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SoniCrest Brand Acoustic Components

www.jlsonicrest.com

Document Type : Specification
Product Type : Electro-magnetic Sound Generator Component
Part Number : HCM2606BX

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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 Appliances, 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	: ≤65mA
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
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4.4. Test Setup of SPL and Frequency Measurement

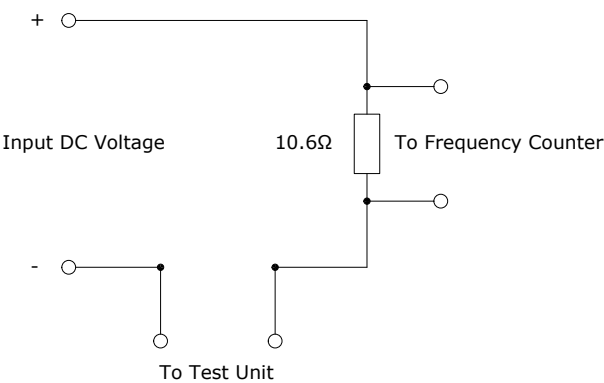


Figure 1. Frequency Testing Circuit

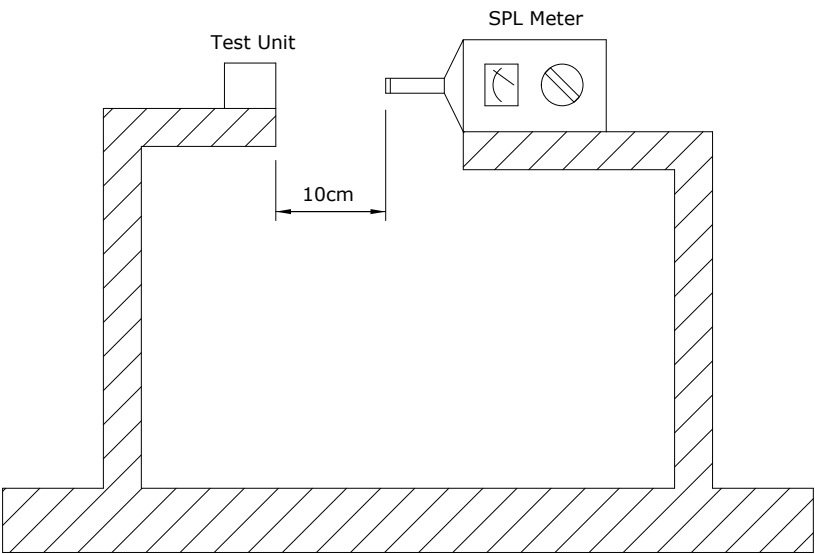


Figure 2. SPL Inspection Test Setup

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 extremes 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 extremes 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

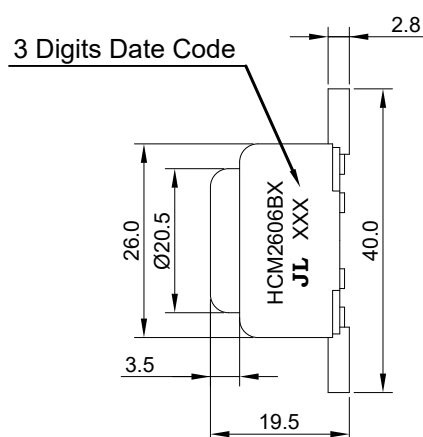
Tolerance : Linear XX.X = ± 0.5

XX.XX = ± 0.05

Angular = $\pm 0.25^\circ$

(unless otherwise specified)

Side View



Top View

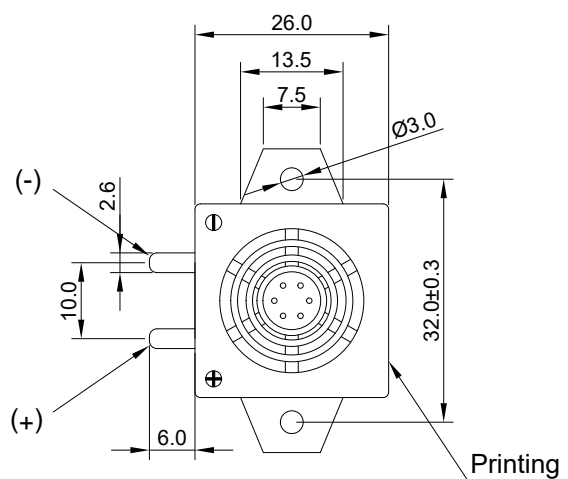


Figure 3. HCM2606BX Mechanical Layout