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Document Number : 0603-71
Revision : A4
Total Pages : 5
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Date : 24 September, 2018

SoniCrest Brand Acoustic Components
www.jlsonicrest.com
Document Type : Specification
Product Type : Electro-magnetic Sound Generator Component
Part Number : HCM2606AX

A1 - New issue created by Leo Sin on 30 Mar., 2006		
A2 - Updated RoHS version by Leo Sin on 24 Aug., 2006		
A3 - Updated section 4 - 6 by Loki, Lo on 26 Apr., 2013		
A4 - Updated section 6 by Loki, Lo on 24 Sept., 2018		

1. Purpose and Scope

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

2. Description

26 x 26 mm electro-magnetic sound generator with built-in oscillation circuit, RoHS compliant.

3. Application

Computers and Peripherals, Portable Equipment, Automobile Electronics, POS System, Household Appilances, etc.

4. Component Requirement

4.1. General Requirement

4.1.1.	Operating Temperature Range	: -20°C to +60°C
4.1.2.	Storage Temperature Range	: -30°C to +70°C
4.1.3.	Weight	: Approx. 17g
4.1.4.	Housing Material	: ABS

4.2. Electrical Requirement

4.2.1.	Rated Voltage	: 6V
4.2.2.	Operating Voltage	: 4 ~ 8 V
4.2.3.	Rated Current	: <=50mA
4.2.4.	Generated Frequency	: 400 ± 100 Hz
4.2.5.	Sound Pressure Level at 10cm (Applying rated voltage)	: >=95dB

4.3. Mechanical Requirement

4.3.1.	Layout and Dimension	: See Section 6, Figure 3

4.4. Test Setup of SPL and Frequency Measurement

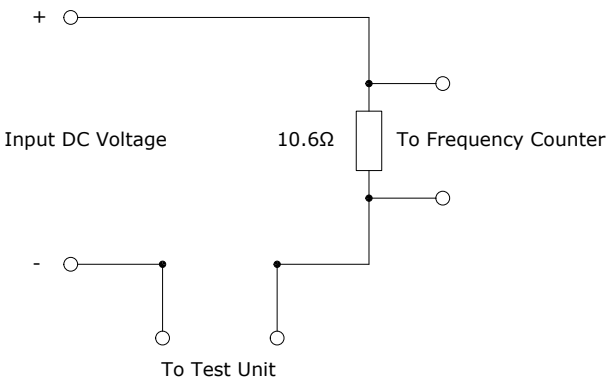

Figure 1. Frequency Testing Circuit

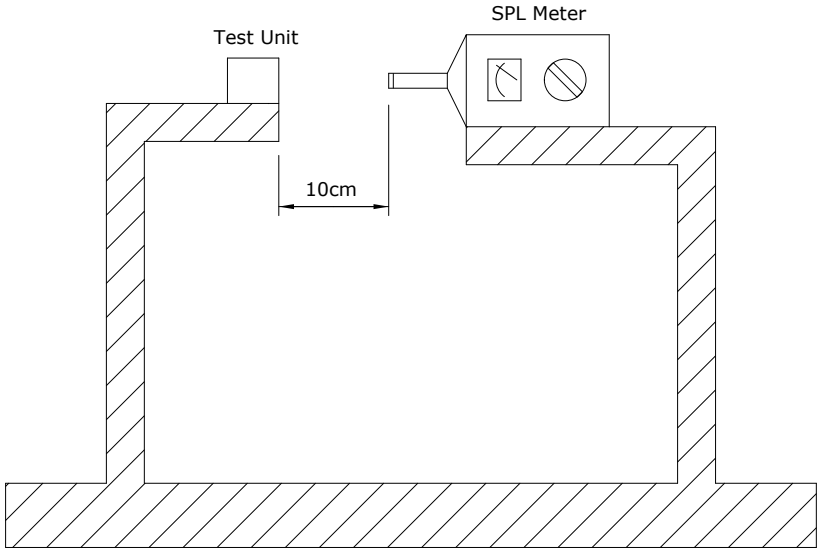

Figure 2. SPL Inspection Test Setup

Notes : Input 6V DC into samples. Measure SPL using a calibrated SPL meter 10cm from the alert port. Sound level meter to be in accordance with IEC651 (1979) Type 1 and/or ANSI S1.4-1983. The meter must be checked on a daily basis using a calibrated acoustic calibrator recommended by the manufacturer. Measurement should be carried out in a free field environment or at least 40cm from any surface.

5. Reliability Test

5.1. Operating Life : Subject samples to room condition for 96 hours with rated voltage. Components must be fully stabilized before data is taken, which may require up to a 2 hours soak.

5.2. High Temperature : Subject samples to +70°C for 72 hours with rated voltage. Components must be fully stabilized at temperature extrems before data is taken, which may require up to a 2 hours soak.

5.3. Low Temperature : Subject samples to -30°C for 72 hours with rated voltage. Components must be fully stabilized at temperature extrems before data is taken, which may require up to a 2 hours soak.

5.4. Temperature Shock : Each temperature cycle shall consist of 30 minutes at -30°C, 15 minutes at +20°C, 30 minutes at +70°C and 15 minutes at +20°C. Test duration is for 10 cycles.

5.5. Static Humidity : Precondition at room temperature 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.

5.6. Random Vibration : Secure samples. Vibrated randomly 10Hz ~ 50Hz with 1.5mm peak amplitude and 1 minutes sweep duration. The test duration is 30 minutes per plane (x, y, z).

5.7. Drop Test : Drop samples naturally from the height of 0.8m onto a wooden board six times.

5.8. Solderability : 235°C±5°C for 2±0.5 seconds.

6. Mechanical Layout

Unit : mm
Tolerance : Linear XX.X = ±0.5
XX.XX = ±0.05
Angular = ±0.25°
(unless otherwise specified)

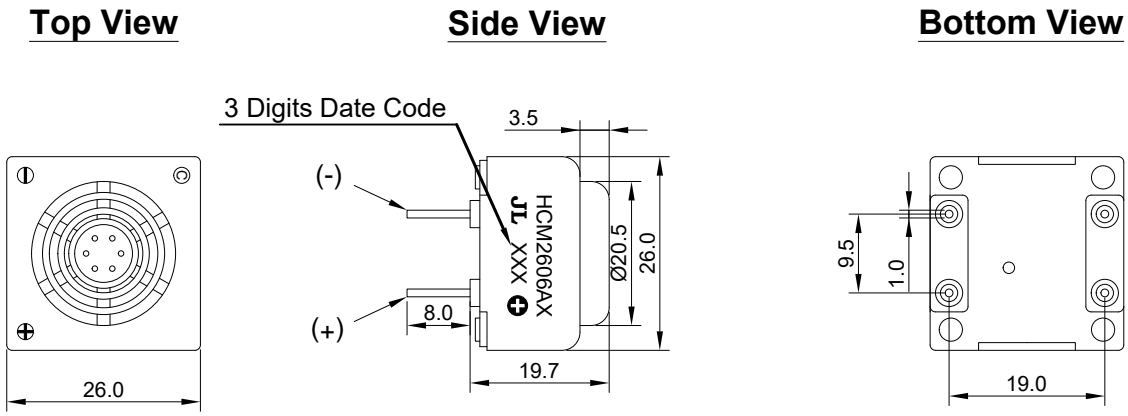

Figure 3. HCM2606AX Mechanical Layout

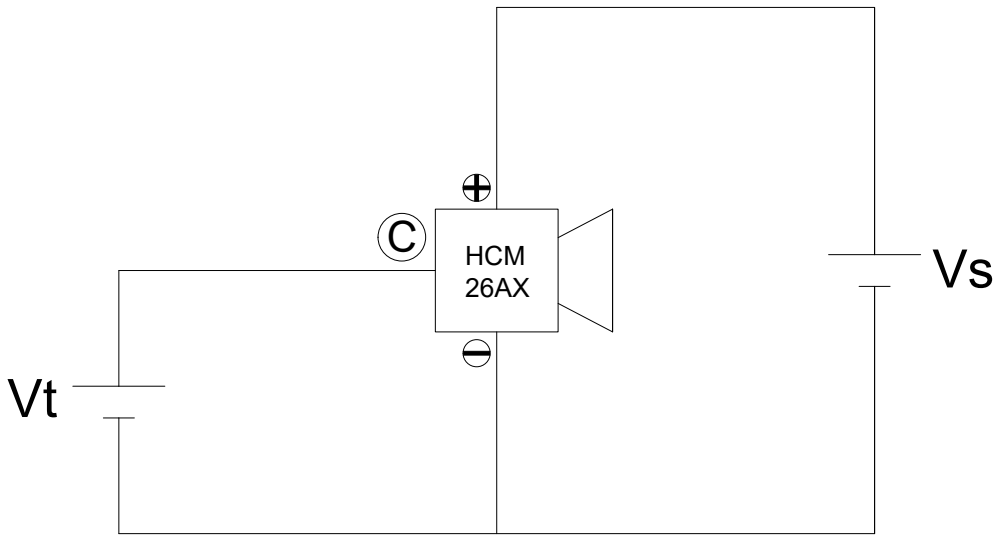

Figure 4. Coupled Circuit