

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

Model Number:

ber: MB6022ABC-3

I. Electrical Characteristics Test Condition (Vs= 3.0 V, RL= 2 k ohm, Ta=20°C, RH=65%)

| ITEM                            | SYMBOL   | TEST CONDITION                                  | MINIMUM          | STANDARD                     | MAXIMUM | UNITS           |
|---------------------------------|--|---|------------------|------------------------------|---------|-----------------|
| Sensitivity                     | S  | f=1kHz, Pin=1Pa                                 | -47              | -45                          | -43     | 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           | ∆s   | f=1kHz, Pin=1Pa<br>Vs= 3.0 - 2.5                |                  |                              | -3      | dB              |
| Frequency Range                 |  | 3.0 - 2.5                                       |                  | 100-10,000                   |         |                 |
|                                 | mp 5 +3   mp 5 -3   mp -3 -3   mp -15 -3   -15 -20 -3   -25 -30 -100 | 1000<br>Frequency (Hz)                          | 10000            |                              |         |                 |
| Schematic Diagram of<br>Circuit | ECM  | Timpedance<br>verter<br>Capacitor<br>10pF<br>33 | Term.1           | C<br>O Output<br>RL<br>O +Vs | 1       |                 |

## II. Mechanical Characteristics

| Dimensions                      | Ø 6 x 2           | 2.2 See Drawing             | g in Section IV                  |  |  |  |
|---------------------------------|-------------------|-----------------------------|----------------------------------|--|--|--|
| Weight                          | Less than 0.2g    |                             |                                  |  |  |  |
| Solderering Heat Shock          | Not Applicable    |                             |                                  |  |  |  |
| Terminal Mechanical<br>Strength | Not Applicable    |                             |                                  |  |  |  |
| Absolute Maximum<br>Ratings     | Operating Voltage | Storage Temperatur<br>Range | e Operation Temperature<br>Range |  |  |  |
|                                 | Vs (V)            | Tstg °C                     | Tope °C                          |  |  |  |
|                                 | 10                | -40°C to +85°C              | -25°C to +70°C                   |  |  |  |



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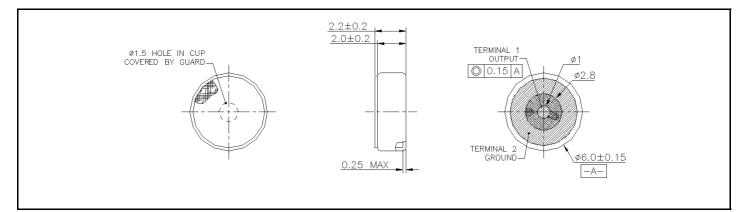
| III. Reliability Tests | No  | te: After any of the following tests performed, the sensitivity of the microphone unit<br>shall not deviate more than ±3dB from its initial value. The microphone shall<br>maintain its initial operation and appearance. Measurements for tests with<br>thermal requirements 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 1minute 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 1.5m onto a metal plate. |   |  |  |
| Temperature Test       | High  | The microphone unit must operate within its sensitivity specifications after subjected to the following conditions: +80°C for 96 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: -40°C for 96 hrs, and exposed to room temperature for 2 hrs.  |  |  |
| Humidity Test          | +70°C at  | +70°C at 90%RH for 120 hrs  |  |  |

+20°C for 10 minutes, 27 cycles. (The measurement to be done after 2 hrs of conditioning at +20°C.)

After exposure at -40°C for 45 minutes, at+20°C for 10 minutes, at +85°C for 45 minutes, at

## IV. Dimensional Drawing

Temperature Cycle Test



## V. Other

Better Shielded, RF noise resistant type.

Thermal Shock : 1cycle = 1Hr (-40°C) + 1Hr(75°C) , 5 cycles with dwells of 2hrs at each and change time < 3min. ESD Test : 15kV no damage (include in mobile phone)

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