ohm, SPL 89dB

RS Stock No.: 7564605



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 versatile mylar speaker is 80hm, 50mm in diameter and generates a SPL of 89dB. 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	Unit	Specifications
1-1	**Dimension**	mm	Φ50mmX12.5mmt
1-2	**Rated Input Power**	W	1.0W
1-3	**Max Input Power**	W	2W
1-4	**Rated Impedance**	Ω	8±15% Ω /1KHz/1V
1-5	**Resonance Frequency(f0)**	Hz	650±20% Hz/1V
1-6	**Sound Pressure Level**	dB	89±3 dB at(AVG0.8,1.0,1.2,1.5)KHz 1.0W,0.5m baffleboard
1-7	**Frequency Range**	HZ	f0HZ ~ 20KHz
1-8	**Total Harmonic Distortion**	W	5%MAX. at 1KHz, 0.1W
1-9	**Flux Density**	T	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**	W	Must be normal at sine wave and program source 1.0W.
1-12	**Buzz,Rattle,etc.**	V	Should not be audible at 2.83 V sine wave between (f0 Hz ~ 20kHz)
1-13	**Weight**	g	18.2g
1-14	**Voice Coil Diameter**	mm	Φ13.28 mm
1-15	**Magnet (NdFeB)**	mm	Φ12.5×2.0t mm
1-16	**Appearance**		Should not exist any obstacle to be harmful to normal operation;damages,cracks,rusts and distortions,etc.

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**	10~55~10Hz sin-wave sweep 15min. 5G(constant) X,Y, Z 3 direction. 2 hours each, total 6 hours.
2-6	**Drop test**	Free drop a unit from 100cm height to a board of 20mm thick x,y, z 6 direction. 1 times each, total 6 times.
2-7	**Load test**	Rated Power white noise is applied for 96 hours
PASS CRITERION : After these tests , the change of S.P.L shall be within ±3dB .		

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

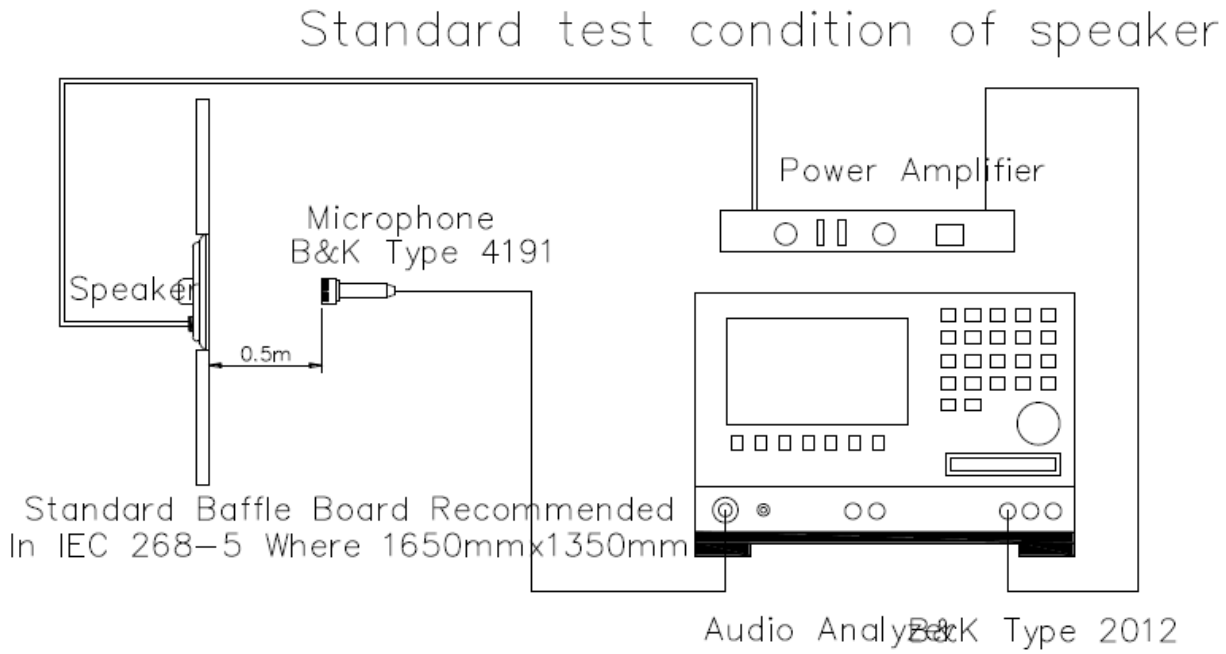
1.Input Power :1.0W (2.83)V

2.Zero Level : -dB

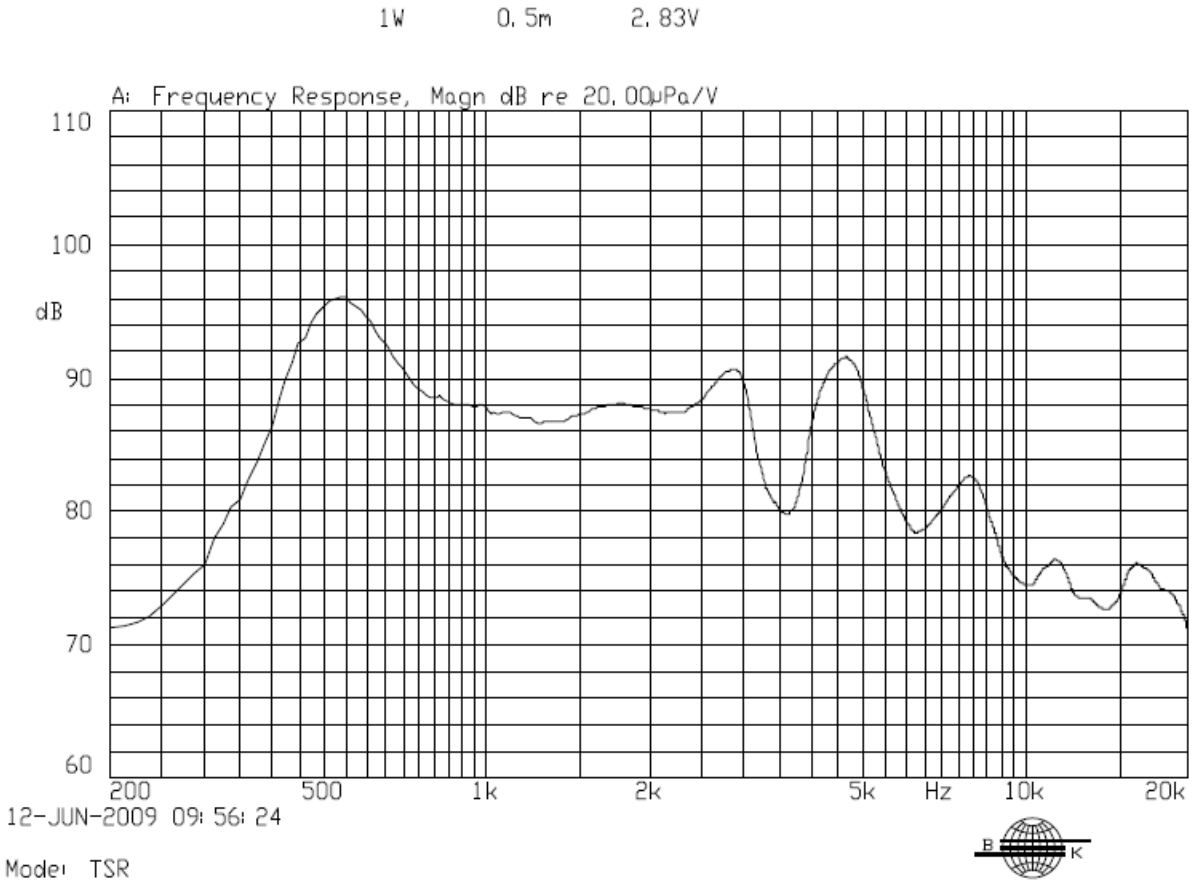
3.Mode : TSR

4.potentiometer Range : 50dB

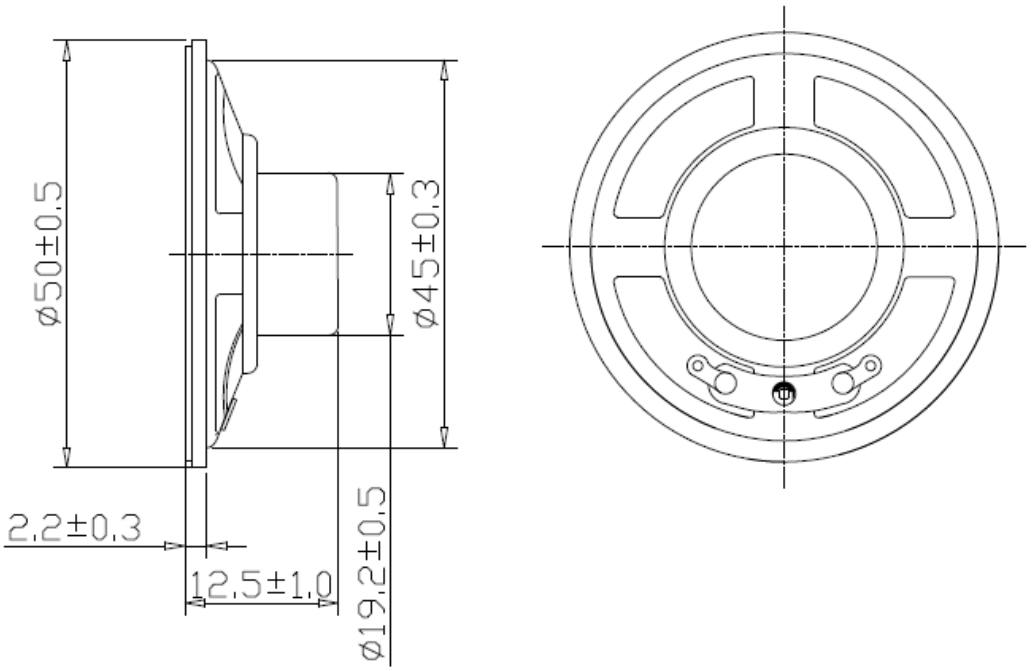
5.Sweep Time : 0.5sec



4.FREQUENCY RESPONSE CURVE



5.DIMENSIONS



1） All parts must be meet to ROHS.

9	Back gasket	1	Black Paper	
8	Plate	1	SPCC	
7	Magnet	1	NdFeB	
6	Damper	1	PAPER	
5	Cap	1	PET	
4	Diaphragm	1	CLEAR MYLAR	
3	Frame	1		
2	Voice coil	1	Self-bonding wire	
1	PCB	1		
Part No.	Part Name	Q'TY	Material	Remark