

# BeStar Technologies Inc.

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# **SoniCrest** Brand Acoustic Components

www.jlsonicrest.com

Document Type : Specification

Product Type : Piezo Sound Generator Component

Part Number : HPA24C

A3 - Updated format & layout by Leo, Sin on 18 Jan., 2007	
A4 - Updated section 4 - 6 by Loki, Lo on 20 Mar., 2014	
A5 - Updated packing by Loki, Lo on 16 Nov., 2015	

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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

Ø24mm piezo sound generator, RoHS compliant.

#### 3. Application

Telecommunication Equipment, Computers and Peripherals, POS System, Portable Equipment, 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 +85°C

**4.1.3.** Housing Material : Noryl

**4.1.4.** Weight : Approx. 1.9

## 4.2. Electrical Requirement

**4.2.1.** Rated Voltage : 15Vp-p

**4.2.2.** Operating Voltage :  $1 \sim 30 \text{Vp-p}$ 

**4.2.3.** Rated Current : <=8mA

**4.2.4.** Capacitance :  $18 \pm 30\%$  nF

**4.2.5.** Sound Pressure level at 10cm : >=90dB

(Applying rated voltage)

**4.2.6.** Generated Frequency :  $5500 \pm 700 \text{ Hz}$ 

#### 4.3. Mechanical Requirement

**4.3.1.** Layout and Dimension : See Section 6, Figure 2

#### 4.4. Test Setup

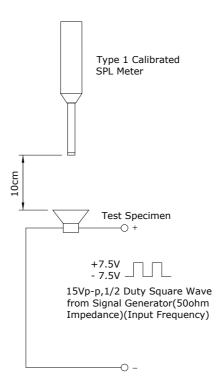


Figure 1. Test Setup

**Notes**: Apply 15Vp-p, set 5500Hz from Signal Generator. 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.

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### 5. Reliability Test

**5.1. High Temperature**: Subject samples to  $+85 \pm 2^{\circ}$ C for 48 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  $-40 \pm 2^{\circ}$ C for 48 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**: Subject samples to  $+40 \pm 2$ °C with 90%~95% relative humidity for 24 hours. Finally dry at room ambient for 4 hours before taking final measurement.

#### 6. Mechanical Layout

Unit: mm

Tolerance : Linear  $XX.X = \pm 0.3$ 

 $XX.XX = \pm 0.05$ 

Angular =  $\pm 0.25^{\circ}$ 

(unless otherwise specified)

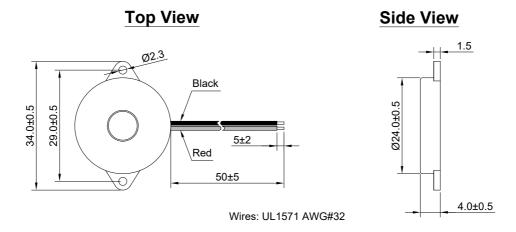


Figure 2. HPA24C Mechanical Layout

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# 7. Standard Packing Requirements

**7.1. Packing Quantity**: 100 pieces per tray, 10 trays per unit, 1 unit per carton

(Total 5000 pieces)

**7.2. Net Weight :** 2Kg

**7.3. Gross Weight :** 3Kg

7.4. Carton Layout

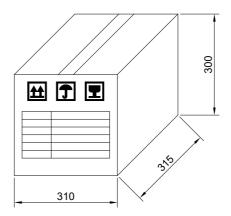


Figure 3. Tray and Carton Layout