



JL World Corporation Limited

Tel : (+852) 25650319 Fax : (+852) 25656979 Web : www.jlworld.com

Document Number : 040544
Revision : A2
Total Pages : 5
Prepare by : Loki, Lo
Date : 9 July, 2013

SoniCrest Acoustic Components

Document Type : Specification
Product Type : Electret Condenser Microphone Component
Part Number : HMC1001A-65

A1 - New issue created by Leo Sin on 24 May, 2004		
A2 - Updated format and layout by Loki Lo on 9 Jul., 2013		

This material is the property of JL World Corporation Limited.
Unauthorized copying or use of this material is prohibited.

1. Purpose and Scope

This document contains both general requirements, qualification requirements, and those specific electrical, mechanical requirements for this part.

2. Description

ø9.7mm electret condenser microphone, RoHS compliant.

3. Application

Telecommunication Equipment, Computers and Peripherals, etc.

4. Component Requirement

4.1. General Requirement

- 4.1.1. Operating Temperature Range : -10°C to +60°C
- 4.1.2. Storage Temperature Range : -20°C to +70°C

4.2. Electrical Requirement

- 4.2.1. Directivity : Noise Cancelling
- 4.2.2. Sensitivity : -45 ± 3dB
(0dB = 1V/Pa, 1kHz, rated voltage, RL = 2.2kΩ)
- 4.2.3. Rated Voltage : 1.5V
- 4.2.4. Operating Voltage Range : 1.1 ~ 10 V
- 4.2.5. Current Consumption : <=0.5mA
- 4.2.6. Frequency Range : 100 ~ 10KHz
- 4.2.7. Impedance : Low
- 4.2.8. S/N Ratio : >=55dB
- 4.2.9. Maximum Input SPL : 110dB

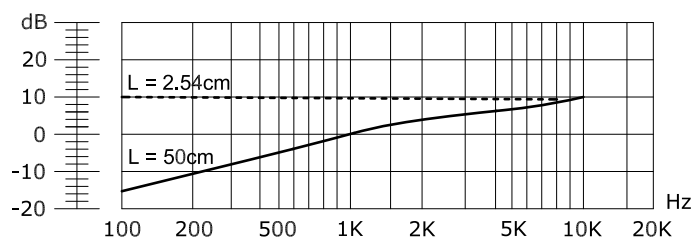


Figure 1. Frequency Response

4.3. Mechanical Requirement

- 4.3.1. Layout and Dimension : See Section 6, Figure 4

4.4. Test Setup

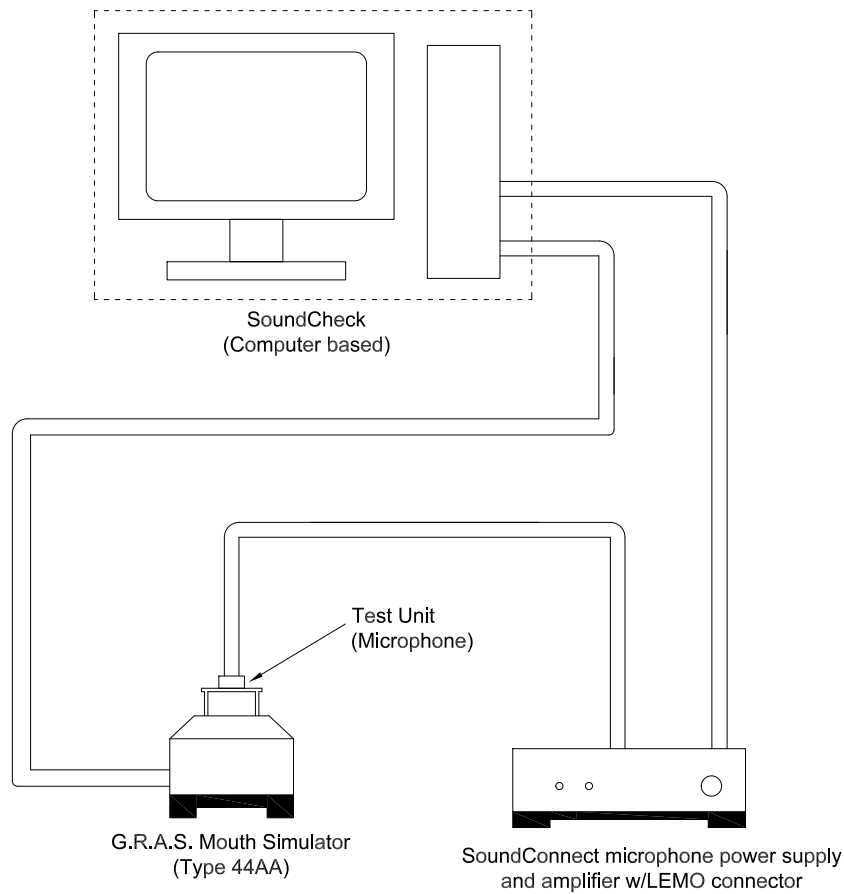


Figure 2. Test Setup

Notes : Apply sinusoidal wave from SoundCheck Audio Analyzer (Computer based) to speaker in G.R.A.S. Mouth Simulator Type 44AA. Measure sensitivity of test unit with specified driving circuit. The whole testing system should be calibrated based on calibration procedure recommended by the manufacturer before measurement. Measurement should be carried out in an excellent insulation from external noise environment.

4.5. Schematic Diagram

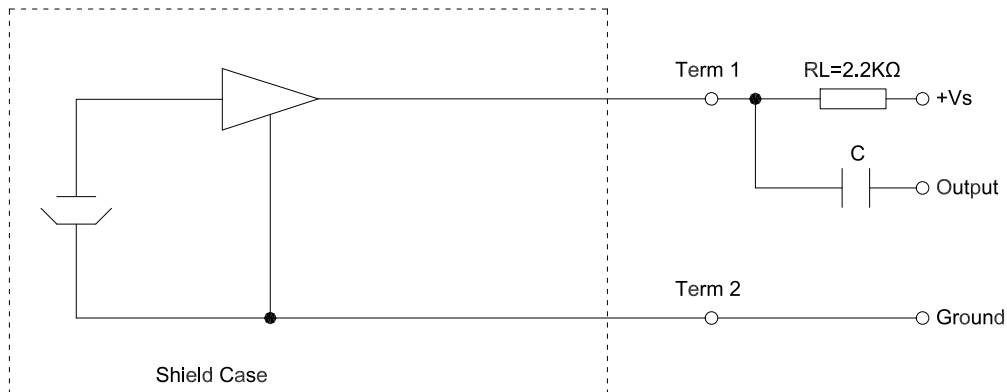


Figure 3. Schematic Diagram

5. Reliability Test

- 5.1. High Temperature** : Subject samples to +60°C and operate for 72 hours. Components must be fully stabilized at temperature extremes before data is taken, which may require up to a 2 hours soak.
- 5.2. Low Temperature** : Subject samples to -10°C and operate for 72 hours. Components must be fully stabilized at temperature extremes before data is taken, which may require up to a 2 hours soak.
- 5.3. Static Humidity** : Precondition at +25°C for 1 hour. Then expose to +40°C with 90 to 95% relative humidity for 96 hours. Finally dry at room ambient for 2 hours before taking final measurement.

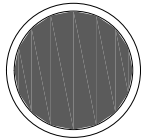
6. Mechanical Layout

Unit : mm

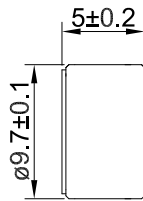
Tolerance : Linear XX.X = ± 0.3
 XX.XX = ± 0.05
 Angular = $\pm 0.25^\circ$

(unless otherwise specified)

Top View



Side View



Bottom View

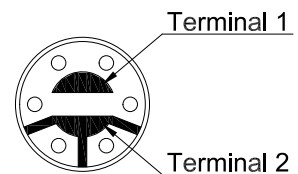


Figure 4. HMC1001A-65 Mechanical Layout