**Challenge Electronics**
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# PRODUCT INFORMATION

| PART #: | CE-CT-516-2310 | Revision: 2-2012 |
|---|---|---|
| RoHS COMPLIANCE | **PIEZOELECTRIC BUZZER** | |

## DESCRIPTION

**Challenge Electronics Piezoelectric Buzzer, 23.0** mm Diameter**, B** style case, **9.7** mm High, **5-16** Vdc, **Continuous Tone Medium Loud, 3,500** Hz Resonant Frequency, Sound Pressure Level at 82 dB(A) at 61 cm and Maximum Voltage, **P**C Pins Termination, **R**oHS Compliant

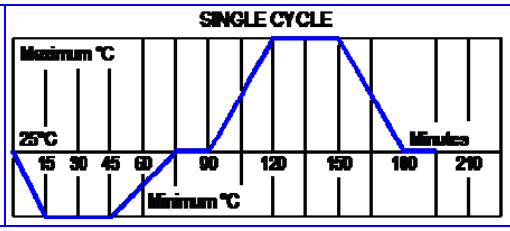
## FEATURES

- **RoHS Compliant**
- **ISO 9001 Certified**

## SPECIFICATIONS

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Alarm Type** | | **Medium Loud, Continuous Tone** | | | | **Pulse Rate** | | | |
| **Operating Voltage** | | **5 - 16 Vdc** | **Nominal Voltage** | **12 Vdc** | | **Resonant Frequency** | **3,500 ± 500 Hz.** | | |
| **Sound Pressure Level** | | **82 ± 4 dB(A), at: Maximum Voltage, 61 cm, 25ºC** | | | | | | | |
| **Operating Current** | | **9 mA at Nominal Voltage** | | | | | | | |
| **Operating Temperature** | | **-20ºC to + 65ºC** | | | | **Storage Temperature** | **-30 ºC to + 80ºC** | | |
| **Termination** | | **Two PC Pins, 0.032" (0.8 mm) Diameter, Electro-Tin Plated** | | | | | | | |
| **Material** | **Housing** | **Plastic, MMPO or equal or equal, Black** | | | | **Diaphragm** | **SS 304** | | |
| | **Encapsulation** | **PCB Plate** | | | | | | | |
| **Physical Dimensions** | | **Length/ Diameter (L /D)** | **23.0 mm ø** | **Width (W)** | | **Height (H)** | **9.7 mm** | **Pin Spacing** | **15.0 mm** |
| **Approximate Weight** | | **4 grams** | **Removable Washing Label** | | **No** | **Compliance** | **RoHS** | | |
| **Packaging** | | | | | | | | | |

## RELIABILITY

| | | |
|---|---|---|
| **Thermal Operating Temperature Test** | | **96 hours** continuous operation **at Rated Voltage**, at **Maximum Rated Operating Temperature** * |
| | | **96 hours** continuous operation **at Rated Voltage**, at **Minimum Rated Operating Temperature** * |
| **Thermal Storage Temperature Test** | | **96 hours** storage at **Maximum Rated Storage Temperatures** * |
| | | **96 hours** storage at **Minimum Rated Storage Temperatures** * |
| **Thermal Shock Test** | | **5 cycles** of **Minimum and Maximum Operating Temperature,** Each cycle shell be set per diagram and is 3 hours long *   |
| **Humidity Test** | | **120 Hours** at +60°C±2°C. 90-95% RH * |
| **Insulation Test** | | A minimum of 10 MΩ, measured with 100 Vdc Insulation Resistance Meter, between the Electrical Terminals and the Transducer Case |
| **Vibration Test** | | 2 Hours of at 1.5 mm with 10 to 55 Hz. vibration frequency to each of 3 perpendicular directions * |
| **Termination Strength** | | Maximum of 9.8 N (1.0 Kg) load pull test, applied to each terminal in axial direction for 10 seconds |
| **Drop Test** | | Dropped naturally from 750 mm height onto the surface of 40 mm wooden board, 3 axes (X,Y,Z) directions, 3 times (6 times total) * |
| **Solderability** | | Terminal leads are immersed in rosin for 5 seconds and then immersed in solder-bath of +270°C for 3±1 seconds |
| **Soldering Heat Resistance** | | Terminal leads are immersed, up to 1.5 mm from part case, in rosin for 5 seconds and then immersed in solder-bath of +350±5°C for 3±0.5 seconds or +260±5°C for 10±1 seconds |
| * **Reliability Test Performance** | | **Parts should conform to original performance within ±3dB, after 3 hours of recovery period** |
| **Life Test** | **Intermittent** | **1,000 hours** of a 1 minute on 4 minutes off cycle at room temperature and **maximum rated voltage** |
| | **Continuous** | **250 hours** continuous operation at **maximum rated Voltage and maximum Operating Temperatures** |
| **Warranty** | For a period of one (1) year from date of shipping under normal operations conditions<br>This warranty does not apply to products damaged through misuse, abuse, improper installation, alteration, rework, or attempt to repair | |

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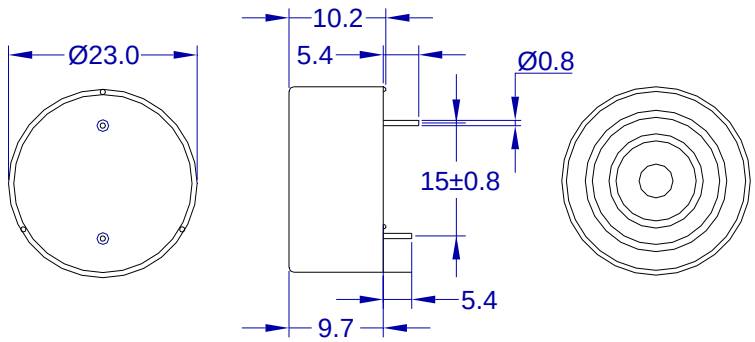
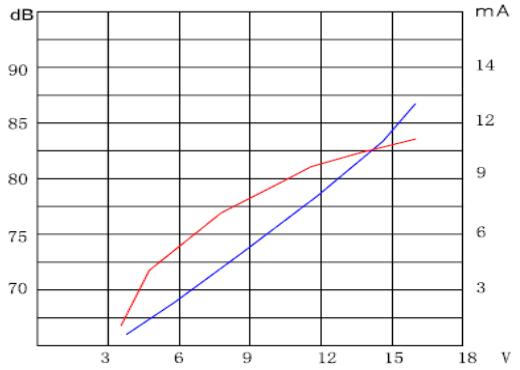
## DIMENSIONS Units in: mm Tolerance: ± 0.5 mm

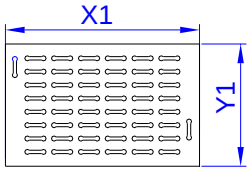



## SPL and Current vs. Input Voltage Response

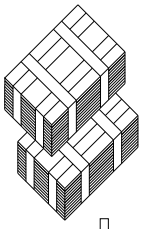



## PACKAGING

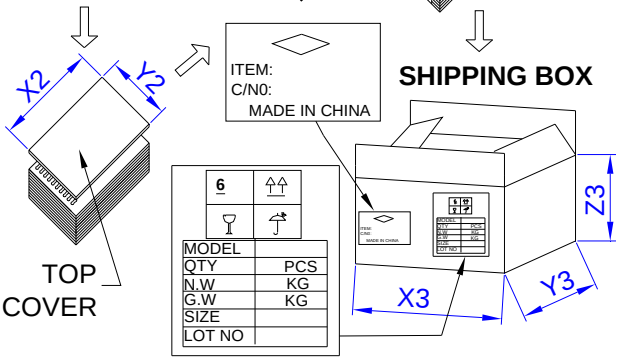
**ONE TRAY:**




**TWO BUNDLE**



**ONE BUNDLE**:




| MARKING | TRAY | | |
|---|---|---|---|
| **Bundle** | Dimensions | **X1** | **cm** |
| Customer PN | | **Y1** | **cm** |
| Other PN if required | | **Z1** | **cm** |
| Quantity | Quantity | | |
| Lot and/or Date Code | **BUNDLE** | | |
| Bundle Number | Dimensions | **X2** | **cm** |
| **Shipping Box** | | **Y2** | **cm** |
| Customer Part Number | | **Z2** | **cm** |
| Other PN (if required) | Quantity | | |
| Quantity | **SHIPPING BOX** | | |
| Lot and/or Date Code | Dimensions | **X3** | **cm** |
| PO Number | | **Y3** | **cm** |
| Net Weight | | **Z3** | **cm** |
| Gross Weighjt | Number of Bundles | | |
| Box Number | Quantity | | |
| of Number of Boxes | Approximate Weight | | |
| **Made in China** | | | |