

Specification for Speaker Box	Page	2/10
	Revision No.	1.0
	Drawing No.	KFC7076
Model No. : KPB3640ST1R50-7076		

## CONTENTS

1. Scope
2. General
3. Electrical and Acoustic Characteristics.
4. Reliability Test
5. Measurement Block Diagram & Response curve
6. Structure
7. Dimensions
8. Packing
9. Revision

Specification for Speaker Box Model No. : KPB3640ST1R50-7076	Page	3/10
	Revision No.	1.0
	Drawing No.	KFC7076

## 1. Scope

This specification is applied to the dynamic speaker which is used all of the electrical acoustic product.

-- compact, rich sound

-- applications: mobile phone, PDA, notebook computer, etc. ..

## 2. General

2.1 Out-Diameter : 36 mm

2.2 Height : 4 mm

2.3 Weight : 6.8 g

2.4 Operating Temperature range:

-40 ~+85 °C without loss of function

2.5 Store Temperature range:

-40 ~+85 °C without loss of function

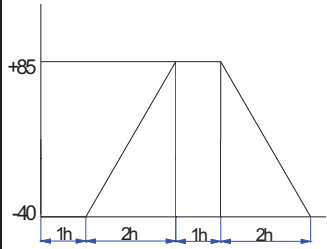
## 3. Electrical and Acoustic Characteristics.

Test condition : 15 ~ 35 °C, 25% ~ 85% RH, 860~1060 mbar

No	Items	Specification
1	Impedance	50 Ω ± 15% (1Vrms at 2.5KHz)
2	Sound Pressure Level	85 dB ± 3dB 0.5m The applied signal has to be a 10 Vpp positive square wave with 800 Hz and a pulse pause ratio of 50% to 50%.
3	Resonance Frequency	1.3k Hz ± 20%
4	Frequency Range	Fo ~2KHz
5	Input Power	Rated 0.8 W / Max. 1.2 W for the duration of 3 seconds
6	Distortion	5% Max. at 1kHz 0.5W
7	Buzz and Rattle	Should not be audible buzzes,rattles when the 6.32V sine wave signal swept at frequency range.
8	Polarity	When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward.

### 4. Reliability Test

Before any tests, all parts shall be stored for 48 hours at 85°C without being electrically operated.

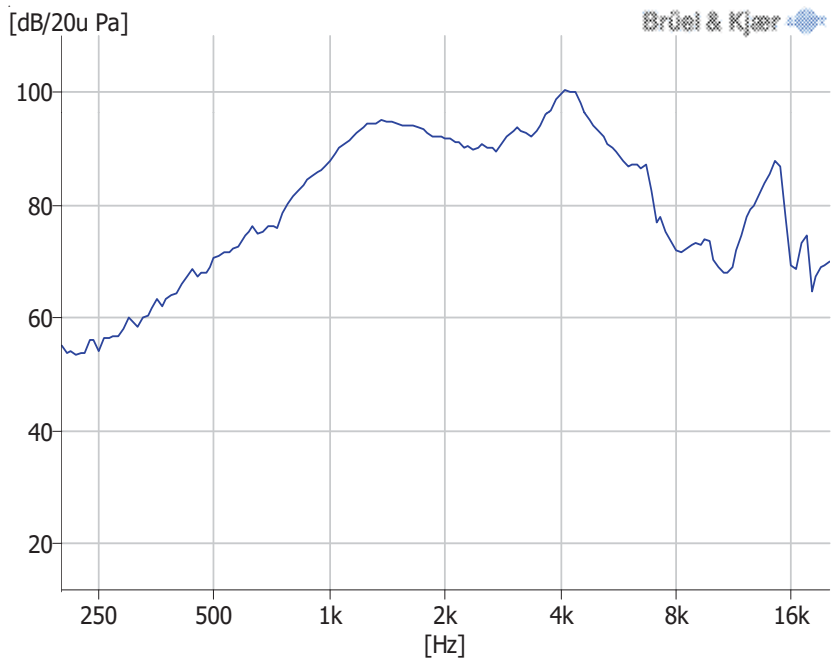
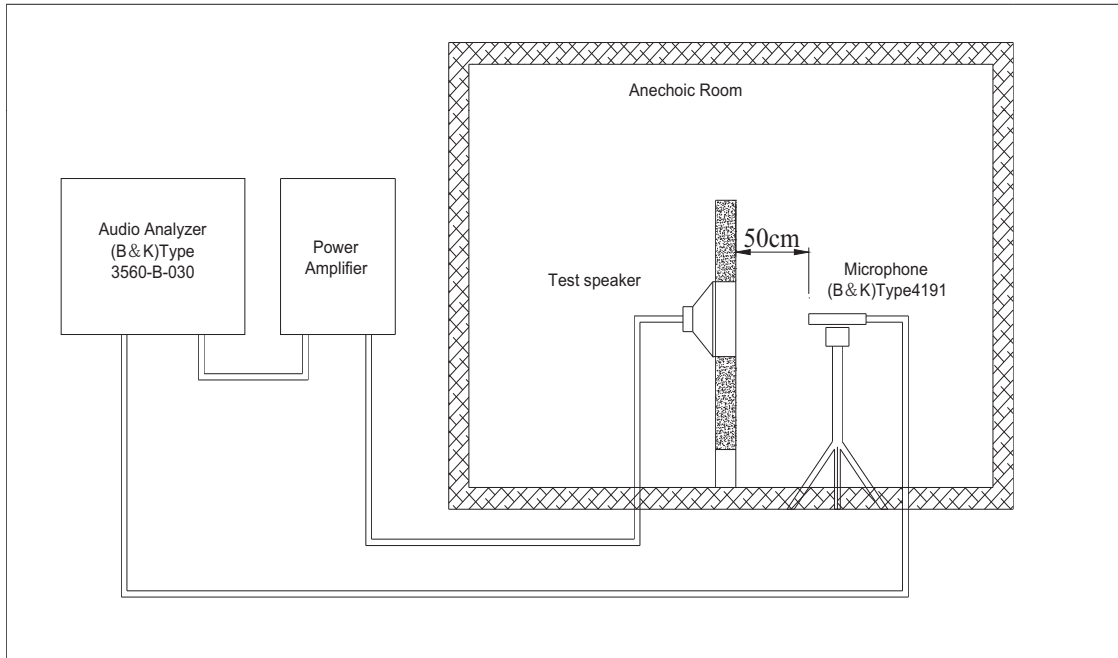
No	Items	Specification
1	Operation at high temperature	This test is intended to simulate the operation of the speaker at high temperatures. Test duration: 656 h Test temperature: +85°C
2	Operation at low temperatures	This test is intended to simulate the operation of the speaker at low temperatures. Test duration: 24 h Test temperature: -40°C
3	Moist heat, cyclic	Operation of the DUT at high air humidity is simulated. This test is performed using the DUT which have undergone the sealing test against dust. Test procedure according to test Db, type 1, stated in DIN EN 60068-2-30. - Upper temperature +55 °C - Number of cycles 6
4	Thermal Shock Test	<p>Temperature profile: -40° C 1 h / temperature rise 2 h / +85° C 1 h / temperature drop 2 h Signal: square-wave voltage, 0 V/10 V, 800 Hz Time pattern: 1 min pulsing operation with pulse-to-pause ratio corresponding to obstacle detection at distance of 1 m (= 75 ms 800 Hz, 294 ms pause) 1 min continuous tone 800 Hz 8 min pause Then repeat cycle. the test is continued as a thermal cycling test with electric loading, until a duration of 320 h is reached.</p> 
5	Thermal shock test	After the test, the units under test must not be subjected to any further tests. Load none Duration of test (normal requirements) 300 cycles Test cycle: a) Expose to lower limit of operating temperature for 40 min b) Move unit within 10 s to expose it to upper limit of operating temperature c) Expose unit to upper limit of operating temperature for 20 min d) Within 10 s, again expose unit to lower limit of operating temperature

Specification for Speaker Box		Page	5/10
		Revision No.	1.0
Model No. : KPB3640ST1R50-7076		Drawing No.	KFC7076

6	Drop Test	<p>Following the tests, the requirements stated in section 3 still must be met. Performance of test:</p> <p>Test according to DIN 40 046 Part 30</p> <p>Drop height 1000 mm</p> <p>Dropping surface Concrete</p> <p>Direction of drop 2 x magnet system pointing down 2 x magnet system pointing to side</p> <p>Performance Free fall</p>
7	Isolation resistance	<p>Riso (kΩ) 100</p> <p>Measuring voltage 24 V DC</p> <p>The isolation resistance is determined between moving coil and speaker chassis or magnet system.</p>
8	Mechanical requirements	<p>Maximum long-time input Voltage according to drawing. Highest voltage which the speaker can sustain for a duration of 1 minute without permanent damage. The signal is a normal program simulating noise (according to IEC 60268-1).</p> <p>The test must be repeated 10 times with a pause of 2 minutes between each repetition.</p>

After test(1~8item), the speaker S.P.L . difference shall be within  $\pm 3\text{dB}$ , and the appearance not exist any change to be harmful to normal operation (e.g. cracks,rusts,damages and especially distortion).

### 5. Measurement Block Diagram & Response curve



**Cursor values**  
 X: 1.120k Hz  
 Y: 91.662 dB/20u Pa

# Specification for Speaker Box

Page

7/10

Revision No.

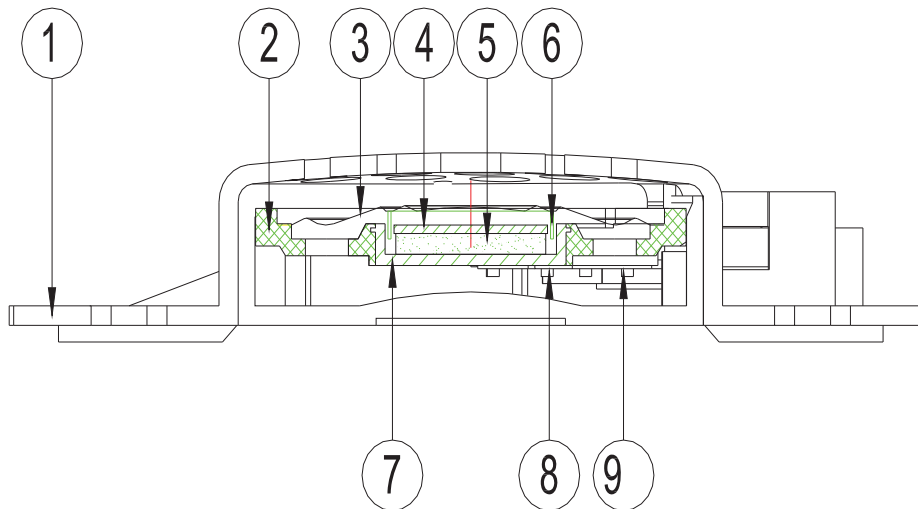
1.0

Model No. : KPB3640ST1R50-7076

Drawing No.

KFC7076

## 6. Structure



9	Spring-2	1	cu	
8	Spring-1	1	cu	
7	Yoke	1	SPCC	
6	Voice Coil	1	Copper	
5	Magnet	1	Nd-Fe-B	
4	Plate	1	SPCC	
3	Diaphragm	1	PEI	
2	Frame	1	PPA	
1	BOX 1	1	P110HS	苏州旭光聚合物有限公司
No.	Part Name	Q'ty	Material	Remarks

# Specification for Speaker Box

Page

8/10

Revision No.

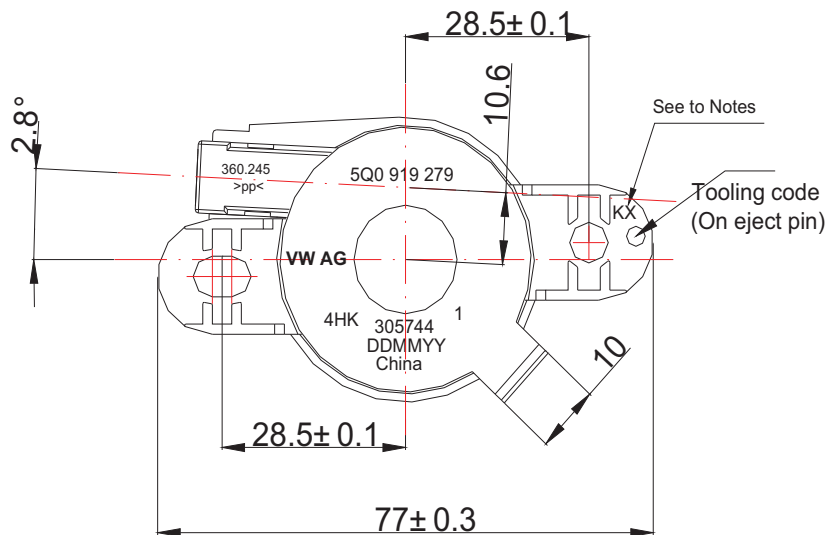
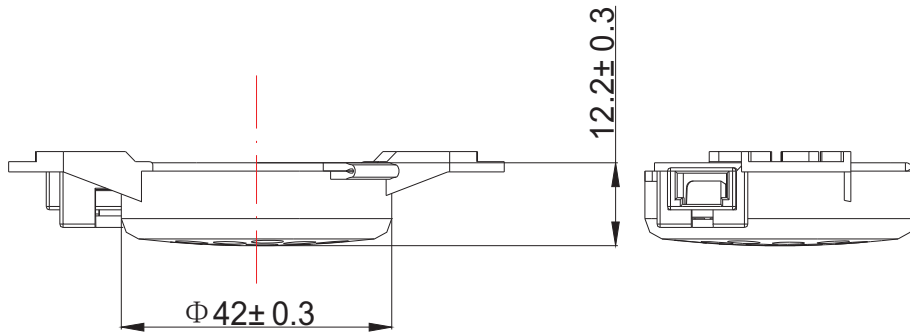
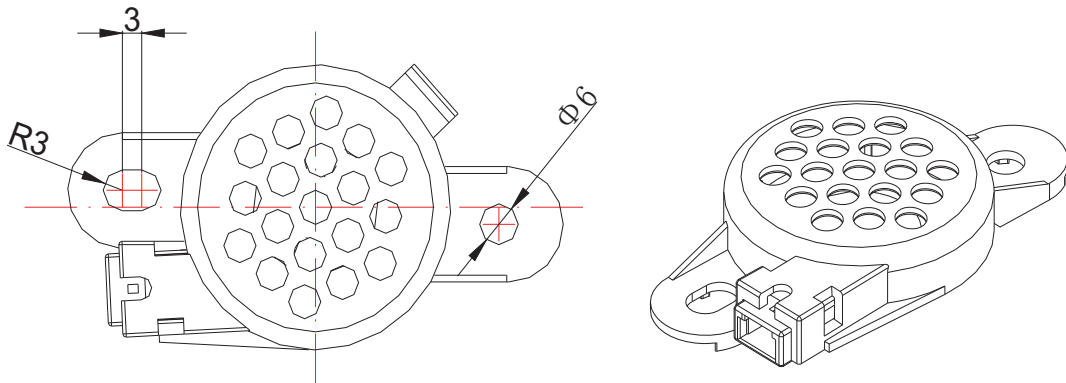
1.0

Model No. : KPB3640ST1R50-7076

Drawing No.

KFC7076

## 7. Dimensions



### NOTES

1, "X" refers to production line 1,2,3,etc

FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ±0.5

Specification for Speaker Box	Page	9/10
	Revision No.	1.0
Model No. : KPB3640ST1R50-7076	Drawing No.	KFC7076

**8. Packing**



