



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: fsvecoc@vecoc.com.cn  
廣東省佛山市南海區羅村工業區 郵編:528226  
TEL:+86-757- 8126 6388    FAX:+86-757- 8126 6389

# Specification

# 規格書

品名 ( Product Name)	揚聲器 (Speaker)
料號 ( Model No.)	P36CS08FN-18-N50BT

Revision History			
Version	Date	Description	Author
V001	2012/02/24	creation	LHN

核準 (Approval)	高紅華	2012/02/24
審查 (Check)	曾憲財	2012/02/24
制作 (Author)	劉紅妮	2012/02/24

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

Luocun Industrial zone Nanhai District Foshan city Guangdong Province China

TEL : + 86-757-8126 6388 FAX: + 86-757-8126 6389 E-mail: fsveco@veco.com.cn

1.	<b>MODEL:</b>	<b>P36CS08FN-18-N50BT</b>					
2	Cone and edge type:	<b>PEN (One of Mylar group )</b>					
3	Dimension & Weight	Outer Diameter	<b>Ø 36 mm</b>				
		Baffle Opening	<b>Ø 32.5 mm</b>				
		Height	<b>Refer to drawing</b>	Weight	<b>8.2 Grams</b>		
4	Magnet	Materials	<b>NdFeB</b>		Size	<b>Ø 12.8*1.8mm</b>	
5.	DC Resistance	<b>8</b>		$\Omega \pm 15 \%$ ,		<b>On OHM Meter</b>	
6.	Power Rating	Normal	<b>1.5</b> Watts		Maximum	<b>2.0</b> Watts Sine	
		Normal	Watts		Maximum	Watts Square	
7.	Resonant Frequency	<b>600</b> $\pm 20 \%$ Hz.					
8.	Output Sound Pressure Level (S.P.L.)	<b>92</b> $\pm 3$ db/ 1.0 Watt • 0.5 Meter					
		<b>86</b> $\pm 3$ db/ 1.0 Watt • 1.0 Meter					
		Average at	<b>800</b>	<b>1000</b>	<b>1200</b>	<b>1500</b>	Hz.
9.	Frequency Range	<b>FO</b> $\sim$ <b>14000</b> Hz. Average SPL – 10 db.					
10.	Distortion	<b>5</b> % Maximum At <b>1000</b> Hz.					
11	Abnormal Sound test	Must be Normal Tested By <b>3.46</b> Volts. Sine Wave.					
12	Load Test	Pink noise with HPF(High Pass Filter 235HZ-3db/Oct) <b>3.46</b> Volts. (RMS.) <b>96</b> Hours.					
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/T9396-1996

## **Mechanical and vibration test**

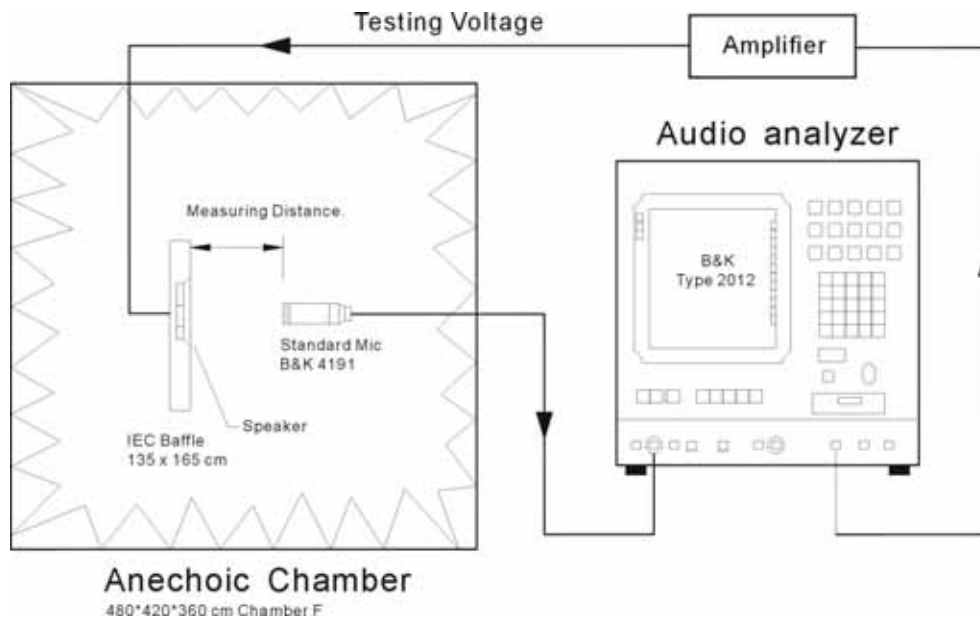
14	High Temperature	<b>+85 <math>\pm</math> 2 °C</b> Humidity Random for 96 Hours. (GB2423.2-81)					
15	Low Temperature	<b>- 40 <math>\pm</math> 2 °C</b> Humidity Random for 96 Hours. (GB2423.1-81)					
16	Humidity	<b>+ 40 <math>\pm</math> 2 °C</b> Relative Humidity (RH) 90 ~ 95 % 96 Hours.					
17	Vibration	Frequency <b>30 <math>\pm</math> 15</b> Hz, Amplitude 1.5 mm for 3 Hours. (GB11606.8-89)					
18	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							
19	Temperature Cycle test	<b>- 40 ~ + 85 °C</b> 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/T 9396-1996
  - 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

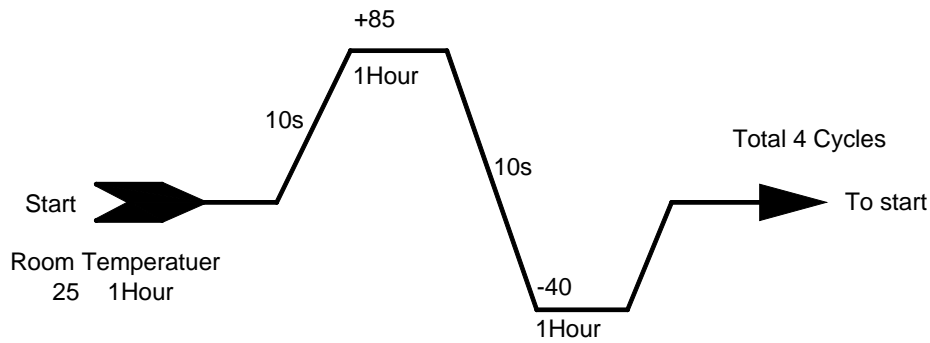
After exposure the speaker in the + 85 ± 2 °C chamber for 96 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by ± 3 db, and resonant frequency should not deviate by ± 50 Hz, compare with pre-test measurement.

#### 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 ± 3 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/T 9396-1996

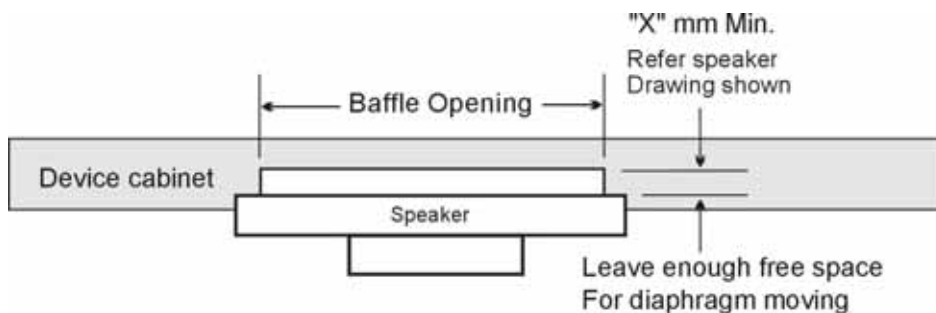
Speaker should not fail after apply 20 ~ 20K Hz Pink noise rated power input (RMS), 96 hours. After test, SPL shall not deviate by  $\pm 3$  db from pre-test measurement,

#### 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/T 9396-1996 and IEC 268-5:1989 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 rated 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  $U_n^2/R$ ,

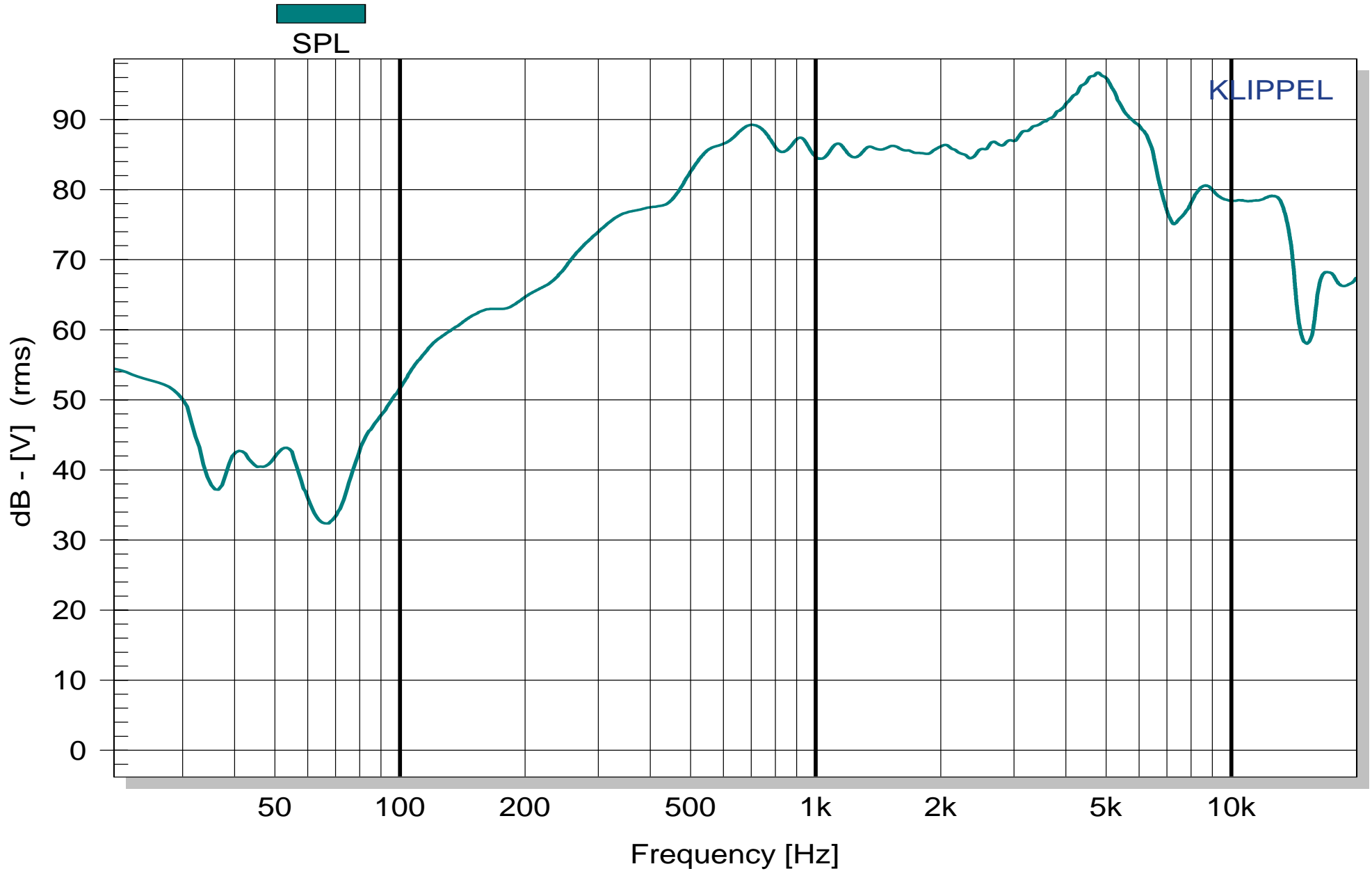
$U_n$  indicates the rated noise voltage,  $R$  indicates the rated impedance.

VECO Part NO:

**P36CS08FN-18-N50BT**

Measurement Condition:

**VOL:2.83V[1W] DIS:1.0M**

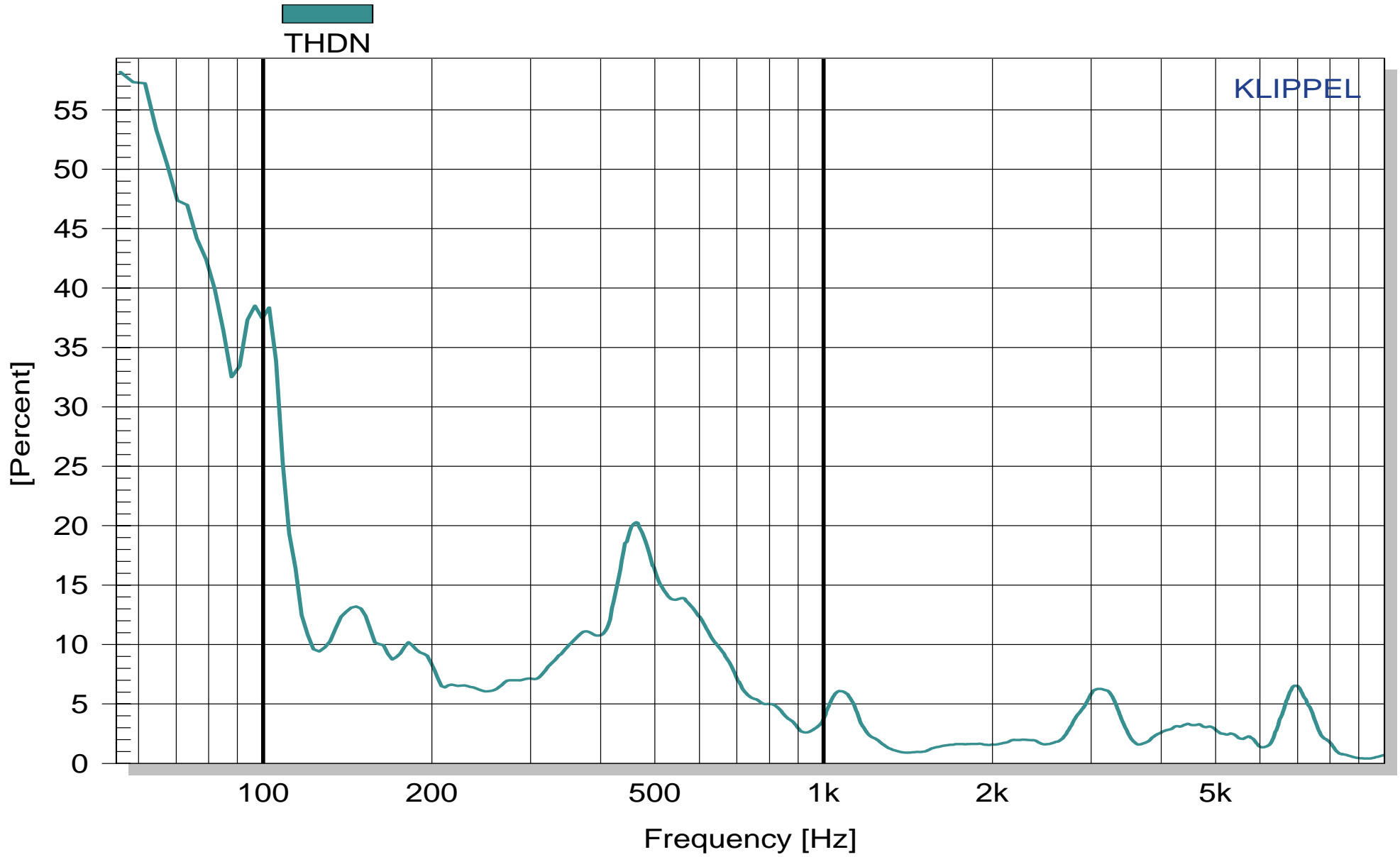


VECO Part NO:

**P36CS08FN-18-N50BT**

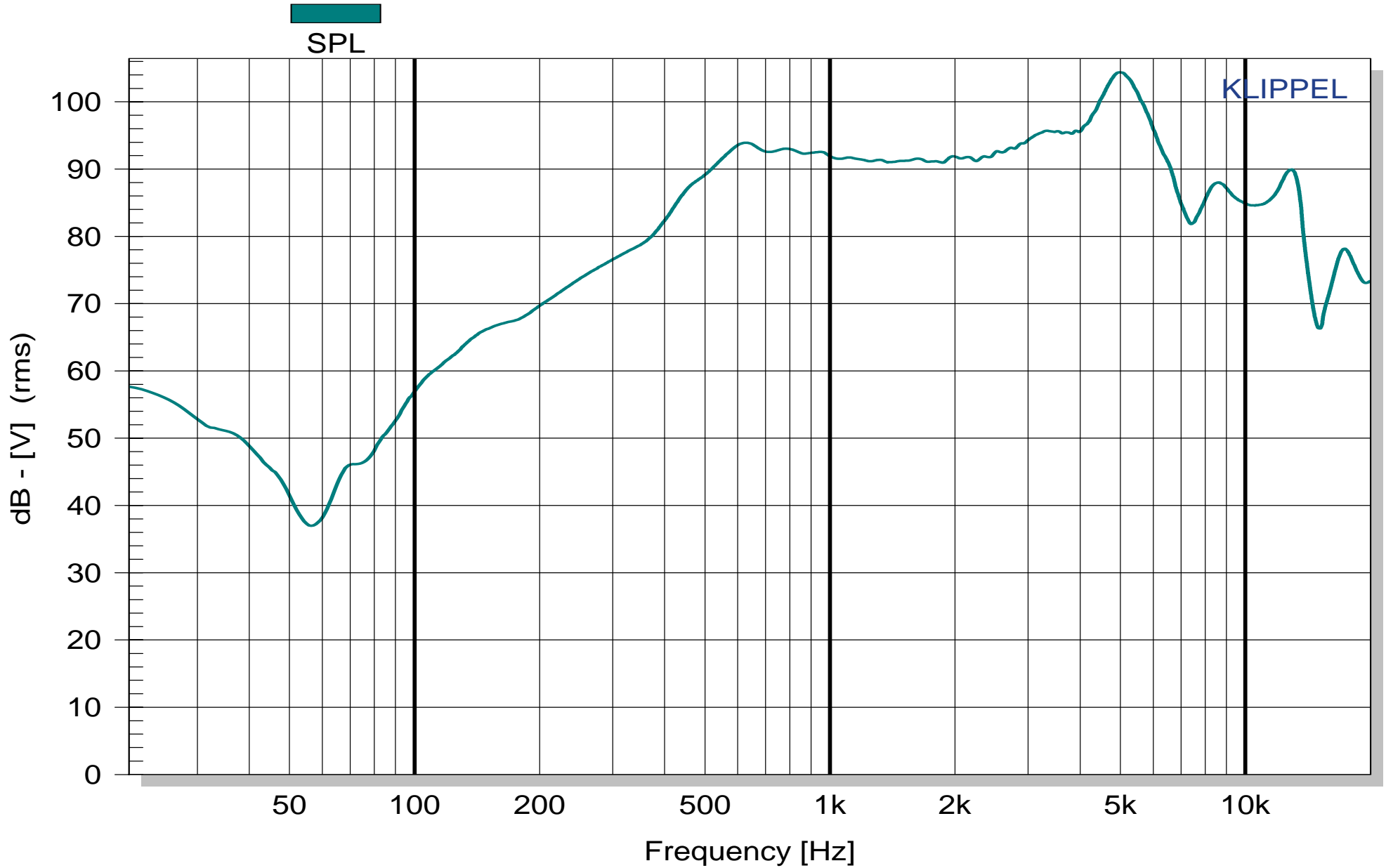
Measurement Condition:

**VOL:2.83V[1W] DIS:1.0M**



VECO Part NO:  
Measurement Condition:

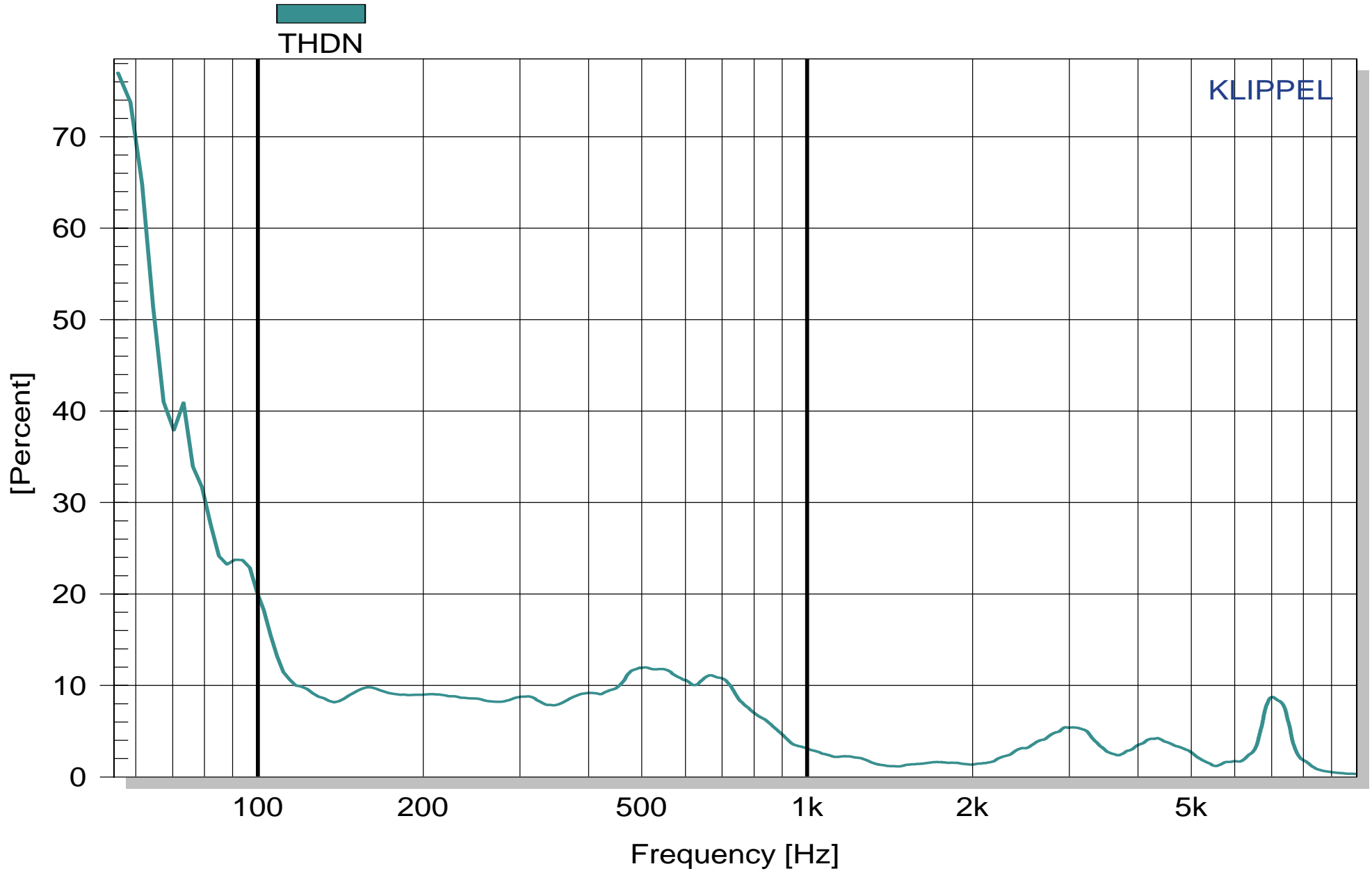
**P36CS08FN-18-N50BT**  
**VOL:2.83V[1W] DIS:0.5M**





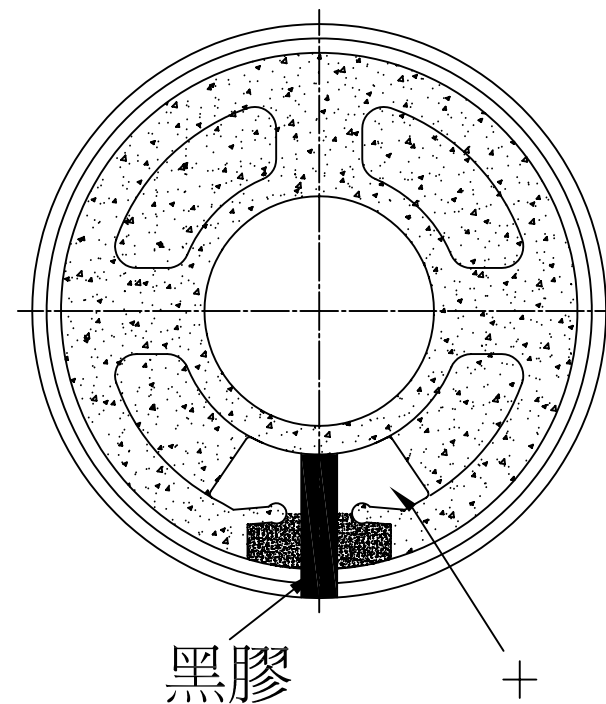
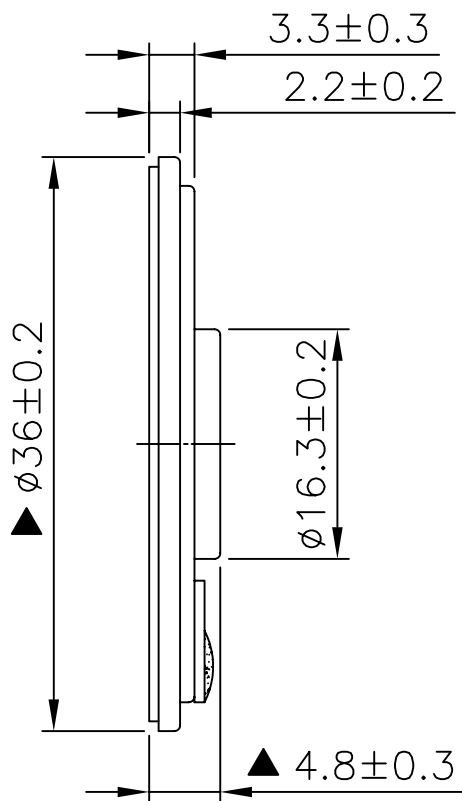
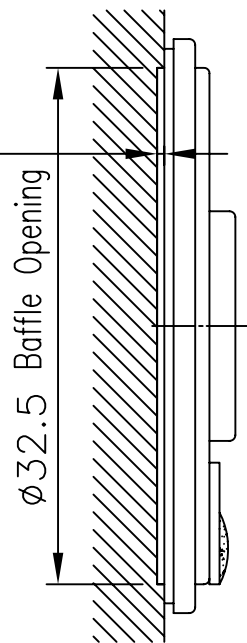
VECO Part NO:  
Measurement Condition:

**P36CS08FN-18-N50BT**  
**VOL:2.83V[1W] DIS:0.5M**



# MOUNTING NOTICE

AT LEAST  
0.8mm  
FOR  
DIAPHRAGM  
MOVING



RANGE	TOL			
0-8	±0.05	±0.10	±0.20	±0.30
8-16	±0.10	±0.15	±0.25	±0.40
16-24	±0.15	±0.20	±0.30	±0.50
24-50	±0.20	±0.25	±0.40	±1.0
50-100	±0.25	±0.30	±0.50	±2
>100	±0.40	±0.40	±0.80	±3

加▲為重點尺寸

V1.0		12.02.24		DESCRIPTION	
VERSION	DATE				
Unit:	mm	Scale:	Appr.:		
Tol.:			CHK.:	Dwg.: 曾憲財	

Vanson Electronics (Nanhai) Co., Ltd.

鉸利電子 E-MAIL: vecof@vansonic.net  
TEL:+86-757-88536828 FAX:+86-757-88536826

Title: P36CS08FN-18-N50BT

F:\SPEC\THIN\36\P36CS08FN-18-N50BT.DWG