1. Purpose and Scope

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

2. Description

Ø23.8mm piezo sound generator with rated frequency 2900Hz, 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	: -20°C to +70°C
4.1.2.	Storage Temperature Range	: -30°C to +80°C
4.1.3.	Weight	: Approx. 6g

4.2. Electrical Requirement

4.2.1.	Rated Voltage (DC)	: 12V
4.2.2.	Operating Voltage	: 3 ~ 20 V
4.2.3.	Rated Current (Applying rated voltage)	: <=8mA
4.2.4.	Generated Frequency	: 2900 ± 500 Hz
4.2.5.	Sound Pressure level at 30cm (Applying rated voltage)	: >=85dB

4.3. Mechanical Requirement

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

4.4. Test Setup of SPL and Frequency Measurement

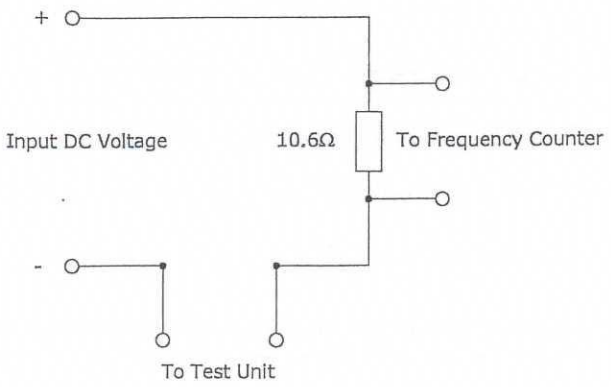


Figure 1. Frequency Testing Circuit

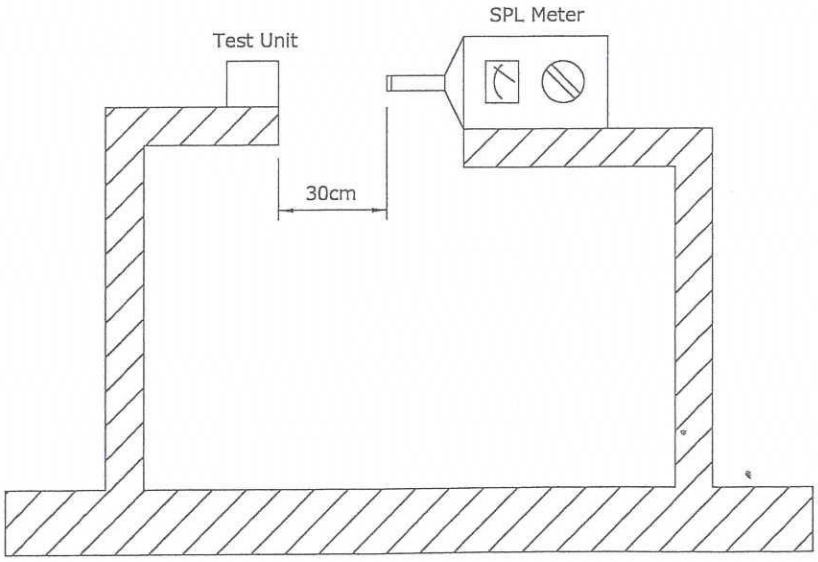


Figure 2. SPL Inspection Test Setup

Notes : Input 12V DC into samples. Measure SPL using a calibrated SPL meter 30cm 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. High Temperature : Subject samples to +80 ± 2°C 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 ± 2°C 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. Temperature Cycle Test : Each temperature cycle shall consist of 30 minutes at -30°C, 15 minutes at +20°C, 30 minutes at +80°C, 15 minutes at +20°C. Test duration is for 50 cycles. Components must be fully stabilized at temperature extremes before data is taken, which may require up to a 2 hours soak.

5.4. Static Humidity : Each cycle shall consist of +25°C for 5 hours and +65°C for 6 hours with 90 to 95% relative humidity. Test duration is for 30 cycles. Finally dry at room ambient for 2 hours before taking final measurement.

5.5. Random Vibration : Secure samples. Vibrated randomly 10 ~ 55Hz with 1.53mm peak amplitude in 3 directions (x, y and z). The test duration is 2 hours per plane.

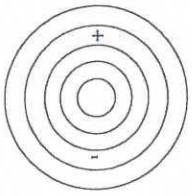
5.6. Drop Test : Drop samples naturally from the height of 100cm onto a 10mm thick wooden board in 3 directions (x, y and z), total of 3 times.

5.7. Solderability : Immerse solder pads into molten solder at 235 ± 5°C for 3 ± 0.5 seconds.

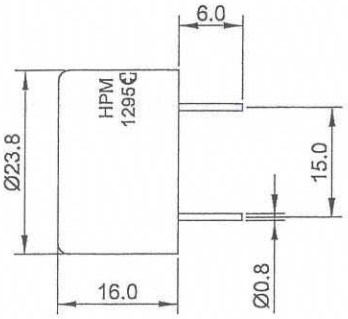
6. Mechanical Layout

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

Top View



Side View



Bottom View