

## Features

- Micro speaker
- 2 linked speakers with leads
- 4ohm
- PEEK cone
- 1.5W rated input power
- 2.0W max. input power
- SPL  $\geq 95\text{dB}$
- Frequency range 500Hz – 10KHz
- 30mm x 11mm x 3mm

## RS PRO Micro Speaker, 2 x 4ohm Linked Speakers with leads

RS Stock No.: 0102776



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 low profile, rectangular speaker consisting of two linked speakers, sharing the same diaphragm. The fitting of leads to this speaker enables them to be more easily mounted within a device. 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	30×11×3.0t
1-2	Rated noise power	1.5W/in 2cc box
1-3	Maximum short term power	2.0W/in 2cc box
1-4	Rated Impedance	4±15% Ω /2.0k Hz/2.45 Vrms/in 2cc box
1-5	Resonance Frequency(f0)	500±20% Hz (1V) in free air 850±20% Hz (1V) in 2cc box
1-6	Sound Pressure Level	95 □ 3 dB SPL /2.45V/0.1M at 2.0K Hz, in 2cc box
1-7	Rated Frequency Range	500Hz ~10k Hz
1-8	Total Harmonic Distortion	THD ≤ 10 % @ Rated Power / 1K Hz/ 10 cm / 2cc test fixture on baffle
1-9	Polarity	When a positive DC Current is applied to the voice coil terminal marked + ,the diaphragm shall move forward
1-10	Buzz,Rattle,etc.	Must be free audible noise (buzzes and rattles)( at rated frequency range ,input level up to 2.45Vrms, while testing in 2cc box.)
1-11	Weight	3.1g
1-12	Appearance	Should not exist any obstacle to be harmful to normal operation;damages,cracks,rusts and distortions,etc.
1-13	Storage temperature	-40℃~+85℃
1-14	Operation temperature	-20℃~+70℃

## 2.ENVIRONMENTAL TEST

	Item	Specifications
2-1	Temperature Shock	-40°C / +85°C 20 cycles. 30 minutes at each temperature. 10 - 15 seconds transition time. Refer to IEC 68-2-14
2-2	Static Humidity Test	Soak samples to +55°C with 95% relative humidity for continuous period of 96 hours.Refer to IEC 68-2-67
2-3	Drop Test	DUTs shall be mounted in a 150g fixture, drop samples from 1.5m to marble ground three times in each direction, total 18 times.
2-4	Operating Life	DUTs shall be tested under each specified climatic condition (Test Climatic condition:Refer section 3-1) for a continuous period of 100 hours at rated noise power. Speakers mounted in a 2cc back cavity; simulated program signal (IEC 268-1) with crest factor of 1.8~2.2 , in rated frequency range;high pass 12dB/Oct or steeper, cut off at 850Hz.Refer to IEC 268-5.
2-5	Short Term Maximum Power	DUTs shall be tested under each specified climatic condition (Test Climatic condition:Refer section 3-1), Input shall be simulated program signal (per IEC 268-1) with crest factor of 1.8 to 2.2 in rated frequency range for a period of 1 second. And the test shall be repeated 60 times with intervals of 1 min. Refer to IEC 268-5.
2-6	Storage in cold environment	96hours,-40+/-2 °C ,2 hours Recovery time.Refer to IEC 60068-2-1,Ab.
2-7	Storage in Dry Heat environment	96hours,+85+/-2 °C ,2 hours Recovery time.Refer to IEC 60068-2-2,Bb.
<p><b>PASS CRITERION :</b>            After these test , Unless otherwise noted, the recovery period shall be 4 hours at least before performance testing, the change of S.P.L shall be within <math>\pm 3</math> dB .</p>		

## 3. MEASURING METHOD (SPEAKER MODE)

### 3-1 . Test Condition

STANDARD

Temperature : 15 ~ 35°C

Relative humidity : 45% ~ 85%,

Atmospheric pressure : 860mbar to 1060mbar.

JUDGEMENT

Temperature :  $20 \pm 3^\circ\text{C}$

Relative humidity : 60% ~ 70%,

Atmospheric pressure : 860mbar to 1060mbar

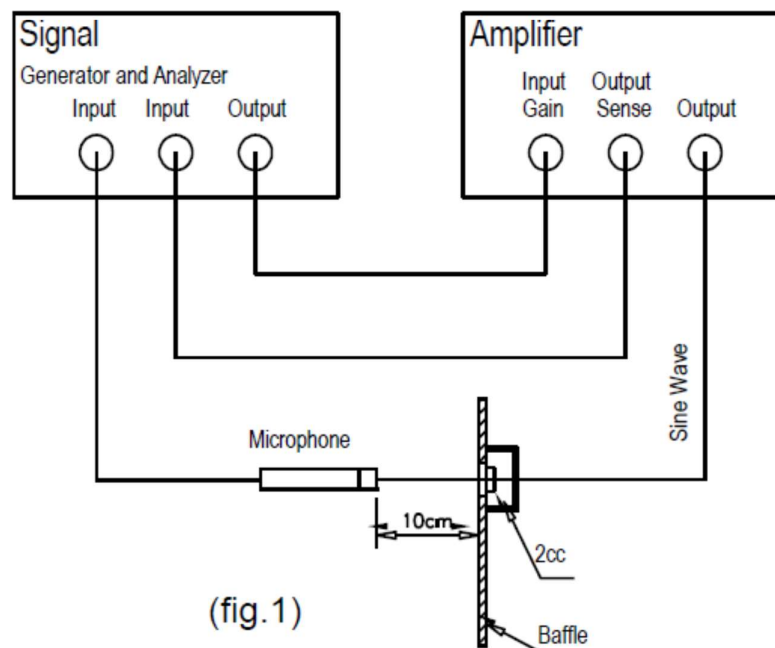
### 3-2 . Standard Test Fixture

1. Input Power : 2.45V<sub>rms</sub>

2. Frequency sweep pattern: R40(1/12 oct)

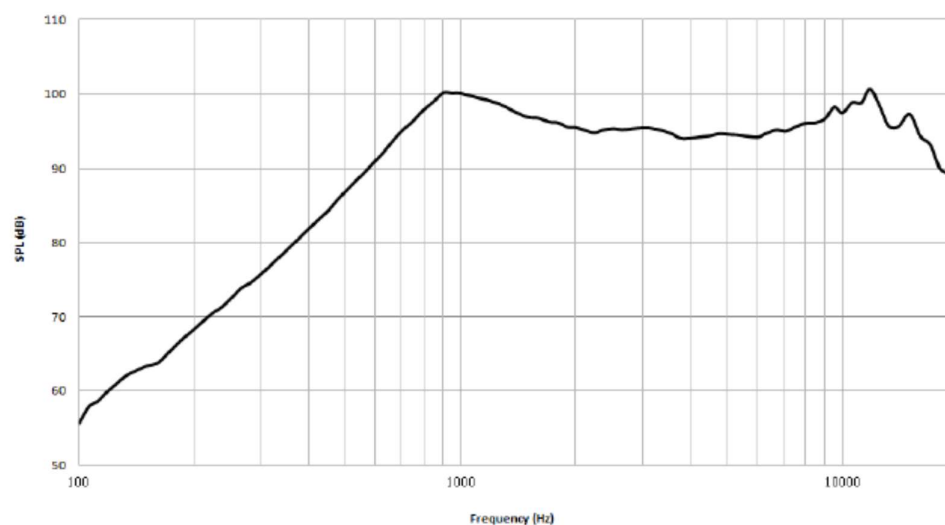
3. Frequency sweep range: 100Hz ~ 20k Hz

## Speaker Measurement Circuit



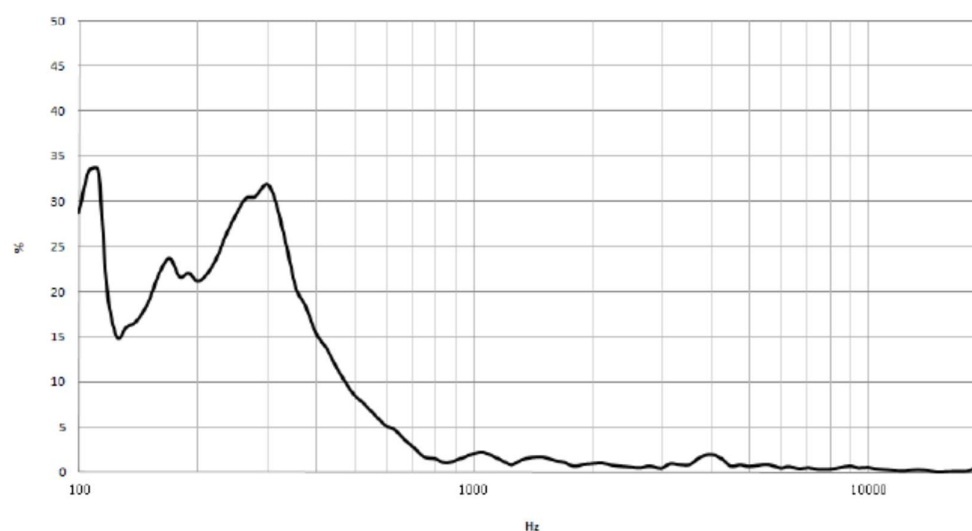
## 4.FREQUENCY RESPONSE CURVE(fig.2)

Test conditions:2. 45Vrms/10cm/in 2cc box



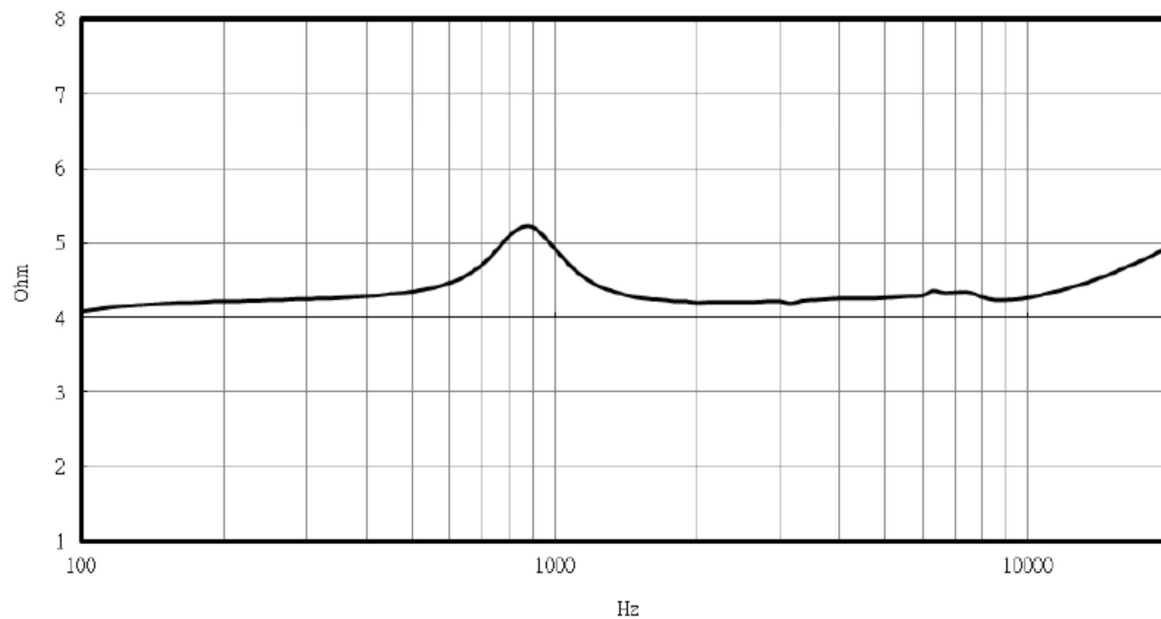
## 5.SPEAKER DISTORTION CURVE(fig.3)

Test conditions:2. 45Vrms/10cm/in 2cc box



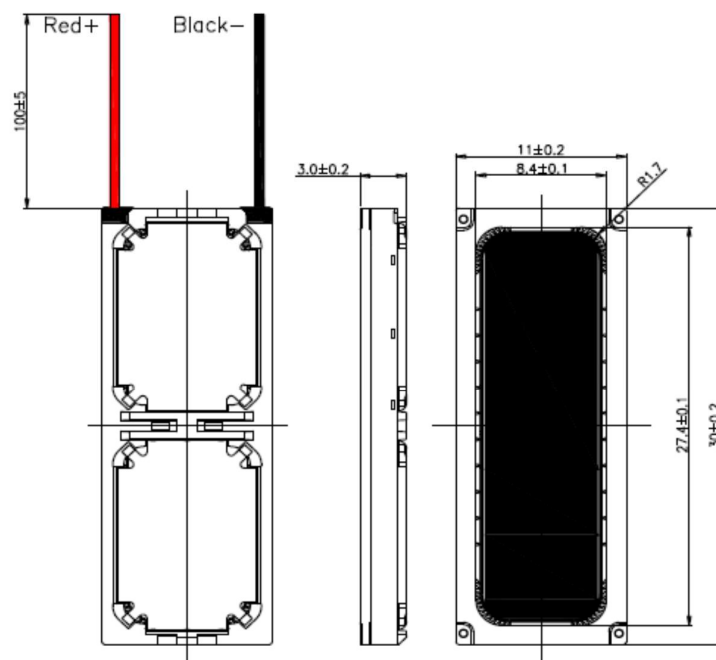
## 6. IMPEDANCE RESPONSE CURVE (fig.4)

Test conditions: 2. 45v



## 7.DIMENSIONS(fig.5)

Unit:mm  $\pm 0.2$



Wire:UL1571 30#

8	PIN	2	SUS	GU-001
7	Front Cover	1	PPA	GU-001
6	Magnet	2	NdFeB	GU-001
5	Plate	2	SPCC	GU-001
4	Voice coil	2	COPPER WIRE	GU-001
3	Diaphragm	1	PEEK	GU-001
2.	Yoke	2	SPCC	GU-001
1	Frame	1	PPA	GU-001
PART NO.	PART NAME	Q'TY	MATERIAL	REMARK