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| | Revision No. | 1.2 |
| Model No. : KP4059SP1-3B-5498 | Drawing No. | KFC5498 |

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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 : 40 mm

2.2 Height : 10.4 mm

2.3 Weight : 12 g

2.4 Operating Temperature range:

-30~+70°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 | 8 Ω ± 15% (1Vrms at 1KHz) |
| 2 | Sound Pressure Level | 92 dB ± 3dB (0.1W/0.1M at average 0.8,1.0,1.2,1.5kHz) |
| 3 | Resonance Frequency | 450 Hz ± 20% |
| 4 | Frequency Range | Fo ~10KHz |
| 5 | Input Power | Rated 2 W / Max. 2.2 W |
| 6 | Distortion | <5% Max. at 2kHz/1Vrms |
| 7 | Buzz and Rattle | Should not be audible buzzes,rattles when the 4V sine wave signal swept at frequency range. |
| 8 | Polarity | When supplied plus D.C. voltage to (+) terminal, the cone diaphragm must move to forward. |

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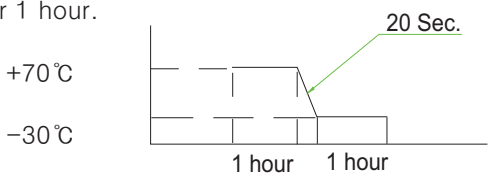
Model No. : KP4059SP1-3B-5498

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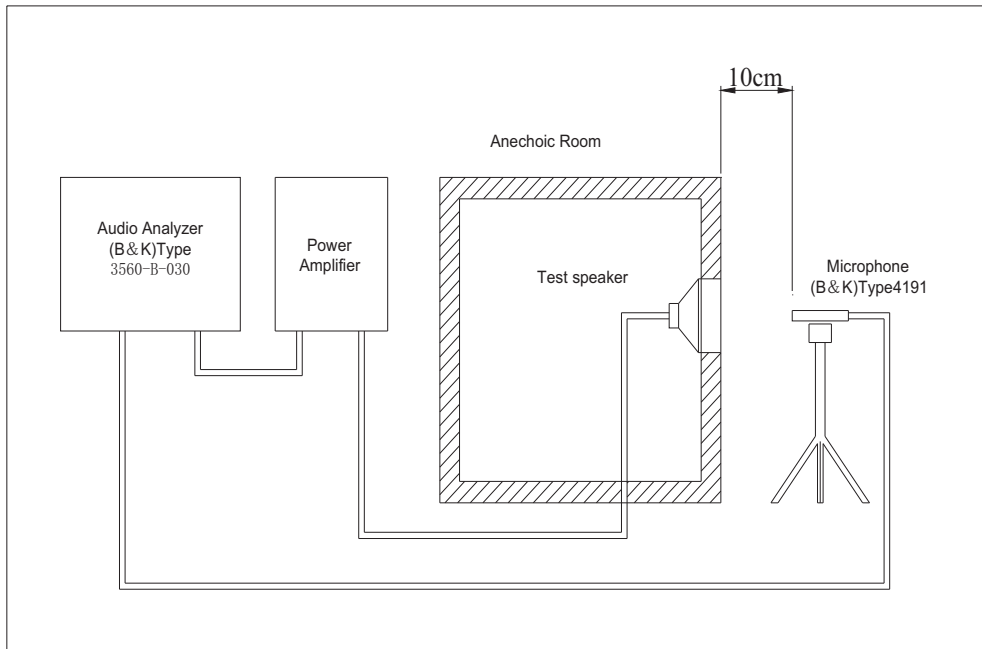
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4. Reliability Test

After test(1~7item), 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).

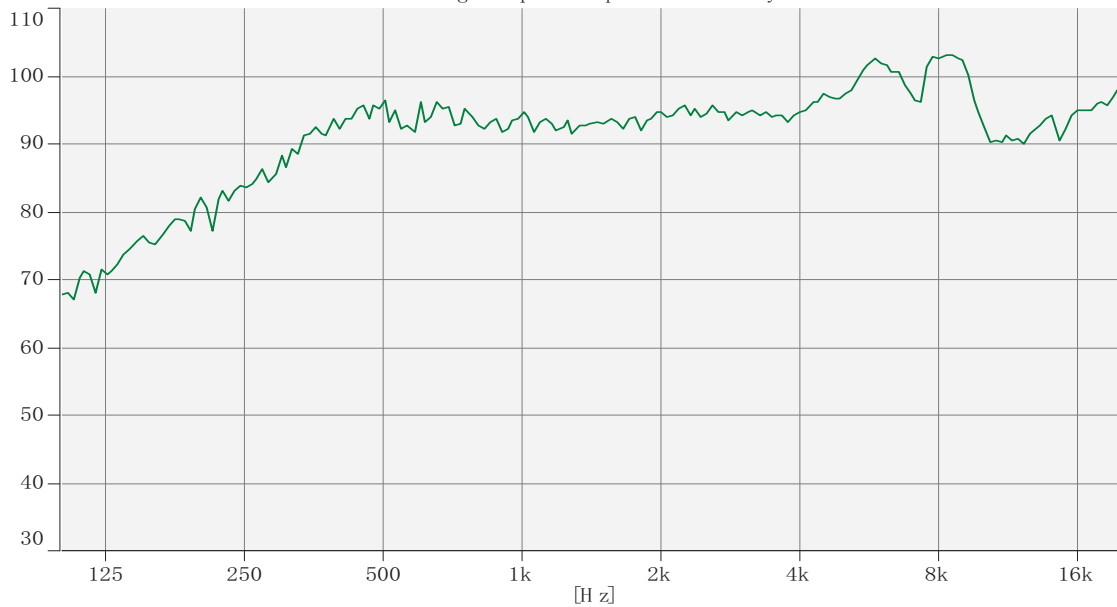
| No | Items | Specification |
|----|-----------------------|--|
| 1 | High Temperature Test | After being placed in a chamber with $+85\pm 3\text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured. |
| 2 | Low Temperature Test | After being placed in a chamber with $-40\pm 3\text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured. |
| 3 | Humidity Test | After being placed in a chamber with 85 to 90%R.H. at $+40\pm 2\text{ }^\circ\text{C}$ for 96 hours and then being placed in natural condition for 1 hour, speaker shall be measured. |
| 4 | Thermal Shock Test | <p>After being placed in a chamber at $+70\text{ }^\circ\text{C}$ for 1 hour, then speaker shall be placed in a chamber at $-30\text{ }^\circ\text{C}$ for 1 hour(1 cycle is the below diagram).</p> <p>After 6 above cycles, speaker shall be measured after being placed in natural condition for 1 hour.</p>  <p style="text-align: center;"> $+70\text{ }^\circ\text{C}$ $-30\text{ }^\circ\text{C}$ </p> <p style="text-align: center;"> 1 hour 1 hour </p> |
| 5 | Vibration Test | After being applied vibration of amplitude of 1.5mm with 10 to 55Hz band of vibration frequency to each of 3 perpendicular directions for 1 hour, then placed in natural condition for 1 hour, speaker shall be measured. |
| 6 | Drop Test | The speaker when mounted in the jig which weight 85g~100g, shall with stand 15 times random drops from a height of 1.5 meter to a concrete floor faced with 5mm thick hard wood board.and be nothing mechanical damage. |
| 7 | Load test | After being applied loading white noise with input power 2W(4Vrms.) for 96 hours, then placed in natural condition for 1 hour, speaker shall be measured. |
| 8 | Insulation test | When they are measured with DC 100V the insulation resistance between v.c. terminal and frame must be more than 1 M Ω |

5. Measurement Block Diagram & Response curve



[dB/20.0u Pa]

Output Response (Signal) - Input (Magnitude)
Working : Input : Input : SSR Analyzer



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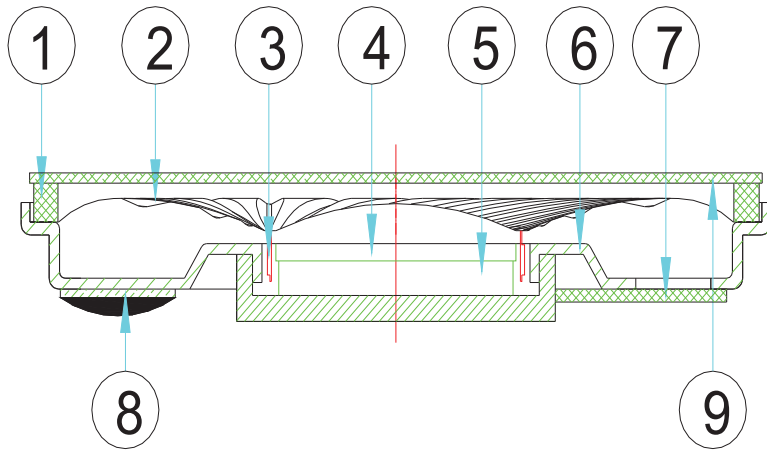
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6. Structure



| No. | Part Name | Q'ty | Material | Remarks |
|-----|-----------|------|-------------|---------|
| 9 | gasket | 1 | 3B | |
| 8 | Terminal | 1 | PCB | |
| 7 | Screen | 1 | 4B | |
| 6 | Frame | 1 | SPCC | |
| 5 | Magnet | 1 | Nd-Fe-B | |
| 4 | Plate | 1 | SPCC | |
| 3 | V-coil | 1 | bobbin coil | |
| 2 | Diaphragm | 1 | PEN | |
| 1 | Gasket | 1 | Paper | |

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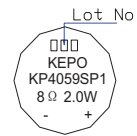
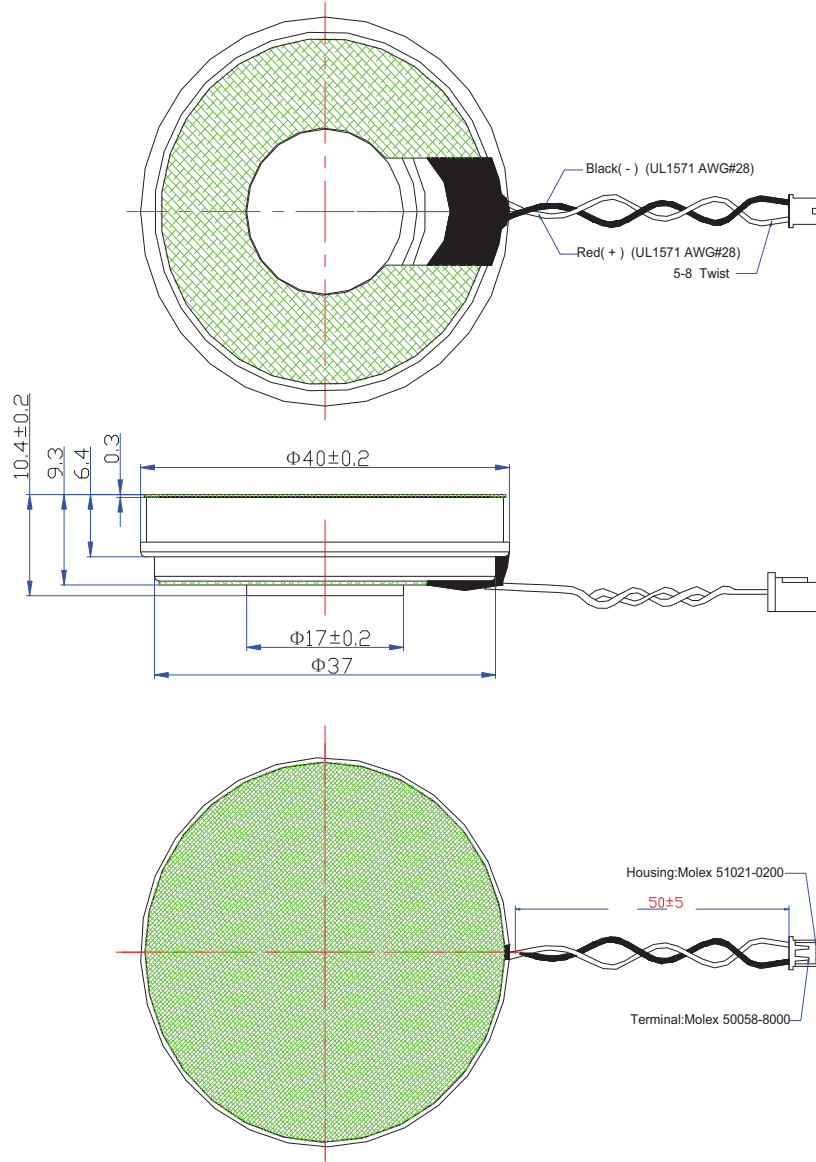
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7. Dimensions



Date Code

#Lot No Example
 ex) 808
 -8 :the year 2008
 -08:the Week

FIRST ANGLE PROJECTION



UNIT : mm

Tolerance : ± 0.2

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8. Packing

Each minimum package unit of products shall be in a carton box and it shall be clearly marked with Part Number, quantity and outgoing inspection number.