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# Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









## **PRODUCT SPECIFICATION**

Doc: MB6052ASC-1

This specification applies to the electret condenser microphone outlined within this document.

Model Number: MB6052ASC-1

## I. Electrical Characteristics Test Condition (Vs= 2.0 V, RL= 2.2 k ohm, Ta=20°C, RH=65%)

| ITEM                            | SYMBOL            | TEST CONDITION                                   | MINIMUM          | STANDARD   | MAXIMUM | UNITS           |
|---------------------------------|-------------------|--|------------------|------------|---------|-----------------|
| Sensitivity                     | S                 | f=1kHz, Pin=1Pa                                  | -45              | -42        | -39     | dB<br>0dB=1V/Pa |
| Impedance                       | Zout              | f=1kHz, Pin=1Pa                                  |                  |            | 2.2     | kΩ              |
| Directivity                     |                   |  | OMNI-DIRECTIONAL |            |         |                 |
| Current Consumption             | I                 |  |                  |            | 0.5     | mA              |
| S/N Ratio                       | S/N (A)           | f=1kHz, Pin=1Pa<br>A Curve                       | 60               |            |         | dB              |
| Sensitivity Reduction           | ΔS                | f=1kHz, Pin=1Pa<br>Vs= 2.0 - 1.5                 |                  |            | -3      | dB              |
| Frequency Range                 |                   | 2.0 - 1.3  |                  | 100-10,000 |         |                 |
|                                 | -30 <sub>50</sub> | 200 500 1 <sub>k</sub> 2 3 4 5<br>FREQUENCY (Hz) | 8 7 89<br>10k    |            |         |                 |
| Schematic Diagram of<br>Circuit | ECM Lunit         | impedance /verter Capacitor 10pF 33              | Term.1           | C Output   |         |                 |

### II. Mechanical Characteristics

| Dimensions                      | Ø 6 x 5   | 5.2   | See Drawing in       | n Section IV                   |  |  |
|---------------------------------|---|-------|----------------------|--------------------------------|--|--|
| Weight                          | Less than 0.5g  |       |                      |                                |  |  |
| Solderering Heat Shock          | To be no interferance in operation after soldering temperature exposure at 260°C +/-5°C for 2 +/- 0.5 seconds.  |       |                      |                                |  |  |
| Terminal Mechanical<br>Strength | The soldering time must be less than 2 seconds each pad, and soldering pull must be larger than 0.5Kg each pad. |       |                      |                                |  |  |
| Absolute Maximum<br>Ratings     | Operating Voltage   |       | Temperature<br>Range | Operation Temperature<br>Range |  |  |
|                                 | Vs (V)  | Т     | stg °C               | Tope °C                        |  |  |
|                                 | 10  | -25°C | C to +70°C           | -10°C to +60°C                 |  |  |



Knowles Acoustics, 1151 MAPLEWOOD DRIVE, ITASCA, IL 60143 USA Americas [USA] +1-630-250-5930 Asia [Taiwan] +886-2-8919-1799

www.knowlesacoustics.com

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## **PRODUCT SPECIFICATION**

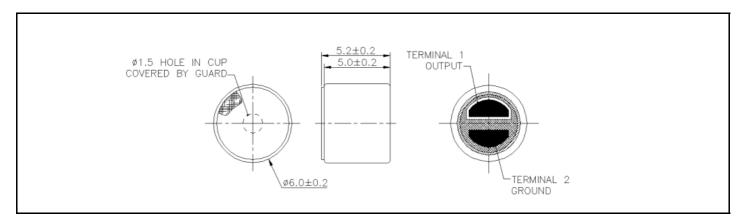
## Doc: MB6052ASC-1

#### III. Reliability Tests

**Note:** After any of the following tests performed, the sensitivity of the microphone unit shall not deviate more than ±3dB from its initial value. The microphone shall maintain its initial operation and appearance. Measurements for tests with thermal requirements are to be done after 2hrs of condistioning at 20°C.

| Vibration Test         | The microphone to have no interferance in operation after vibrations, 10Hz to 55Hz for 1 minute full amplitude 1.52mm, for 2 hours at three axises.  |  |  |
|------------------------|--|--|--|
| Drop Test              | The microphone unit must operate when dropped three times once on each axis from a height of 1m onto a metal plate.  |  |  |
| Temperature Test       | High The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: +70°C for 240 hrs, and exposed to room temperature for 2 hrs.         |  |  |
|                        | Low The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: -25°C for 240 hrs, and exposed to room temperature for 2 hrs.          |  |  |
| Humidity Test          | +40°C at 95%RH for 240 hrs   |  |  |
| Temperature Cycle Test | After exposure at -55°C for 30 minutes, at+20°C for 10 minutes, at +85°C for 30 minutes, at +20°C for 10 minutes, 5 cycles. (The measurement to be done after 2 hrs of conditioning at +20°C.) |  |  |

#### IV. Dimensional Drawing



#### V. Other

Better Shielded, RF noise resistant type.

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Knowles Acoustics, 1151 MAPLEWOOD DRIVE, ITASCA, IL 60143 USA Americas (USA) +1-630-250-5930 Asia (Taiwan) +886-2-8919-1799 Europe (England) +44 1444 87 2810 Japan (Tokyo) +81-3-3439-1151 www.knowlesacoustics.com

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