



佛山鎡利電子有限公司  
Vanson Electronics (NanHai) Co., Ltd.

HTTP:// www.vecoc.com.cn

Luocun Industrial zone Nanhai District Foshan city

Guangdong Province China Eail:vecocf@vansonic.net

廣東省佛山市南海區羅村工業區 郵編:528226

TEL:+86-757-8853 6828 FAX:+86-757-8853 6826

# Specification

## 規 格 書

品名 ( Product Name)	揚聲器 (Speaker)
料號 ( Model No.)	P32KUG08XNT-W

### Revision History

Version	Date	Description	Author
00	2015/11/26	Preliminary	LHN
01	2016/08/24	修正防水等級	LHN
02	2017/03/15	修正印章內容	LHN
03	2017/10/11	修改錦絲線焊點位置	LHN

核準 (Approval)	高紅華	2017/10/11
審查 (Check)	曾憲財	2017/10/11
設計 (Designer)	王麗紅	2017/10/11
制作 (Author)	劉紅妮	2017/10/11

# **VECO** Vanson Electronics(Nanhai) Co., Ltd.

Luocun Industrial zone Nanhai District Foshan city Guangdong Province China

TEL:+86-757-8853 6828 FAX:+86-757-8853 6826 E-mail: vecof@vanson.net

1.	<b>MODEL:</b>	<b>P32KUG08XNT-W</b>			
2	Dimension & Weight	Outer Diameter	31.7X31.7	mm	
		At least <b>2mm</b> for diaphragm moving			
		Height	<b>Refer to drawing</b>		Weight
3	Magnet	Materials	<b>Rare Earth</b>		Size $\phi$ <b>12.8*3.5</b> mm
4.	DC Resistance		<b>8</b>	$\Omega \pm 15 \%$ ,	On OHM Meter
5.	Power Rating	Normal	<b>3.0</b> Watts	Maximum	<b>4.0</b> Watts Sine
		Normal	Watts	Maximum	Watts Square
6.	Resonant Frequency	<b>200</b> $\pm 20 \%$ Hz.			
7.	Output Sound Pressure Level (S.P.L.)		<b>85</b>	$\pm 3$ db	<b>1.0</b> Watt $\cdot$ 0.5 Meter
		Average at	<b>600</b>	<b>800</b>	<b>1000</b>
8.	Frequency Range	<b>F0</b>	<b>~ 20000</b>	Hz. Average SPL – 10 db.	
9.	Distortion	<b>5</b>	% Maximum At		<b>1000</b> Hz. <b>1.0</b> Watt $\cdot$ 0.5 Meter
10	Abnormal Sound test	Must be Normal Tested By <b>4.9</b> Volts. Sine Wave.			
11	Load Test	Pink noise with HPF(High Pass Filter 235HZ-3db/Oct) <b>4.9</b> Volts. (RMS.) <b>96</b> Hours.			
12	Waterproof Level	IPX5			
13	Polarity	Diaphragm shall move Forward while Apply a Positive DC Signal to the " + " or " Marked " Terminal.			

Above Measuring condition under temperature : 15~35°C R.H. 25 ~75%. According to standard GB/T12060.5-2011

## **Mechanical and vibration test**

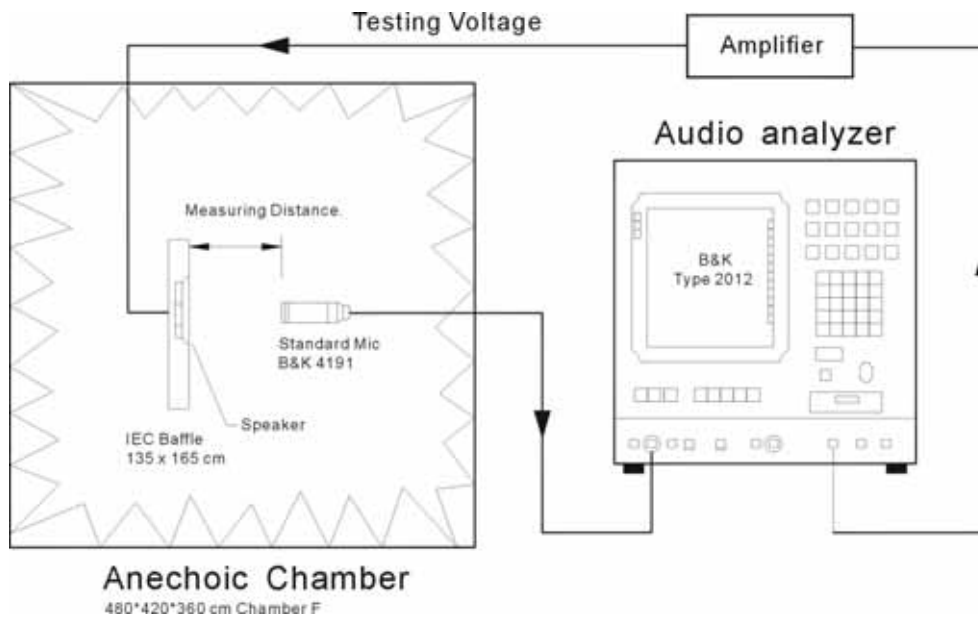
13	High Temperature	+ 85 $\pm$ 2 °C	Humidity Random for 96 Hours. (GB2423.2-81)		
14	Low Temperature	- 40 $\pm$ 2 °C	Humidity Random for 96 Hours. (GB2423.1-81)		
15	Humidity	+ 40 $\pm$ 2 °C	Relative Humidity (RH) 90 ~ 95 % 96 Hours.		
16	Vibration	Frequency 30 $\pm$ 15 Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)			
17	Drop test	75 CM free falling on Concrete floor, 10 times. (GB2423. 8-81)			
After test leave speakers at room temperature for 1 hour, SPL shall not deviate by $\pm 3$ db from pre-test Measurement, and meet above spec. item 6. 7. 8. 9. 10.					
18	Temperature Cycle test	- 40 ~ + 85 °C	4 Cycles Temperature test. (GB5170.18-87)		

After test leave speakers at room temperature for 1 hour, SPL shall not deviate by  $\pm 4$  db from pre-test Measurement, and meet above spec. item 6. 7. 8. 9. 10.

Please refer to next pages for more detailed testing method.

## Test method and User precaution.

1. Characteristics measured according to standard GB/T12060.5-2011
  - 1.1 Except other specified, measuring are under Temperature 15~35°C R.H. 25 ~75%
  - 1.2 Judgement condition Temperature 20 ±2 R.H. 63~67%
  - 1.3 .Product shelf life is valid for 12 months only.
  
2. Output Sound Pressure Level (S.P.L.) and distortion testing setup



### 3. Environment & Mechanical test:

#### 3.1 High Temperature: GB2423.2-81

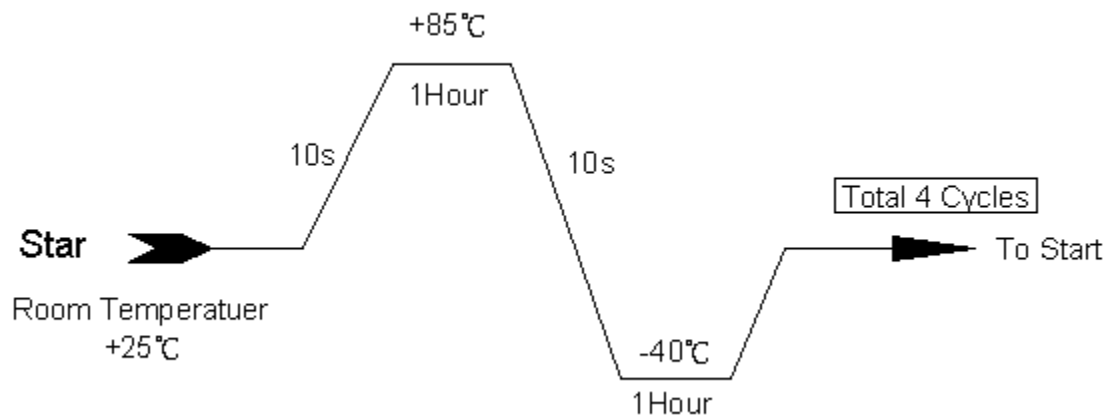
After exposure the speaker in the + 85 ± 2 °C chamber for 96 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by ± 3 db, and resonant frequency should not deviate by ± 50 Hz, compare with pre-test measurement.

#### 3.2 Low Temperature: GB2423.1-81

After exposure the speaker in the -40 ± 2 °C chamber for 96 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by ± 3 db, and resonant frequency should not deviate by ± 50 Hz, compare with pre-test measurement.

#### 3.3 Temperature cycle: GB5170.18-87

After exposure the speaker in the chamber, temperature cycle setting as below shows, SPL should not deviate by ± 4 db, and resonant frequency should not deviate by ± 80 Hz, compare with pre-test measurement.



### 3.4 Humidity: GB5170.18-87

After exposure the speaker in the  $+40 \pm 2$  °C, relative humidity 90% ~ 95% chamber for 96 hours, then leave the speaker at room temperature for 6 hours, the SPL should not deviate by  $\pm 3$  db, and resonant frequency should not deviate by  $\pm 50$  Hz, compare with pre-test measurement.

### 3.5 Vibration: GB11606.8-89

Frequency  $30 \pm 15$  Hz, Amplitude 1.5 mm for 3 Hours. After test, SPL shall not deviate by  $\pm 3$  db from pre-test measurement,

### 3.6 Load test: GB/T12060.5-2011

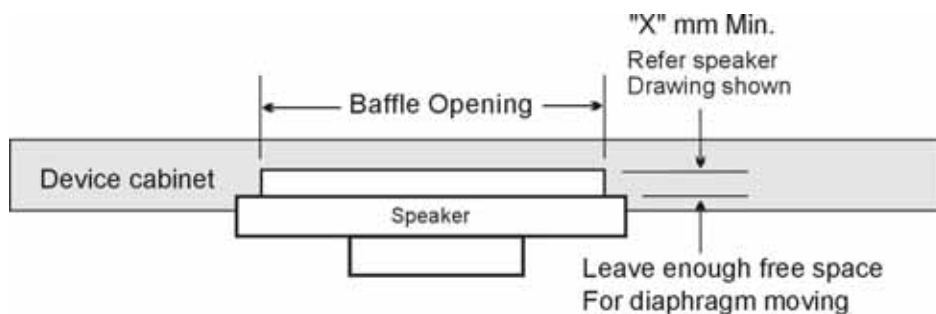
Speaker should not fail after apply 20 ~ 20K Hz pink noise with HPF rated power input (RMS), 96 hours. After test, SPL shall not deviate by  $\pm 3$  db from pre-test measurement,

### 3.7 Drop test: GB2423. 8-81

75 cm free falling on concrete floor, 10 times. After test, SPL shall not deviate by  $\pm 3$  db from pre-test measurement,

## 4. Mounting **precaution**

In order to keep speaker work normally, there shall leave enough free space for diaphragm moving, minimum distance required is marked in speaker mechanical drawing.



## 5. Measuring & standard referenced

Abstract from GB/T12060.5-2011 and IEC 60268-5:2007 methods of measurement for main characteristics of loud speakers.

### 5.1 Rated sine voltage.

It is stipulated by manufacturer, sine signal voltage that make speaker work continuously in rated frequency range, but the speaker wouldn't be damaged heartily or mechanically.

The persist time of the voltage is 1 hour.

### 5.2 The rated sine power.

The rated sine power is corresponding with the rated sine voltage, its definition is  $U_s^2/R$ ,

$U_s$  indicates the maximum sin voltage,  $R$  indicates the rated impedance.

### 5.3 The rated noise power.

The rated noise power is corresponding with the rated noise voltage, its definition is  $U_n^2/R$ ,

$U_n$  indicates the rated noise voltage,  $R$  indicates the rated impedance.

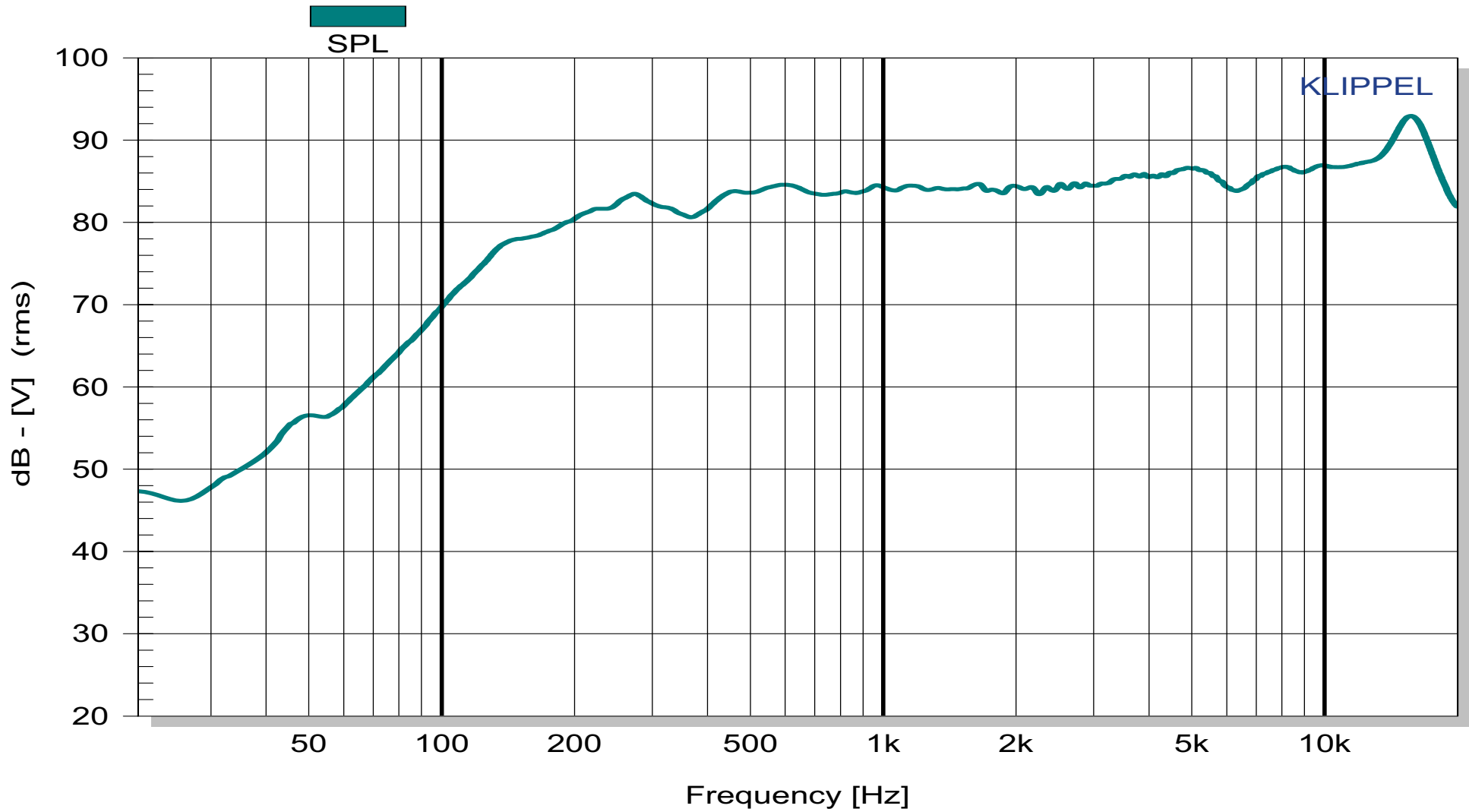


VECO Part NO:

**P32KUG08XNT-W**

Measurement Condition:

**VOL: 2.83V(1W) DIS: 0.5M**

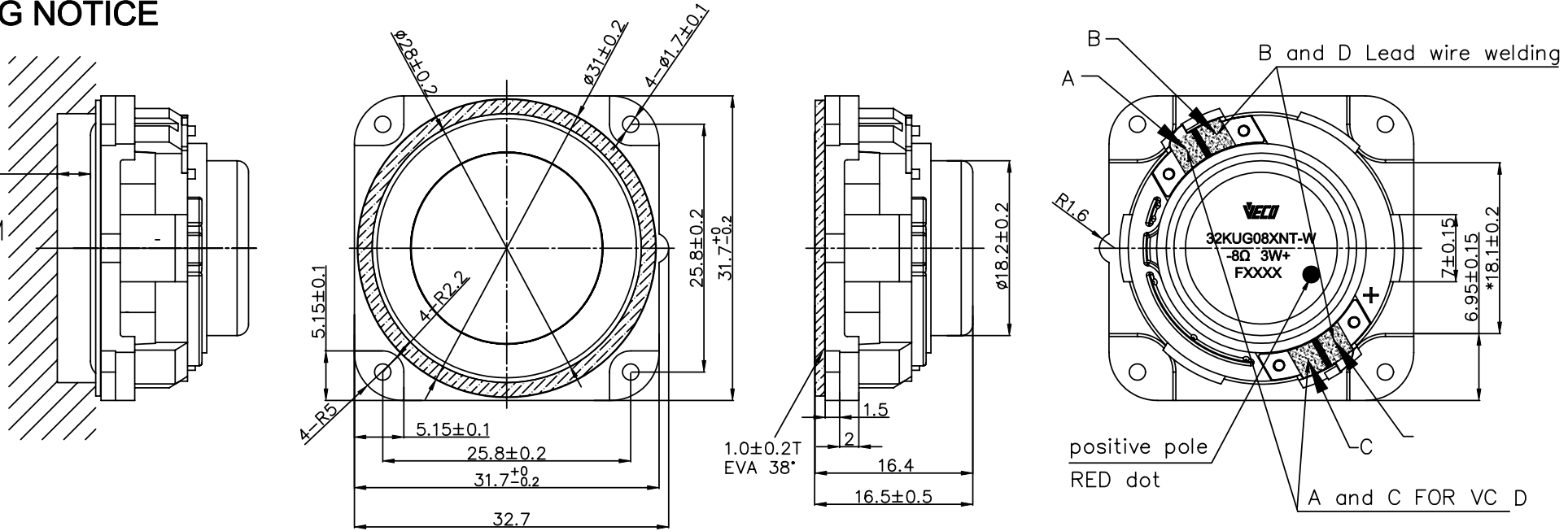


不准使用鉍利  
電子禁止使用的  
環境管理物質

- NOTE:  
1. 加工要求:  
2. 表面處理:  
3. 制程重點:  
4. 檢驗重點:

### MOUNTING NOTICE

AT LEAST  
FOR 2mm  
DIAPHRAGM  
MOVING



=> Red dot for positive  
▲ Critical dimension

RANGE	TOL			✓	
0-8	±0.05	±0.1	±0.15	±0.2	±1
8-16	±0.1	±0.15	±0.2	±0.2	±2
16-24	±0.15	±0.2	±0.3	±0.3	±2
24-50	±0.2	±0.25	±0.3	±0.4	±3
50-100	±0.25	±0.3	±0.5	±0.5	±3
>100	±0.3	±0.4	±0.4	±0.8	±5

Ⓢ CRITICAL DIMENSIONS ENVIRONMENT REQUIREMENT:  
COSTOMER PN: VEKO PN:  
DATE: DD/MM/YYYY MATERIAL: COLOUR:

03	17/10/11	修改錦絲線焊點位置	王麗紅
02	17/08/08	修正*處尺寸, 修改錦絲線焊點位置	王麗紅
01	17/03/15	修正印章內容	吳生
ITEM	Y/M/D	CONTENTS OF CHANGE	SPONSOR

Vanson Electronics (Nanhai) Co., Ltd.

鉍利電子 E-MAIL: foshan@veco.com.cn  
TEL:+86-757-88536828 FAX:+86-757-88536826

Title: P32KUG08XNT-W

Unit: mm

VER: 03

Appr.:



Scale: 1:1

CHK.:

Dwg.: 王麗紅