



常州市凯丽金电子有限公司---微型贴片电声元器件专业生产商



KELIKING ELECTRONIC-----Micro SMD Buzzer Professional manufacturer

# SPECIFICATION FOR APPROVAL

## 承 認 書

Description : Speaker  
 Part No : KLJ-111517KT-01CS  
 Customer's Model No :  
 Specification No : KLJ-111517KT-01CS  
 Number Of The Edidion : 2.1

CUSTOMER'S APPROVED SIGNATURE		



常州市凯丽金电子有限公司

CHANGZHOU KELIKING ELECTRONICS CO., LTD

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Approved by	Checked by	Lssued by



## 1.SCOPE

This specification covers our product of dynamic speaker unit for cordless/mobile telephone and ear phone use.

## 2. GENERAL REQUIREMENTS

2.1 OPERATING TEMPERATURE RANGE: -20°C ~ +70°C

2.2 STORAGE TEMPERATURE RANGE: -40°C ~ +85°C

## 3.WEIGHT: Approx 1.6 gram

## 4 TEST CLIMATIC CONDITIONS

### STANDARD TEST CONDITIONS:

Temperature: 17~25°C  
Relative Humidity: 45%~80%(RH)  
Air Pressure: 860~1060 hPa

### JUDGEMENT CONDITIONS:

Temperature: 20±2°C  
Relative Humidity: 60%~70%(RH)  
Air Pressure: 860~1060 hPa

## 5. ELECTRICAL REQUIREMENTS

5.1 Rated Impedance (in 1.0cc box) 8±15% ohms @2kHz, 1Vrms input See Figure 2

5.2 Rated Noise Power (in 1.0cc box) 0.7 Watts

5.3 Short Term Maximum Power (in 1.0cc box) 1.0 Watt

## 6. ACOUSTICAL REQUIREMENTS

measuring diagram See Figure 1

6.1 Sound Pressure Level in 1cc box 89.5±3dB at 2Vrms/10cm at 2KHz

6.2 Bass Resonance Frequency

4.2.1 Resonance frequency in free air 450±15% Hz

4.2.2 Resonance frequency in 1.0cc box 850±15% Hz

6.3 Rated Frequency Range 400 - 20kHz

Frequency Response See Figure 3

(Mounted in 1.0cc measure box and in a baffle) Test at 2Vrms/10cm

6.4 THD See Figure 4

(Mounted in 1.0cc measure box and in a baffle) Test at 2Vrms/10cm

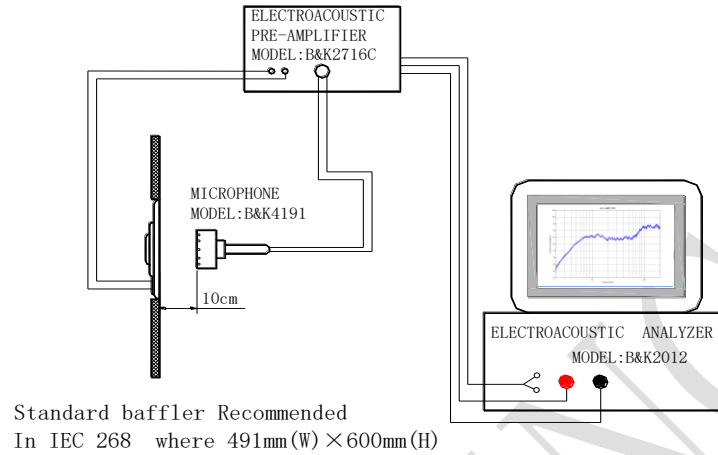
6.5 Rub & Buzz

A sine sweep among 100-1500Hz at 2.37Vrms with 1.0cc back cavity will not result in any buzzing or extraneous sound.

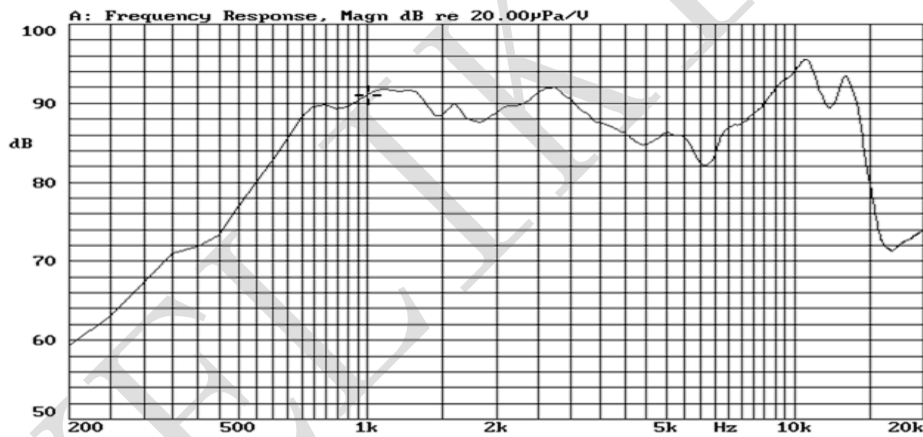
## 7.POLARITY REQUIREMENTS

When a DC sources "+" polarity is attached to speaker's "+" polarity, "-" polarity is attached speaker's "-" polarity, the membrane will move forward.

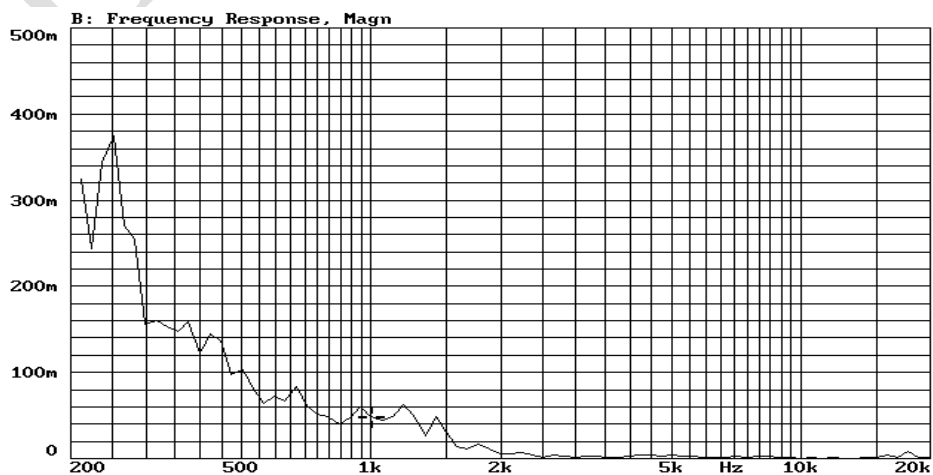
## ■ FREQUENCY MEASURING CIRCUIT (Fig.1)



## ■ TYPICAL FREQUENCY RESPONSE CURVE (Fig.2)



## ■ TOTAL HARMONIC DISTORTION





## 8. RELIABILITY TESTS

THE SOUND PRESSURE AS SPECIFIED SHALL NEITHER DEVIATE MORE THAN  $\pm 3\text{dB}$  FROM THE INITIAL VALUE, NOR ANY SIGNIFICANT DAMAGE AFTER ANY OF FOLLOWING TESTING.

### 8.1 HIGH TEMPERATURE TEST

HIGH TEMPERATURE:  $+85\pm 2^{\circ}\text{C}$   
DURATION: 96 HOURS

### 8.2 LOW TEMPERATURE TEST

LOW TEMPERATURE :  $-40\pm 2^{\circ}\text{C}$   
DURATION: 96 HOURS

### 8.3 HEAT SHOCK TEST (SEE IN FIG.5)

HIGH TEMPERATURE:  $+85\pm 2^{\circ}\text{C}$   
LOW TEMPERATURE:  $-40\pm 2^{\circ}\text{C}$   
CHANGEOVER TIME: < 30 SECONDS  
DURATION: 30MINUTES  
CYCLE: 100

### 8.4 HUMIDITY TEST

TEMPERATURE:  $+40\pm 2^{\circ}\text{C}$   
RELATIVE HUMIDITY: 90~95%  
DURATION: 96 HOURS

### 8.5 TEMPERATURE CYCLE TEST (SEE IN FIG.6)

TEMPERATURE:  $-40^{\circ}\text{C}$   $+85^{\circ}\text{C}$   
DURATION: 45 MINUTES 45 MINUTES  
TEMPERATURE GRADIENT:  $1\sim 3^{\circ}\text{C}/\text{MIN.}$   
CYCLE: 25

### 8.6 VIBRATION TEST

VIBRATION: 10~55Hz/MIN  
AMPLITUDE: 1.5MM  
DURATION: 2 HOURS EACH AXES(3 AXES)

### 8.7 DROP TEST

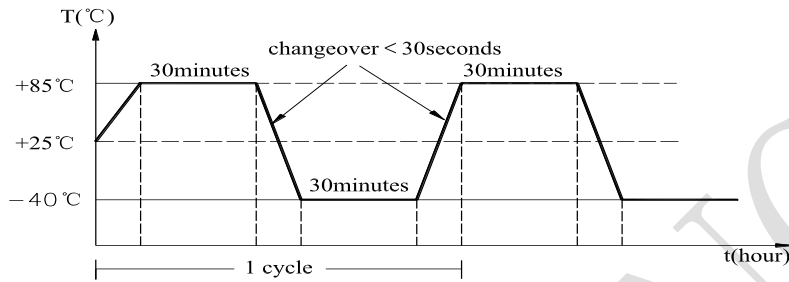
MOUNTED WITH DUMMY SET MASS: 100 G  
HEIGHT: 1.5 M  
CYCLE: 6 (1 EACH PLAIN)

ONTO THE CONCRETE BOARD

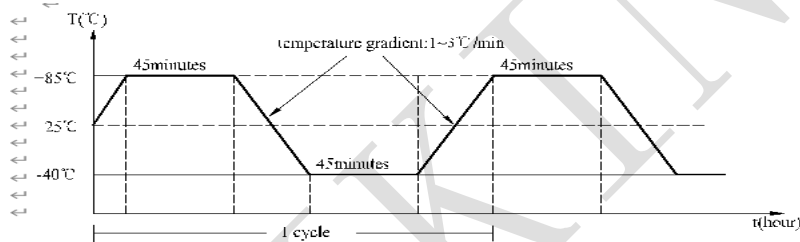
## 8.8 LOAD TEST

SIMULATED PROGRAM SIGNAL (IEC 268-1) WITH CREST FACTOR OF 2;HIGH PASS12DB/OCT OR STEEPER, CUT OFF AT 850HZ FOR 96 HOURS @0.7W(IN 1.0CC CLOSED BOX) INPUT POWER.

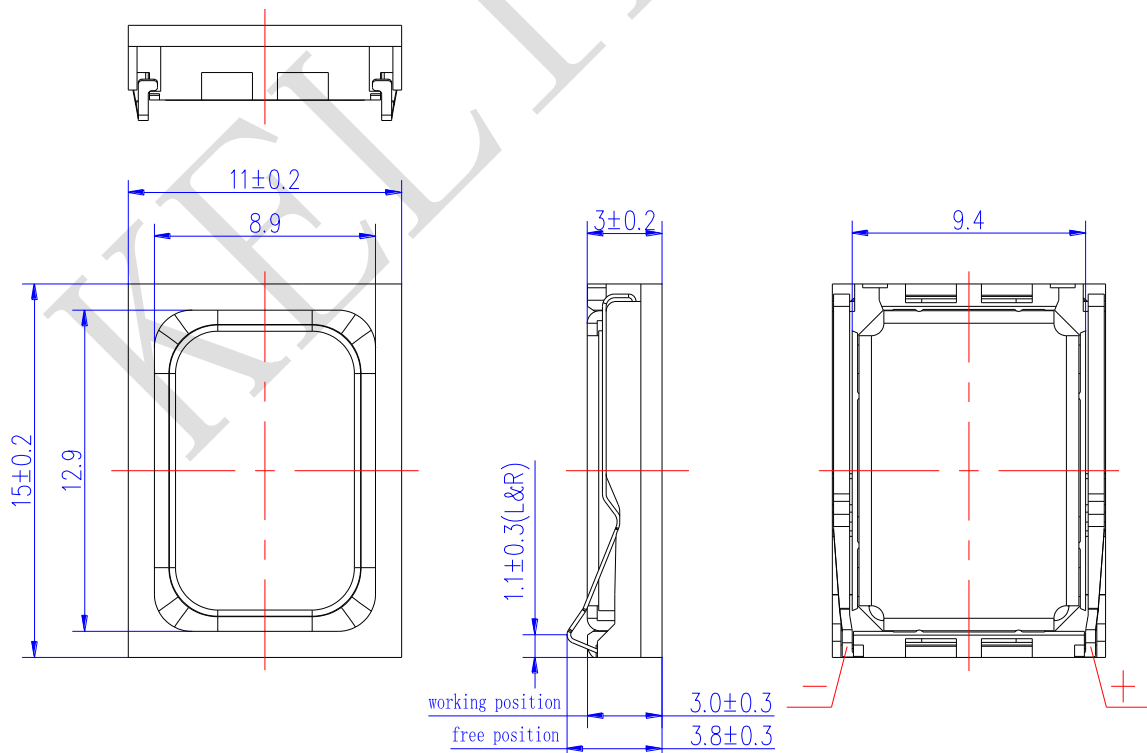
## ■ HEAT SHOCK TEST



## ■ TEMP. CYCLE TEST

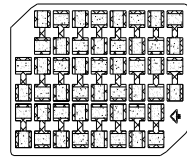


## 9.MECHANICAL LAYOUT & DIMENSIONS



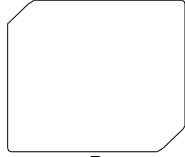
Unless otherwise specified, tolerance:  $\pm 0.2$  (unit: mm)

## 10.PACKING STANDARD 包装规格



PVC BOX

PVC BOX SIZE: 325X263mm;  
ONE BOX: 50PCS;



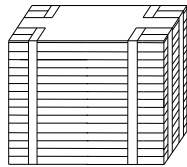
FRONT COVER BOARD

COVER BOARD SIZE: 325X263mm;



ONE BUNDLE

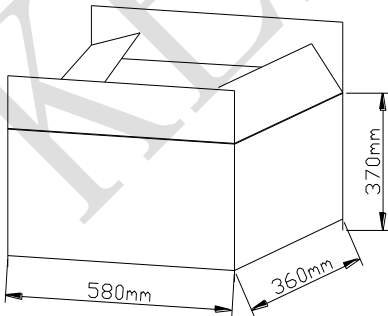
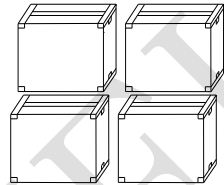
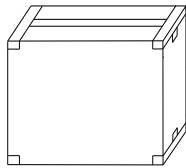
ONE BUNDLE SIZE: 325X263X145mm;  
TEN BOX/BUNDLE: 50 × 10=500PCS



SMALL BOX

SMALL BOX SIZE: 335X275X160mm

ONE BUNDLE/SMALL BOX: 500 × 1=500PCS  
500PCS USE ONE SMALL BOX  
TEN BOX/BUNDLE: 50 × 10=500PCS



BIG BOX SIZE: 580X360X370 mm;

FOUR SMALL BOX/BIG BOX: 4X500PCS=2000PCS

2000PCS USE ONE BIG BOX

4PCS SMALL BOX USE ONE BIG BOX

