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SoniCrest Acoustic Components

Document Type : Specification
Product Type : Electro-magnetic Sound Generator Component
Part Number : HCS1206D/854

A1 - New issue created by Holmes, Poon on 12 May, 2011		
A2 - Updated Mechanical Layout by Loki, Lo on 19 Feb., 2013		
A3 - Added packing layout by Loki, Lo on 2 Sept., 2014		

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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

12.8 x 12.8 mm SMD electro-magnetic sound generator with sealing label, 90 degree pin orientation, RoHS compliant.

3. Application

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

4. Component Requirement

4.1 General Requirement

4.1.1. Operating Temperature Range	: -30°C to +70°C
4.1.2. Storage Temperature Range	: -40°C to +80°C
4.1.3. Weight	: Approx. 2g

4.2 Electrical Requirement

4.2.1. Rated Voltage	: 6V
4.2.2. Operating Voltage	: 4 ~ 8 V
4.2.3. Rated Current	: <=60mA
4.2.4. Rated Frequency	: 2400Hz
4.2.5. Coil Resistance	: 45 ± 5 Ω
4.2.6. Sound Pressure level at 10cm (Applying rated voltage and rated frequency)	: >=85dB

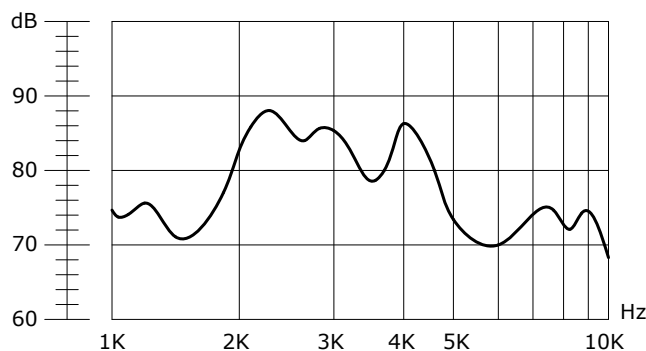


Figure 1. Frequency Response

4.3 Mechanical Requirement

4.3.1. Layout and Dimension	: See Section 7, Figure 4
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4.4. Test Setup

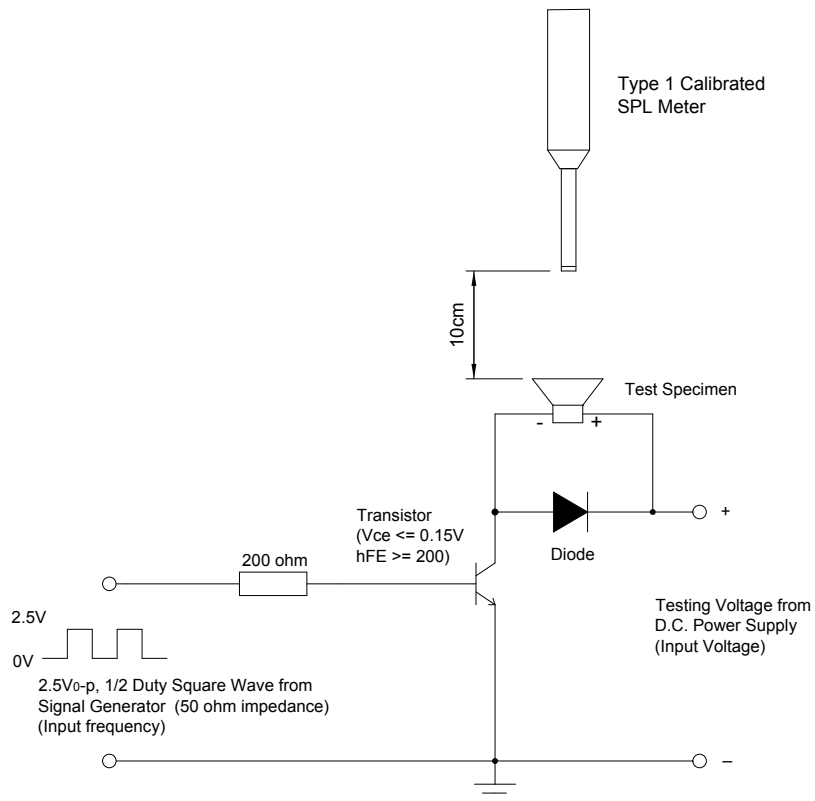


Figure 2. Test Setup

Notes : Apply 2.5V_{0-p} from Signal Generator, set 2400Hz from Signal Generator. Measure SPL using a calibrated SPL meter 30cm from the sound 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. High Temperature** : Subject samples to +80°C and operate for 96 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 -30°C and operate for 96 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 room temperature for 1 hour. Then expose to +40°C with 90 ~ 95% relative humidity for 96 hours. Finally dry at room ambient for 2 hours before taking final measurement.

6. Recommended Reflow Process Condition

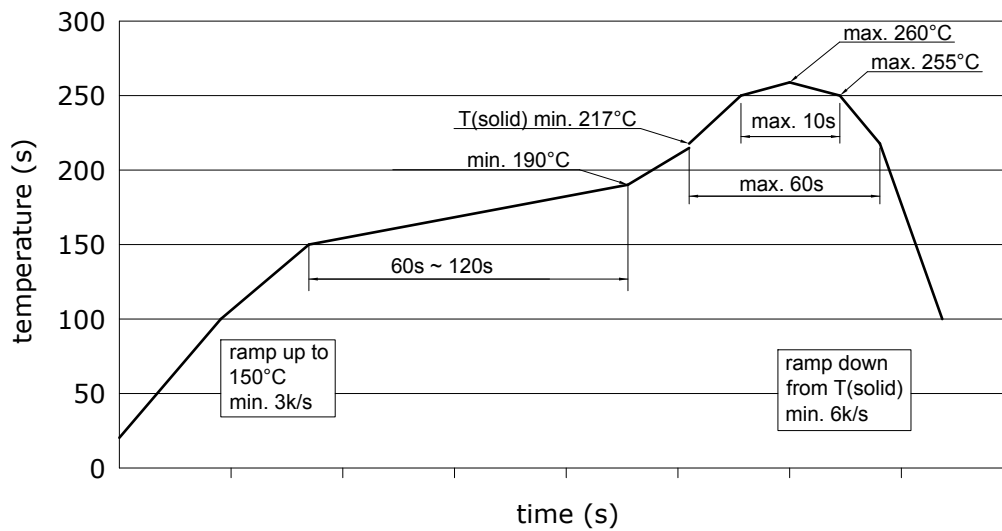


Figure 3. Recommended reflow oven temperature profile

7. Mechanical Layout

Unit : mm

Tolerance : Linear XX.X = ± 0.3
 XX.XX = ± 0.05
 Angular = $\pm 0.25^\circ$
(unless otherwise specified)

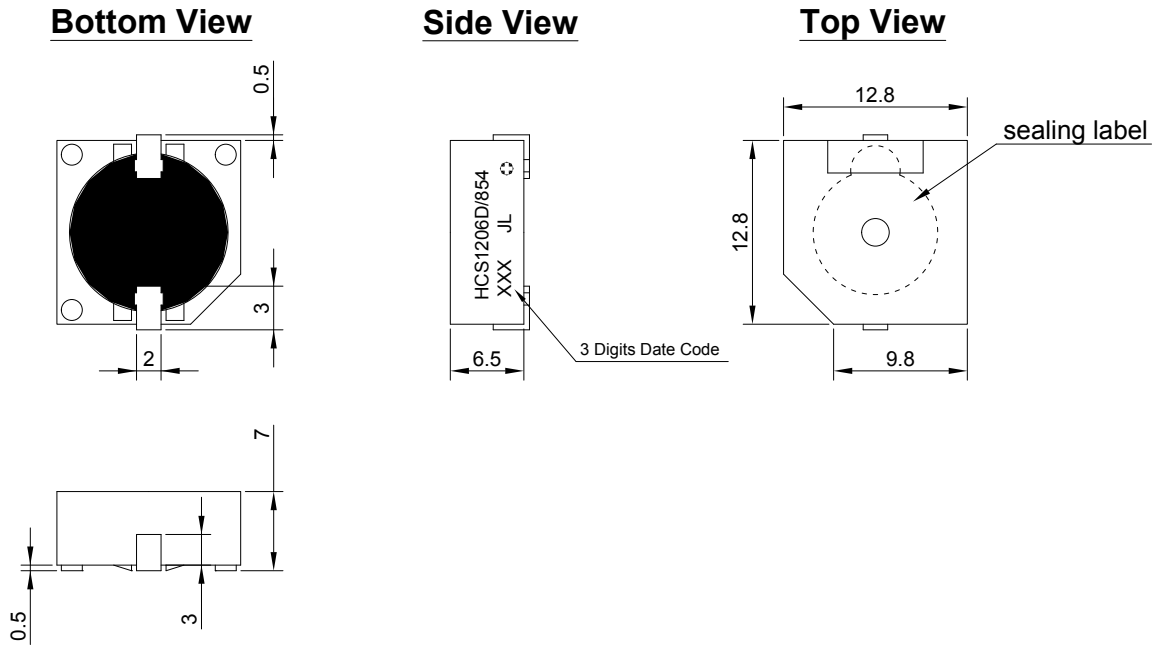


Figure 4. HCS1206D/854 Mechanical Layout

8. Standard Packing Layout

8.1. Tape Layout

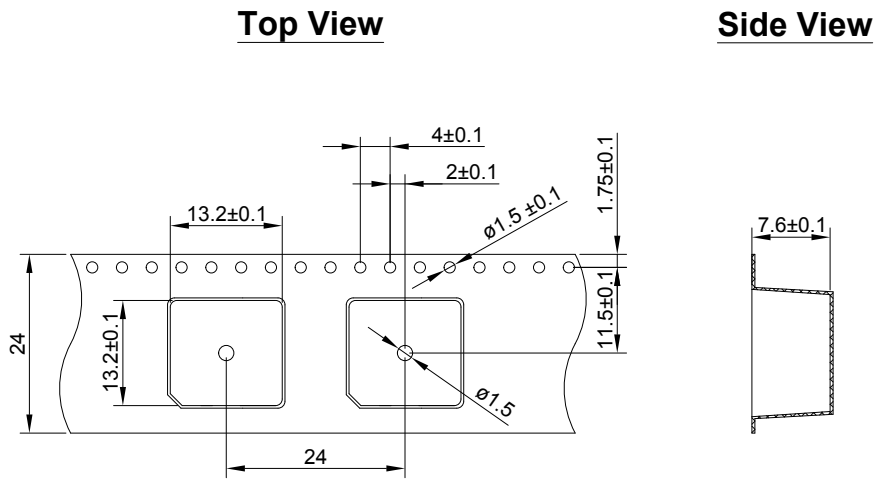


Figure 5. Tape Layout

8.2. Reels Installation Layout

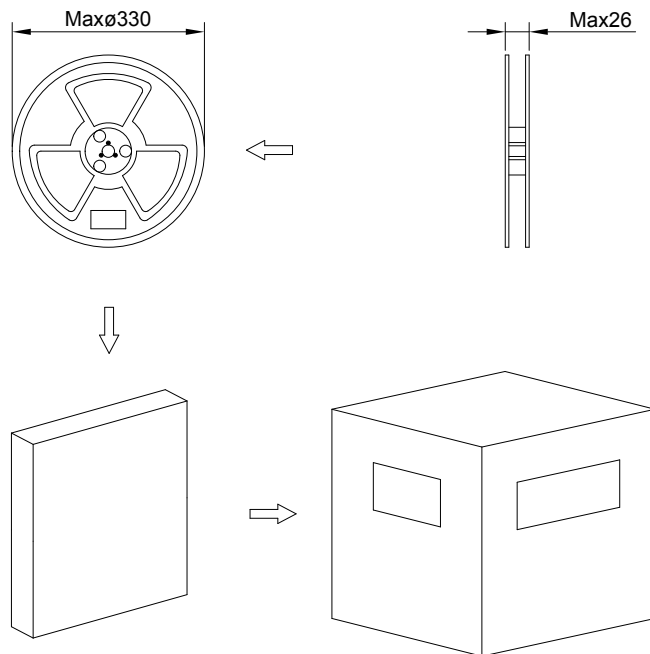


Figure 6. Reels Installation

8.3. Packing Quantity : 300 pieces per reel, 10 reels per carton. (Total 3000 pieces)

8.4. Carton Size : 365 x 370 x 420 mm