

Features

- Miniature speaker
- 0.1W rated input power
- 0.2W max. input power
- SPL ≥ 75 dB
- Diameter 20mm, Height 4.28tmm

RS PRO 20mm Miniature Speaker 8ohm, 0.1W

RS Stock No.: 756-4595



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 speaker is 80hm, 20mm in diameter with a frequency range of 1000Hz. 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

	Item	Specifications
1-1	Dimension	φ 20 x 4.28t
1-2	Rated Input Power	0.1W
1-3	Max Input Power	0.2W
1-4	Rated Impedance	8±20% Ω /2kHz/1v
1-5	Resonance Frequency (f0)	1000±25% Hz/1V
1-6	Sound Pressure Level	75±3 dB at (AVG 0.8, 1.0, 1.2, 1.5)KHz 0.1W/0.1m baffleboard (IEC)
1-7	Frequency Range	FOHZ ~ 5.5Hz
1-8	Total Harmonic Distortion	5%MAX. at 1KHz, 0.1w
1-9	Flux Density	T
1-10	Polarity	When a positive DC Current is applied to the voice coil terminal marked +or red, the diaphragm shall move forward

1-11	Operation Test	Must be normal at sine wave and program source 0.1W.
1-12	Buzz, Rattle, etc.	Should not be audible at 0.89 V sine wave between (FO Hz ~ 5.5kHz)
1-13	Weight	2.2g
1-14	Voice Coil Diameter	φ 7.2mm
1-15	Magnet (NdFeB)	6.5 x 1.5t mm
1-16	Apperance	Should not exist any obstacle to be harmful to normal operation; damages, cracks, rusts and distortions, etc.

Environmental Test

	Item	Specifications
2-1	High temp. Test	Keep 96 hours at +40°C ±3°C and leave 3 hours in normal temperature then check
2-2	Low temp. Test	Keep 96 hours at +10°C ±3°C and leave 3 hours in normal temperature then check
2-3	Humidity test	Keep 96 hours at +40°C ±3°C relative humidity 95% and leave 3 hours in normal temperature and then checked.
2-4	Thermal cycle test.	Low temperature: +10°C ± 3°C, temperature: +40°C ± 3°C, cycle: 1 hour/cycle each and then 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
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: Afet these test, the change of S/P/L shall be withing ±3 dB.		

Measuring Method

Speaker Mode

3-1 Test Condition

STANDARD

Temperature: 15 ~ 30°C

Relative humidity: 45% ~ 85%

Atmosphere pressure: 860mbar to 1060mbar

JUDGEMENT

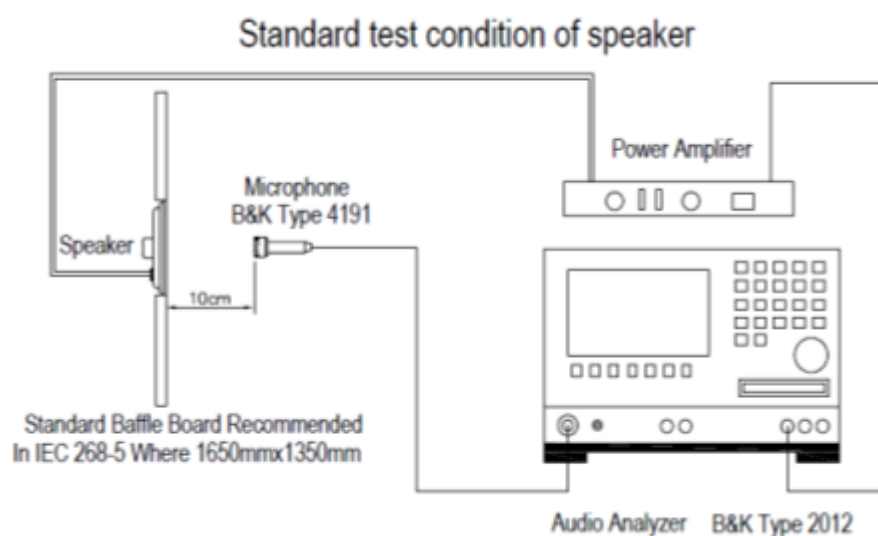
Temperature: 20±3°C

Relative humidity: 60% ~ 70%

Atmosphere pressure: 860mbar to 1060mbar

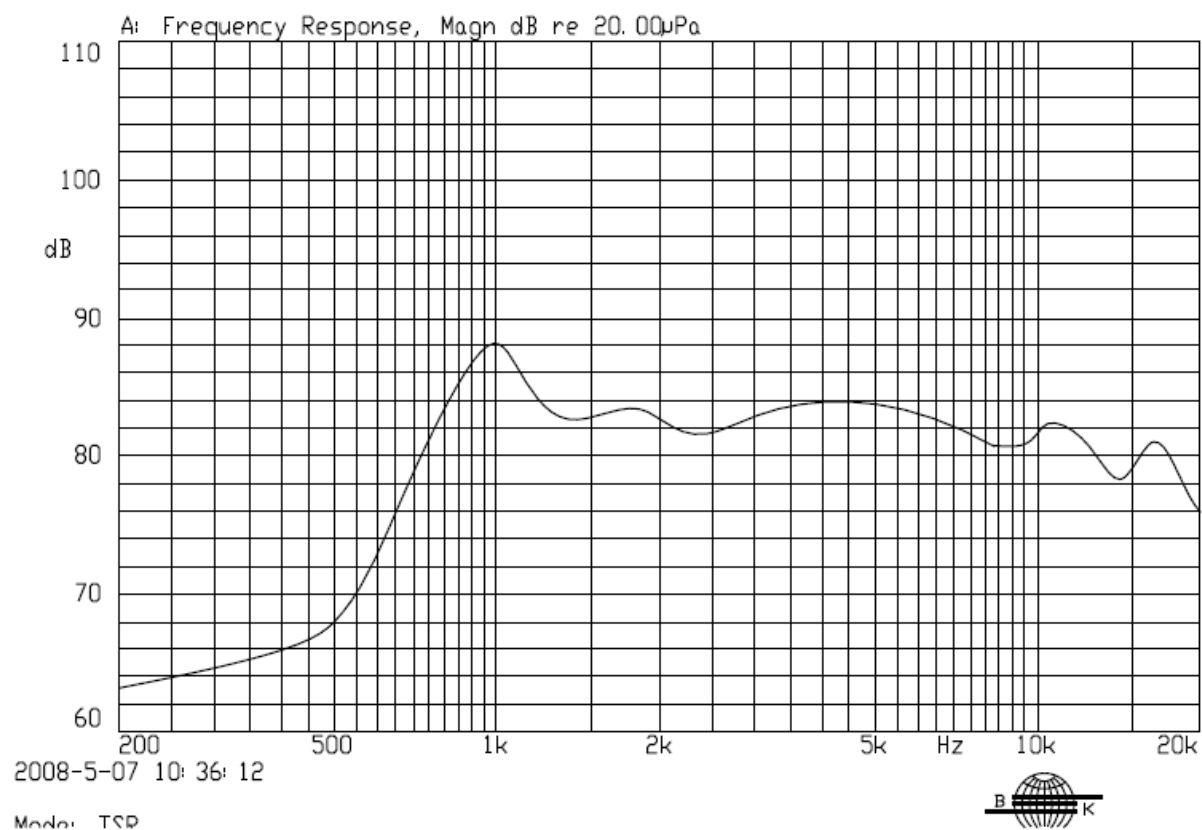
3-2 Standard Test Fixture

1. Input Power: 0.1W(0.89V)
2. Zero Level: -dB
3. Mose: TSR
4. Potentiometer Range: 50dB
5. Sweep Time: 0.5sec



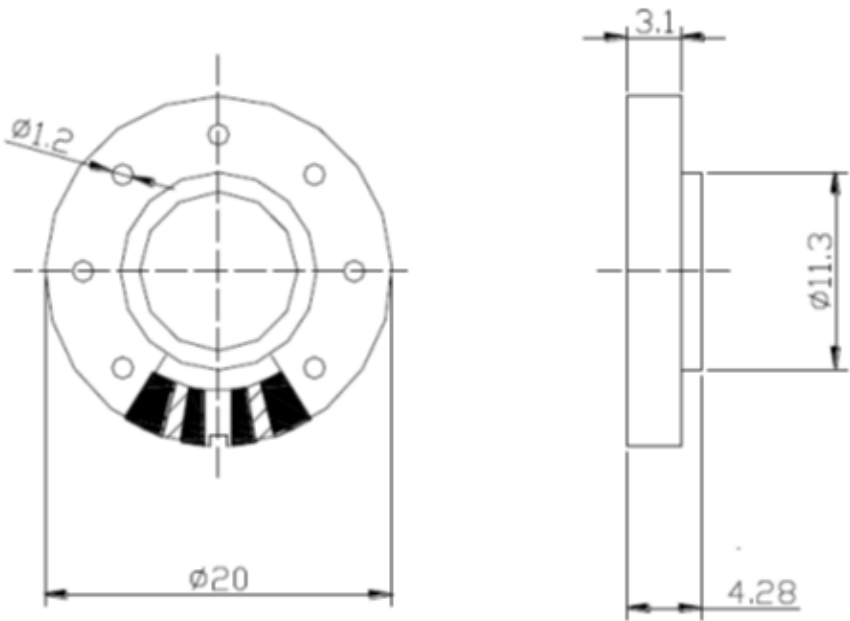
Frequency Response Curve

4.FREQUENCY RESPONSE CURVE



Dimensions

Unless otherwise specified, tolerance: ± 0.3 (unit: mm)



6	PCB	1	FR4	GU-001
5	Magnet	1	NdFeB	GU-001
4	Plate	1	SPCC	GU-001
3	Voice coil	1	Self-bonding wire	GU-001
2	Diaphragm	1	PET	GU-001
1	Frame	1	SPCC+ABS	GU-001
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK