

Name	Security Level
BELLSING® BAS Hybrid module	Open
Version	A Total of 5 Pages
REV D	

# BAS Hybrid module

## BVA310C00001

### Product Data Sheet

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Shenzhen Bellsing Acoustic Tech. Co., Ltd.

## BVA310C00001 BAS Hybrid module

### 1.1 Description

The BAS (Best Audio Speaker) Hybrid module is made up of a high performance  $\Phi 6\text{mm}$  dynamic speaker and a BTC310 BA receiver. This transducer is recommended to be used in consumer electronics, especially TWS products.

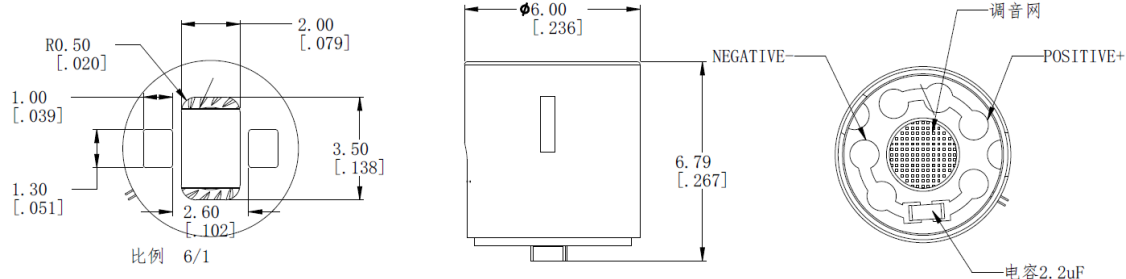
Name:	BAS Hybrid module
Model Number	BVA310C00001 REV D

### 1.2 Construction Specification



Weight: 0.55 g

Mechanical dimension: please refer to the drawing below



\*A positive voltage applied to the negative terminal (-) will result in an increase in pressure at the sound outlet.

### 1.3 Features & Benefits

- Perfect package size for TWS applications
- Outstanding efficiency
- Substantial maximum output
- Full range receiver, optimized low frequency performance
- Hybrid driver, dynamic speaker as woofer and BA receiver as tweeter.

### 1.4 Electro-acoustic Specifications

#### Test condition

- Acoustic tubing: tubless
- Acoustic coupler: IEC711 coupler
- Constant voltage drive: 0.179V RMS
- Environment: 23°C, RH 50%

#### Acoustic Parameter I

Test Item		Nominal	Tolerance	Comments
Sensitivity(dB)	@20Hz	123.0	+/- 3.0	
	@200Hz	114.0	+/- 3.0	
	@500Hz	109.0	+/- 3.0	
	@1000Hz	109.5	+/- 3.0	
Peak1	Frequency (Hz)	2800	+/- 350	
	SPL(dB)	117.5	+/- 3.0	
Peak2	Frequency (Hz)	9500	+/- 1000	
	SPL(dB)	114.0	+/- 3.0	
Maximum output@Peak frequency (dB)		N/A	N/A	THD<10%

#### Acoustic Parameter II

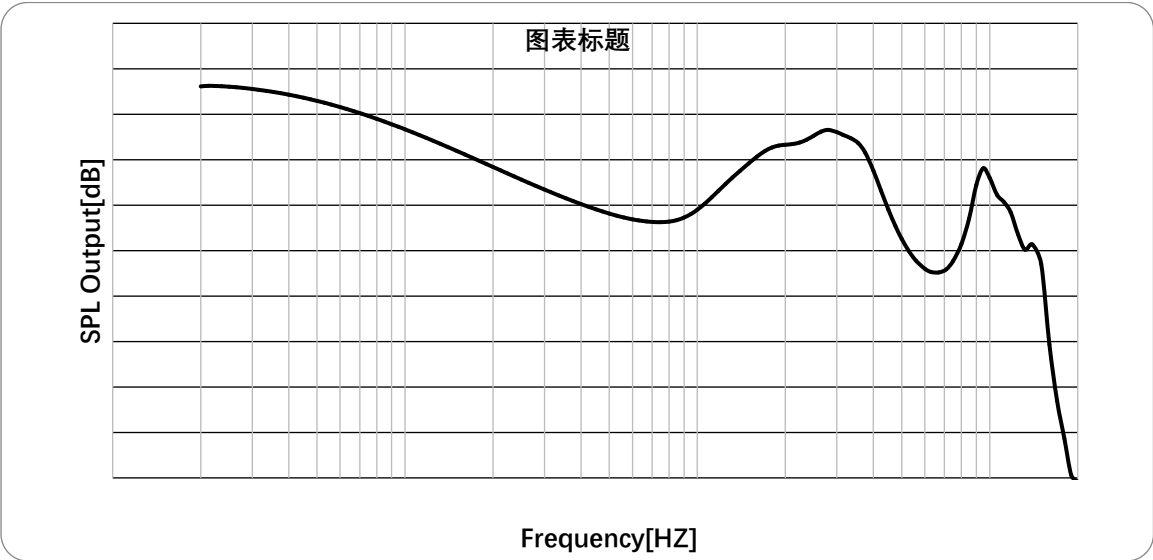
Test Item		Nominal	Comments
THD(%)	@50-5000Hz	< 5.0	

#### Electric Parameter

Test Item	Nominal	Tolerance	Comments
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Impedance @500Hz	30.4	+/- 15%	
Impedance @1000Hz	27.3	+/- 15%	
DCR @20°C Speaker	32.0	+/- 15%	
DCR @20°C Receiver	12.0	+/- 10%	

Nominal Frequency Response Curve



1.5 Package and Storage Condition

- Package: PVA bubble pack, 1 pcs per bubble, 144 pcs per pack
- Storage temperature range: -40°C ~ 60°C
- Storage humidity range: <60%

## 1.6 Reliable Test

No	Item	Test Conditions
1	Operation Test	Input power 5mW sine Wave Input 0.25v Must Be Normal
2	Heat Test	60°C $\pm$ 3°C. 48 Hours After Test Meet Item 1
3	Heat Test	60°C + 2°C 20%-50% 48 Hours After Test Meet Item 1
4	Humidity Test	60°C $\pm$ 2°C 90-95%. 24 Hours After Test Meet Item 1
5	Load Test	White Noise 2mW 96 Hours After Test Meet Item 1
6	Cold Test	-25°C $\pm$ 3°C 45-85% 48Hours After Test Meet Item 1
7	Vibration Test	F=10~55Hz Amplitude:1.5mm Test Direction is X, Y,Z 2H/each.
8	Dropping Test	Effective height 1M Slope 75° $\pm$ 2°
9	Insulation Resistance	More than 1M $\Omega$ +dc 100V $\pm$ 10%
10	Cold hot circulation	60°C $\pm$ 1°C/0.5h $\rightarrow$ 20°C/0.5h $\rightarrow$ -20°C/0.5h $\rightarrow$ 20/0.5h 10cycles and then on 20°C 3 hours
11	life test	2mW white noise was input by audio signal generator for 48 hours, and there was no adverse phenomenon during the test