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Specification

規 格 書

品名 (Product Name)	揚聲器 (Speaker)
料號 (Model No.)	P32-8C-2-W

Revision History			
Version	Date	Description	Author
00	2019/05/10	Publish	CSP

核準 (Approval)	高紅華	2019/05/10
審查 (Check)	曾憲財	2019/05/10
設計 (Designer)	王麗紅	2019/05/10
制作 (Author)	陳思萍	2019/05/10

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1.	MODEL:	P32-8C-2-W				
2	Dimension & Weight	Outer Diameter 31.7X31.7 mm				
		At least 2mm for diaphragm moving				
		Height	Refer to drawing			Weight
3	Magnet	Materials	Rare Earth		Size	φ12.8*3.5 mm
4.	Impedance	ACR	8	$\Omega \pm 15 \%$,	At	1250 Hz
		DCR	7.6	$\Omega \pm 15 \%$,	On	ohm meter
5.	Power Rating	Normal	3.0 Watts	Maximum	4.0 Watts	Sine
		Normal	Watts	Maximum	Watts	Square
6.	Resonant Frequency	230 $\pm 20 \%$ Hz.				
7.	Output Sound Pressure Level (S.P.L.)	85 ± 3 db 1.0 Watt \cdot 0.5 Meter				
		Average at	600	800	1000	1200 Hz.
8.	Frequency Range	150 \sim 20000 Hz. Average SPL – 10 db.				
9.	Distortion	5 % Maximum At 1000 Hz. 1.0 W.				
10	Abnormal Sound test	Must be Normal Tested By 4.9 Volts. Sine Wave.				
11	Load Test	Pink noise with HPF(High Pass Filter 235HZ-6db/Oct) 4.9 Volts. (RMS.) 96 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

14	High Temperature	+ 85 \pm 2 °C	Humidity Random for 96 Hours. (GB2423.2-81)
15	Low Temperature	- 40 \pm 2 °C	Humidity Random for 96 Hours. (GB2423.1-81)
16	Humidity	+ 40 \pm 2 °C	Relative Humidity (RH) 90 ~ 95 % 96 Hours.(GB5170.18-87)
17	Vibration	Frequency 30 \pm 15 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 ± 3 db from pre-test Measurement, and meet above spec. item 6. 7. 8. 9. 10.

19	Temperature Cycle test	- 40 ~ + 85 °C	4 Cycles Temperature test. (GB5170.18-87)
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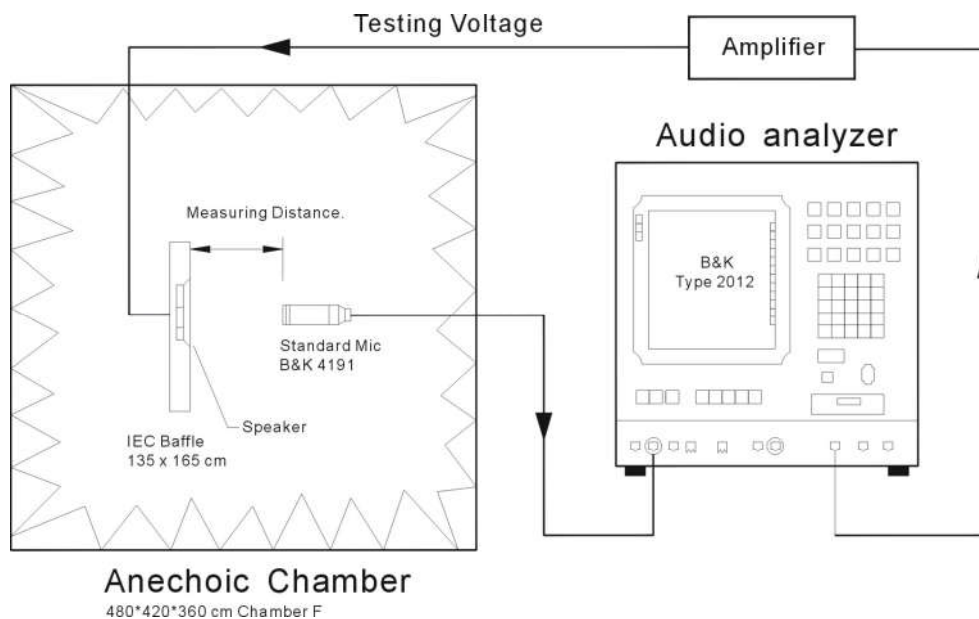
After test leave speakers at room temperature for 1 hour, SPL shall not deviate by ± 4 db from pre-test Measurement, and meet above spec. item 6. 7. 8. 9. 10.

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

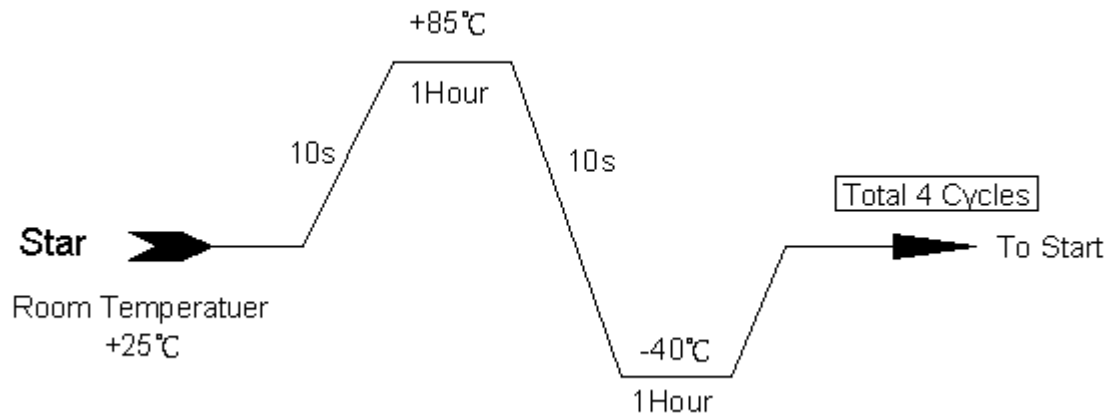
After exposure the speaker in the + 85 ± 2 °C chamber for 96 hours, then leave the speaker at room temperature for 1 hour, the SPL should not deviate by ± 3 db, and resonant frequency should not deviate by ± 50 Hz, compare with pre-test measurement.

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 ± 3 db, and resonant frequency should not deviate by ± 50 Hz, compare with pre-test measurement.

3.5 Vibration: GB11606.8-89

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

3.6 Load test: GB/T12060.5-2011

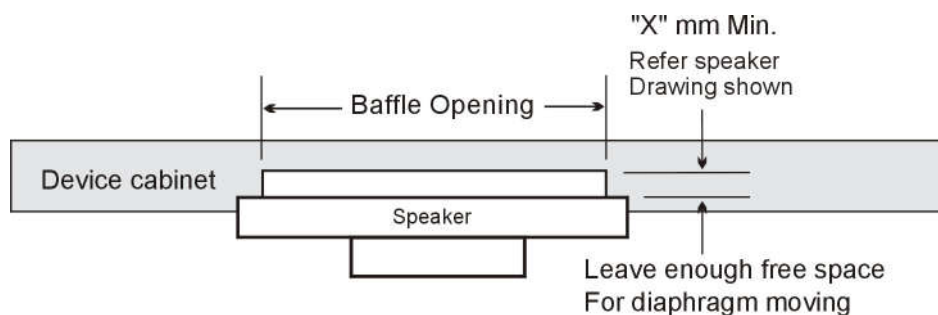
Speaker should not fail after apply 20 ~ 20K Hz pink noise with HPF rated power input (RMS), 96 hours. After test, SPL shall not deviate by ± 3 db from pre-test measurement,

3.7 Drop test: GB2423. 8-81

75 cm free falling on concrete floor, 10 times. After test, SPL shall not deviate by ± 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.

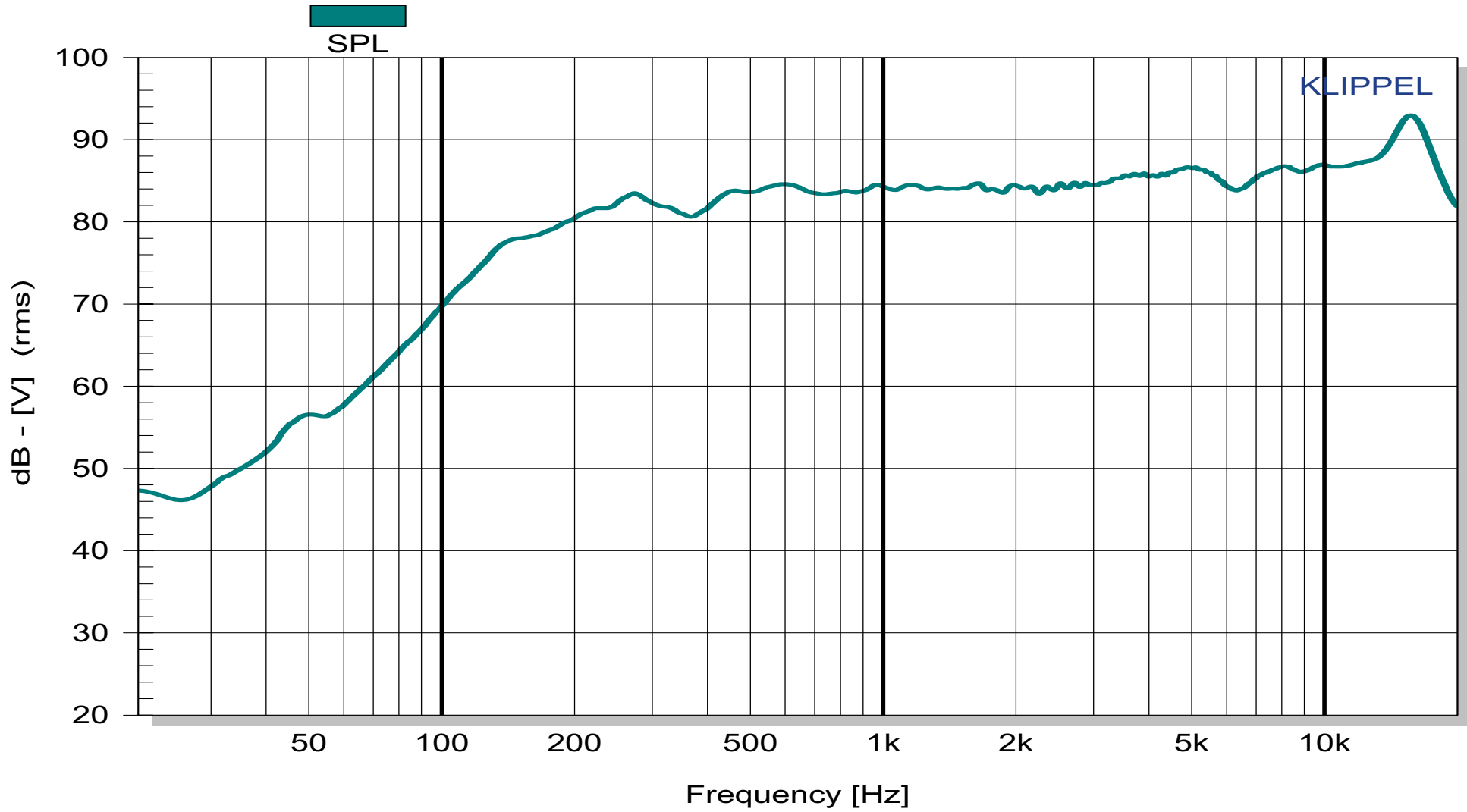


VECO Part NO:

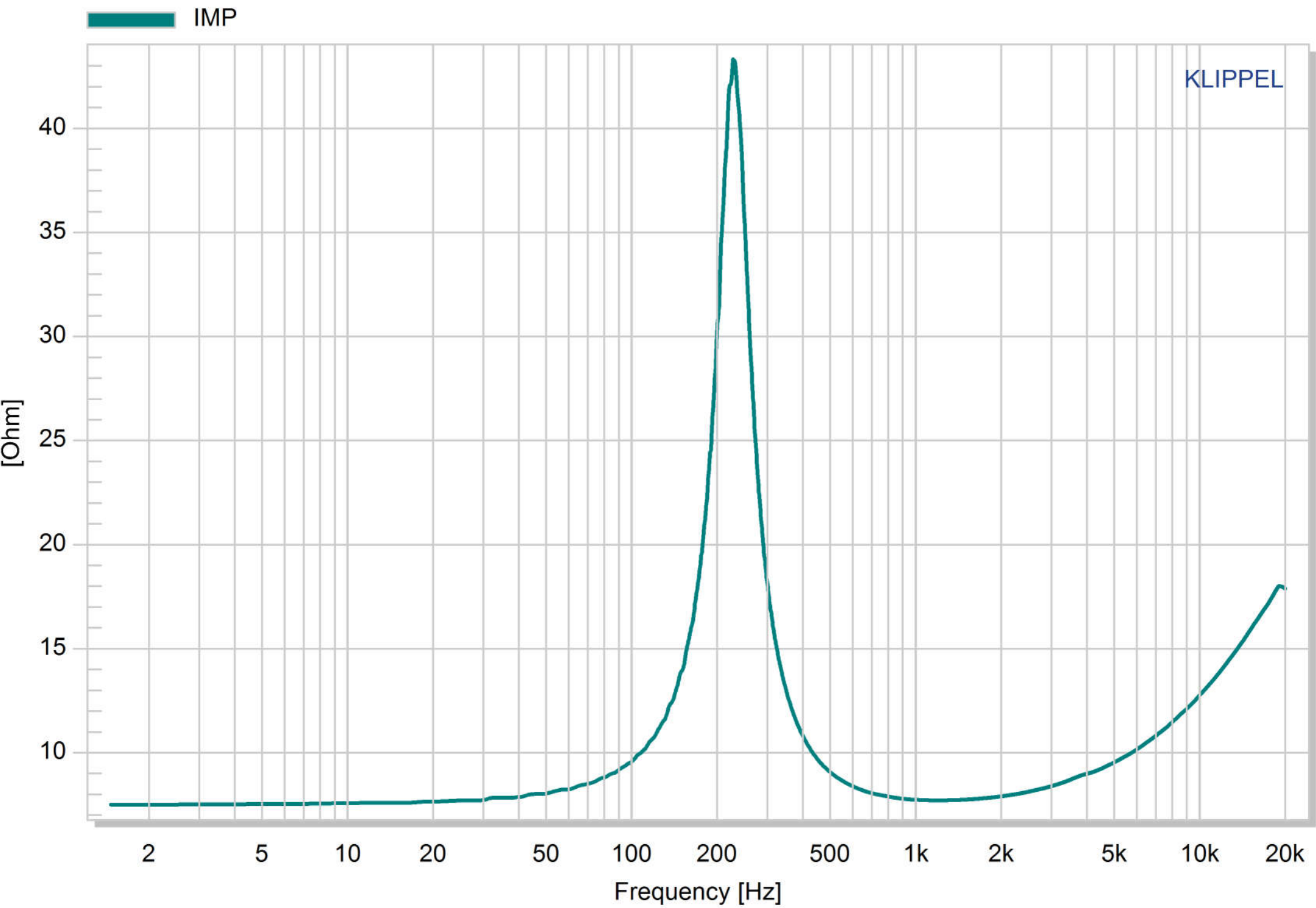
P32-8C-2-W

Measurement Condition:

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



P32-8C-2-W

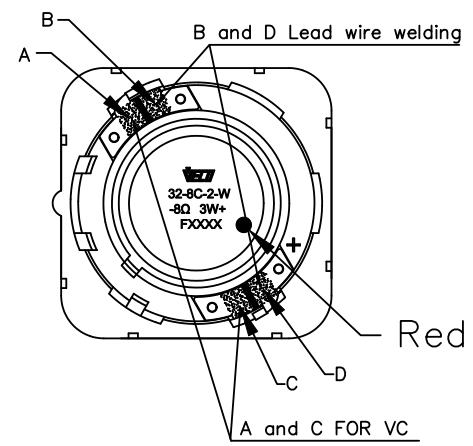
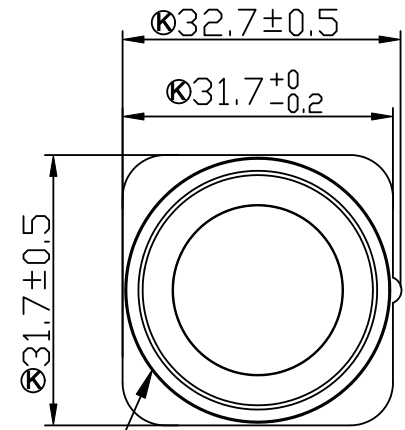
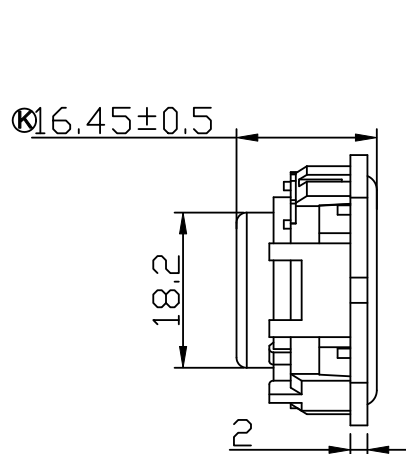
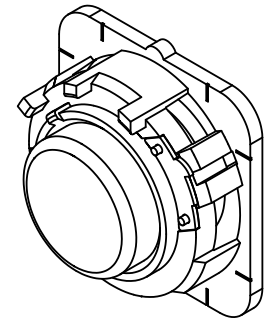


NOTE:

1. 加工要求:
2. 表面處理:
3. 制程重點:
4. 檢驗重點:

不准使用鎳利
電子禁止使用的
環境管理物質

Marking details	
VECO	Manufacturer name
32-8C-2-W	Product name
-8Ω 3W+	impedance and power rating
FXXXX	F=manufactured in Foshan factory
	X=year of manufacture (B: 2017, C: 2018, D: 2019....)
	XX=week of manufacture
	X=weekday of manufacture (Sunday: number 1, Monday: number 2...)
	e.g. B253 stands for manufactured on Tuesday, week 25, in 2017



Waterproof Gasket

Red dot for Positive

=> Critical dimension

Waterproof Grade: IPX5

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: HF					
COSTOMER PN:		VECO PN:					
DATE: 2019/06/12	MATERIAL:	COLOUR:	ITEM	Y/M/D	CONTENTS OF CHANGE	SPONSOR	

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Title: P32-8C-2-W

Unit: mm	VER: 00	Appr.:
	Scale: 1:1	CHK.:
		Dwg.: 高飛