


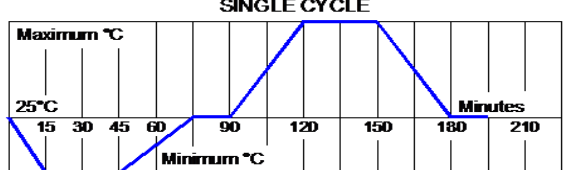


# PRODUCT INFORMATION

**Part #: CE-CU515BS**

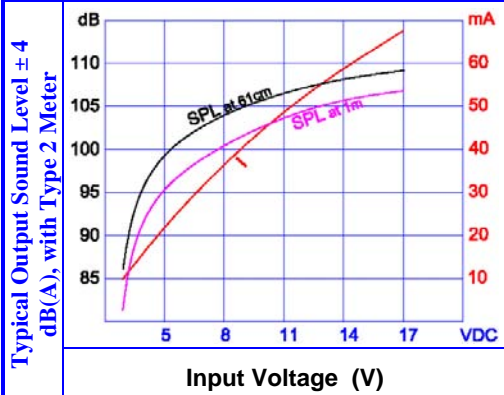
**Revision: 5-2013**



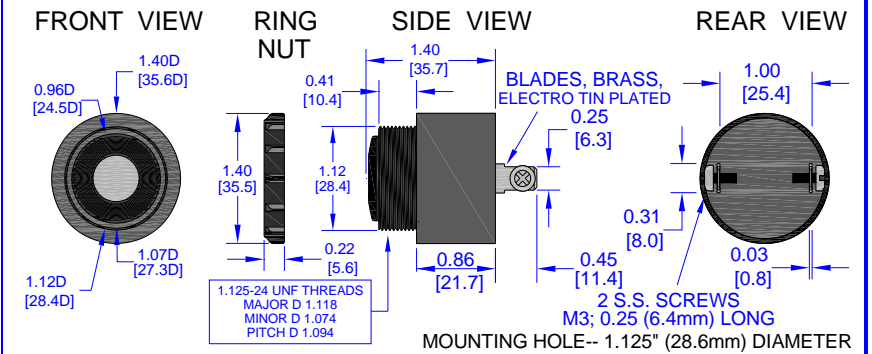
| DESCRIPTION   |  | FEATURES   |                                  |  |  |
|---|--|--|----------------------------------|--|--|
| <p><b>Challenge Electronics CONTINUOUS Tone, ULTRA Loud, 5 to 15 Vdc</b> with a relatively low sound frequency of 2,100 Hz., <b>B</b> style case Rear Panel Mounting in 1.125" (28.6 mm) Hole, Sound Pressure Level of 108 dB(A) at 15 Vdc at 61 cm, <b>S</b> two 0.25" (6.4 mm) Blades with M3 0.25" (6.4 mm) long Stainless Steel Screws termination, Piezoelectric Alarm, RoHS Compliant</p> |  | <ul style="list-style-type: none"> <li>◆ Reliable Solid State Piezoelectric Technology</li> <li>◆ Corrosion resistant Stainless Steel Diaphragm</li> <li>◆ Flame Retardant Plastic</li> <li>◆ Extended storage temperature</li> <li>◆ Hermetically Sealed Alarm</li> <li>◆ Water Proof, NEMA 3R, 4X, or 12 with Gasket (not supplied)</li> <li>◆ RoHS, Lead Free Compliance</li> <li>◆ ISO 9001 Certified</li> </ul> |                                  |  |  |
| <b>SPECIFICATIONS</b>   |  |   |                                  |  |  |
| <b>Operating Mode</b>   | <b>Ultra Loud, Continuous Tone</b>   |  | <b>Pulse Rate</b>                |  |  |
| <b>Operating Voltage</b>  | <b>5 to 15 Vdc</b>   |  | <b>Nominal Operating Voltage</b> | <b>12 Vdc</b>  |  |
| <b>Operating Frequency</b>  | <b>2,100 ± 200 Hz.</b>   |  |                                  |  |  |
| <b>Typical Loudness</b>   | <b>At Minimum Voltage</b>  | <b>100 ± 5 dB(A), at 5 Vdc, 24 inches (61 cm), 25°C</b>  |                                  |  |  |
|   | <b>At Maximum Voltage</b>  | <b>108 ± 3 dB(A), at 15 Vdc, 24 inches (61 cm), 25°C</b>   |                                  |  |  |
| <b>Typical Operating Current</b>  | <b>At Minimum Voltage</b>  | <b>20 mA at 5 Vdc</b>  | <b>At Maximum Voltage</b>        | <b>70 mA at 15 Vdc</b>   |  |
| <b>Operating Temperature</b>  | <b>-30°C to +65°C</b>  |  | <b>Storage Temperature</b>       | <b>-40°C to +105°C</b>   |  |
| <b>Surge Voltage</b>  | <b>20% over maximum Operating Voltage for less than 5 minutes</b>  |  |                                  |  |  |
| <b>Materials</b>  | <b>Alarm Case</b>  | <b>Plastic, "B" Case Style, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Black</b>   |                                  |  |  |
|   | <b>Diaphragm</b>   | <b>Stainless Steel 304</b>   |                                  |  |  |
|   | <b>Encapsulation</b>   | <b>Two parts epoxy resign or silicone potting, Black</b>   |                                  |  |  |
|   | <b>Termination</b>   | <b>Two, 0.25 (6.4 mm) Quick Connect Blades, 0.032Ø (0.8Ø mm) Wide, brass, Electro-Tin plated With M3 0.25" (6.4 mm) long Stainless Steel Screws.</b>   |                                  |  |  |
| <b>Physical Dimensions</b>  | <b>Length or Diameter (L/D)</b>  | <b>1.40" (35.6 mm) Ø</b>   | <b>Width (W)</b>                 |  | <b>Height (H)</b> <b>1.40" (35.7 mm)</b> |
| <b>Approximate Weight</b>   | <b>37 grams</b>  | <b>Removable Washing Label</b>   | <b>No</b>                        | <b>Compliance</b>  | <b>RoHS</b>                              |
| <b>Available Options</b>  |  |  |                                  |  |  |
| RELIABILITY   |  |  |                                  |  |  |
| <b>Thermal Operating Temperature Test</b>   | <b>240 hours</b> continuous operation <b>at Rated Power</b> , at <b>Maximum Rated Operating Temperature</b> *  |  |                                  |  |  |
|   | <b>240 hours</b> continuous operation <b>at Rated Power</b> , at <b>Minimum Rated Operating Temperature</b> *  |  |                                  |  |  |
| <b>Thermal Storage Temperature Test</b>   | <b>96 hours</b> storage at <b>Maximum Rated Storage Temperatures</b> *   |  |                                  |  |  |
|   | <b>96 hours</b> storage at <b>Minimum Rated Storage Temperatures</b> *   |  |                                  |  |  |
| <b>Thermal Shock Test</b>   | <p><b>5 cycles of Minimum and Maximum Operating Temperature</b><br/>           Each cycle shall be set per diagram below and is 3 hours long *</p>   |  |                                  |  |  |
| <b>Humidity Test</b>  | <b>120 Hours</b> at +60°C±2°C, 90-95% RH *   |  |                                  |  |  |
| <b>Salt Spray</b>   | Withstand exposure to salt spray per ASTM B117 for a period of <b>300 hours</b> *  |  |                                  |  |  |
| <b>Water &amp; Dust Exposure</b>  | Withstands water submergence and dust exposure per IP-68 *   |  |                                  |  |  |
| <b>Vibration Test</b>   | 2 Hours at 1.5 mm with 10 to 55 Hz. of vibration frequency to each of 3 perpendicular direction *  |  |                                  |  |  |
| <b>Drop Test</b>  | Dropped naturally from 1 meter height onto the surface of 10mm wooden board, 2 directions upper and side of the part are applied *   |  |                                  |  |  |
| <b>Termination Strength</b>   | Maximum of 15 pounds (6.8 Kg) load pull test and of 4 lb. per inch driving torque on screw   |  |                                  |  |  |
| <b>* Reliability Test Performance</b>   | <b>Parts should conform to original performance within ±3dB, after 3 hours of recovery and dry period</b>  |  |                                  |  |  |
| <b>Life Test</b>  | <b>Intermittent</b>  | 1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and maximum rated voltage   |                                  |  |  |
|   | <b>Continuous</b>  | 250 hours continuous operation at maximum rated Voltage and maximum Operating Temperatures   |                                  |  |  |
| <b>Warranty</b>   | 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 |  |                                  |  |  |



**Current Draw and Loudness Vs. Input Voltage**

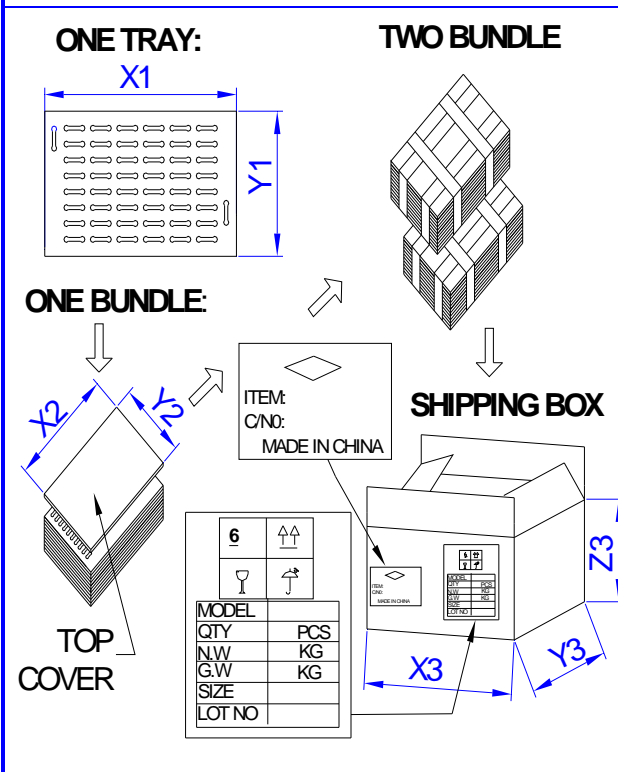


**DIMENSIONS**



| Units | Inches | Tolerance | 0.030<br>(0.7) |
|-------|--------|-----------|----------------|
|       | (mm)   |           |                |

**PACKAGING**



| MARKING                |                     | TRAY         |         |
|------------------------|---------------------|--------------|---------|
| Bundle                 |                     | X1           | 34.7 cm |
| Part Number            | Dimensions          | Y1           | 34.7 cm |
| Other PN if required   |                     | Z1           | 21.2 cm |
| Quantity               | Quantity            | 42           |         |
| Lot and/or Date Code   | <b>BUNDLE</b>       |              |         |
| Bundle Number          |                     | X2           | cm      |
| <b>Shipping Box</b>    | Dimensions          | Y2           | cm      |
| Part Number            |                     | Z2           | cm      |
| Other PN (if required) | Quantity            |              |         |
| Quantity               | <b>SHIPPING BOX</b> |              |         |
| Lot and/or Date Code   |                     | X3           | 35 cm   |
| PO Number              | Dimensions          | Y3           | 35 cm   |
| Net Weight             |                     | Z3           | 22.5 cm |
| Gross Weight           | Number of Bundles   | 1            |         |
| Box Number of Boxes    | Quantity            | 250          |         |
| <b>Made in China</b>   | Approximate Weight  | <b>9 Kg.</b> |         |

| Revision | Description                   | By        | Date      |
|----------|-------------------------------|-----------|-----------|
| 5-2013   | Revised Operating Temperature | Ely Zofan | 6/25/2013 |
|          |                               |           |           |
|          |                               |           |           |