



Messrs : \_\_\_\_\_

## SPECIFICATION

ITEM : DYNAMIC MICRO SPEAKER \_\_\_\_\_

CUSTOMER'S

MODEL : \_\_\_\_\_

MODEL

NUMBER : STS-2308-01 \_\_\_\_\_

SIZE : Ø23 5.0T \_\_\_\_\_

DATE OF APPROVAL 2007. 03.09 \_\_\_\_\_

星 音 電 子

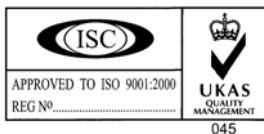
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# STS-2308-01

## DYNAMIC MICRO SPEAKER

### 1. Scope

This documents contains both general speaker requirements, qualification Requirements, and those specific electrical and mechanical requirements For this model. ( Dynamic Micro Speaker )

### 2. Mechanical Specification

|     |            |   |
|-----|------------|---|
| 2.1 | Dimension  | 23mm X 5.0mmT   |
| 2.2 | Weight     | 5.21g $\pm$ 10%   |
| 2.3 | Magnet     | Nd-Fe-B , $\varnothing$ 9.5mm X 1.5mm   |
| 2.4 | Appearance | Should not exist any obstacles to be harmful to Normal operation, from damages, cracks, rusts and Distortions, etc. |

### 3. Electro-acoustical Specification

|      |                       |  |
|------|-----------------------|--|
| 3.1  | S.P.L                 | 84dB $\pm$ 3dB ( 1.0W/0.5m )<br>Average at 1.0k, 1.2k, 1.5k, 2.0kHz                      |
| 3.2  | Impedance             | 8 ohm $\pm$ 15% at 1V, 1kHz  |
| 3.3  | Power Rating          | Nominal 0.7W, Max 1.0W   |
| 3.4  | Resonance Frequency   | 600Hz $\pm$ 20% at 1V.   |
| 3.5  | Frequency Range       | 600Hz ~ 20kHz  |
| 3.6  | Distortion            | 5% max, at 1kHz, 0.7W  |
| 3.7  | Magnetic Flux Density | ----- Gauss  |
| 3.8  | Polarity              | Positive DC current is applied to the Terminal marked(+) should be moved Forward.        |
| 3.9  | Terminal Strength     | Capable of withstand a 500g load for 3sec. Without resulting in any damage or rejection. |
| 3.10 | Buzz & Rattle         | Must be normal at 2.36V<br>Sine wave between 600Hz to 20kHz                              |

# STS-2308-01

DYNAMIC MICRO SPEAKER

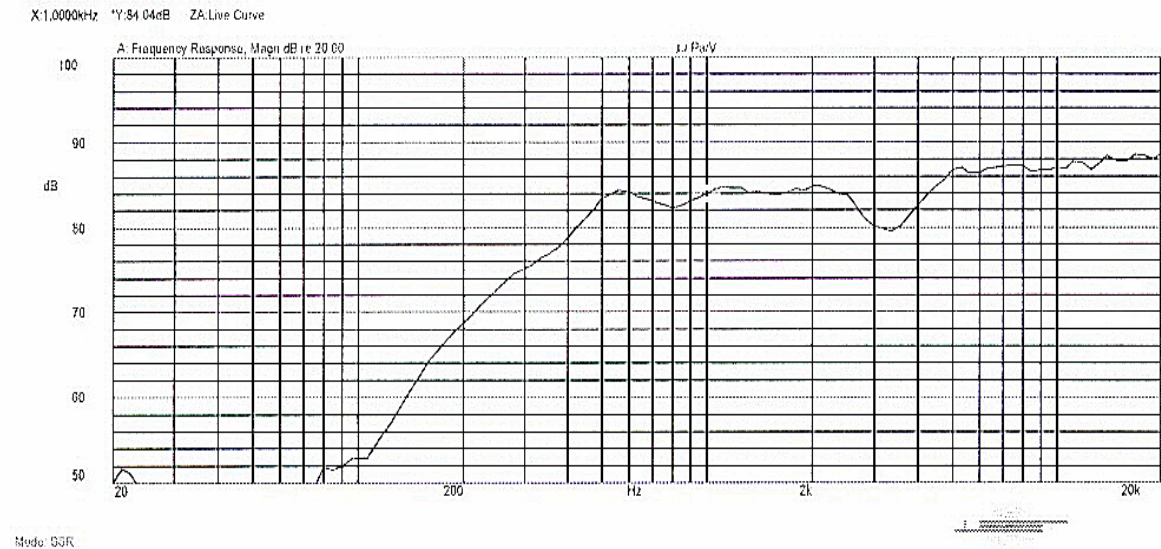
## 4. Qualification test

|     |                         |   |
|-----|-------------------------|---|
| 4.1 | Initial Characteristics | All data initially taken at + 25 °C ( Room Temperature ). Component must be fully stabilized at + 25 °C before data Is taken which may require up to a 4 hour soak.   |
| 4.2 | Heat Resistance Test    | Sound pressure level is not to deviate by more than $\pm 3\text{dB}$ From pre-test measurement after exposed for 96 hours to $+70\pm 2^{\circ}\text{C}$ then removed and placed under normal temperature for a period 3hours.   |
| 4.3 | Cold Resistance Test    | Sound pressure level is not to deviate by more than $\pm 3\text{dB}$ From pre-test measurement after exposed for 96 hours to $-20\pm 2^{\circ}\text{C}$ then removed and placed under normal temperature for a period 3 hours.  |
| 4.4 | Static Humidity         | Precondition at $+25^{\circ}\text{C}$ for 1 hour. Then expose to $+40^{\circ}\text{C}$ With 90 to 95% relative humidity for 96 hours. Finally allow to dry at room ambient for 6 hours before Taking final measurements.  |
| 4.5 | Load Test (Life Test)   | 0.7white noise is applied for 96 hours application of- Filtered signal and satisfy the tests listed on specifications 2.4 / 3.1 / 3.4 / 3.10  |
| 4.6 | Drop Test               | Drop the unit contained in normal box onto the board 20mm Thickness 10 times from the height of 0.75m and then should Satisfy the tests listed on specifications 2.4 / 3.10   |
| 4.7 | Temperature Cycling     | <p>One cycle shall consist of 30minutes at <math>+70^{\circ}\text{C}</math> followed By 30minutes at <math>-20^{\circ}\text{C}</math>. Allow 20 minute chamber transition Time at <math>+25^{\circ}\text{C}</math> between temperature extremes total of 10cycles.</p> <p style="text-align: center;">Temperature(<math>^{\circ}\text{C}</math>)</p> <p style="text-align: center;">( Diagram For 1 Cycle )</p> |

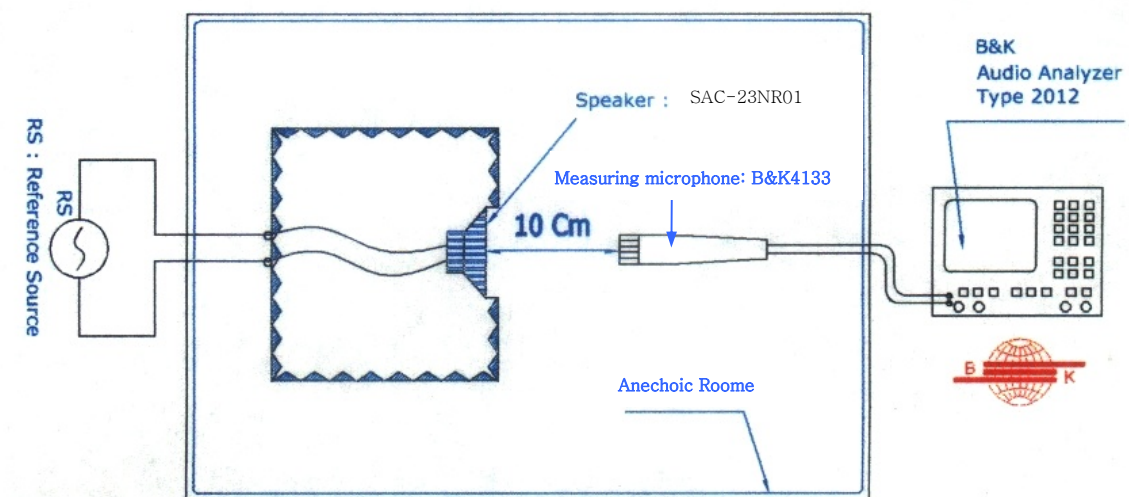
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DYNAMIC MICRO SPEAKER

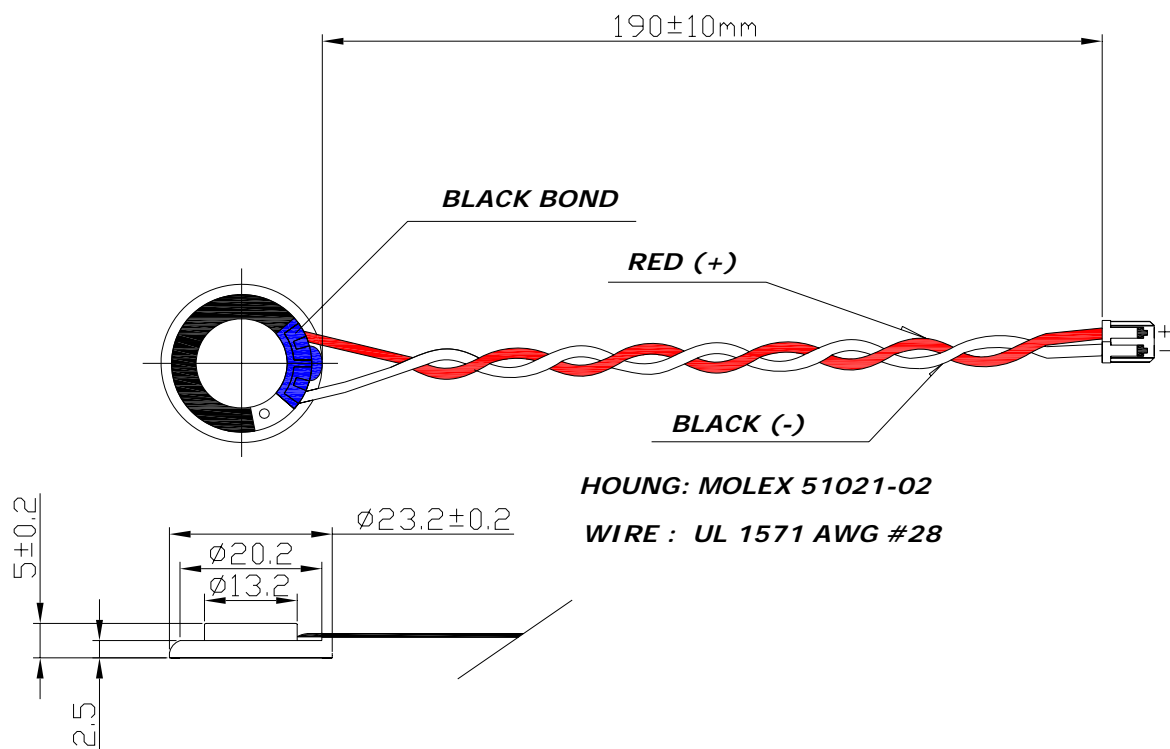
## 5. Frequency Response Curve






## 6. Measurement setup



- 6-1. Testing input : 1.0W
- 6-2. Measuring Distance : 0.5m
- 6-3. Potentiometer Range : 50dB
- 6-4. Response Time : 0.5 sec



|           |                       |  |            |         |
|-----------|-----------------------|--|------------|---------|
| MODEL NO  | STS-2308-01           | DATE   | 2007.03.09 |         |
| TITLE     | Dynamic Micro Speaker | DESD.BY  | CHED.BY    | APPD.BY |
| Scale     | N/S                   |    |            |         |
| Tolerance | ± 0.2                 |  |            |         |
| Unit      | mm                    |  |            |         |