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# PRODUCT INFORMATION

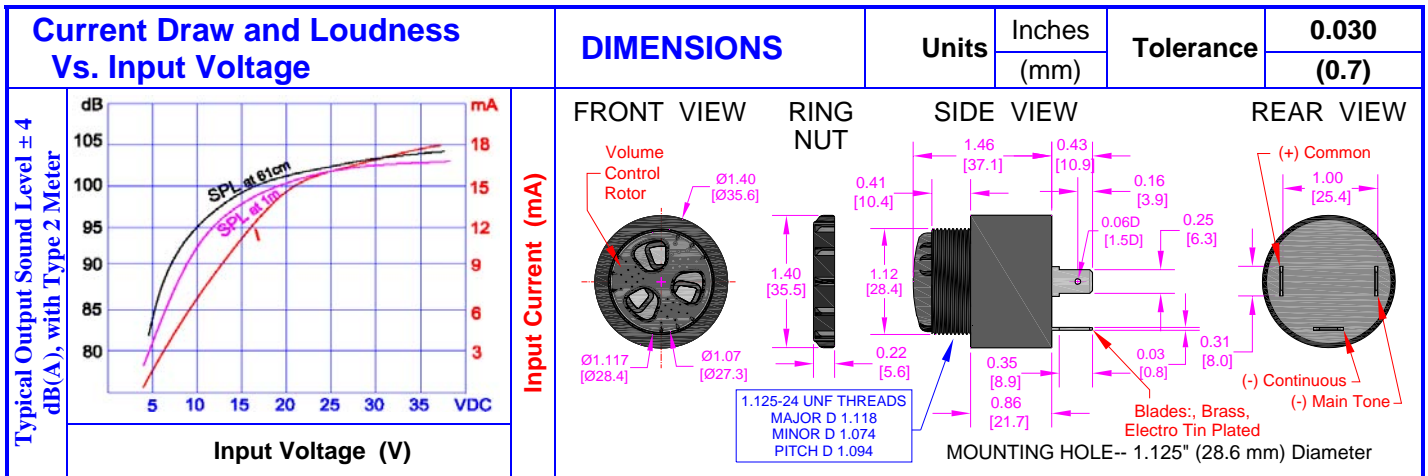
Part #: **CE-BCM530AVQS**

Revision: 3-2012



| DESCRIPTION                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                | FEATURES                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                           |                          |                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------|-----------------|
| <b>Challenge Electronics Dual-Function BEEPING or CONTINUOUS</b> Tones, <b>MEDIUM Loud</b> , 5 to 30 Vdc, <b>A</b> style case Rear Panel Mounting in 1.125" (28.6 mm) Hole, Sound Pressure Level of <b>98 dB(A)</b> at 30 Vdc at 61 cm, <b>2,900 Hz</b> . Output Frequency, three <b>Quick Connect Blades</b> termination, <b>Slow Rate 1</b> pulse per second, Piezoelectric Alarm with a mechanical <b>Volume Control</b> , <b>RoHS</b> Compliant |                                                                                                                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>◆ <b>Reliable Solid State Piezoelectric Technology</b></li> <li>◆ <b>Corrosion resistant Stainless Steel Diaphragm</b></li> <li>◆ <b>Flame Retardant Plastic</b></li> <li>◆ <b>Extended storage temperature</b></li> <li>◆ <b>Hermetically Sealed Alarm</b></li> <li>◆ <b>Water Proof, NEMA 3R, 4X, or 12 with Gasket (not supplied)</b></li> <li>◆ <b>RoHS, Lead Free Compliance</b></li> <li>◆ <b>ISO 9001 Certified</b></li> </ul> |                           |                          |                 |
| SPECIFICATIONS                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Operating Mode                                                                                                                                                                                                                                                                                                                                                                                                                                      | Medium Loud, Slow Intermittent or Continuous Tones                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Pulse Rate                | 1 ± 10% Pulse per Second |                 |
| Operating Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5 to 30 Vdc                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Nominal Operating Voltage | 24 Vdc                   |                 |
| Operating Frequency                                                                                                                                                                                                                                                                                                                                                                                                                                 | 2,900 ± 250 Hz.                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Typical Loudness                                                                                                                                                                                                                                                                                                                                                                                                                                    | At Minimum Voltage                                                                                                                                                                                                                                                                                                                             | 85 ± 5 dB(A), at 5 Vdc, 24 inches (61 cm), 25°C                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | At Maximum Voltage                                                                                                                                                                                                                                                                                                                             | 98 ± 3 dB(A), at 30 Vdc, 24 inches (61 cm), 25°C                                                                                                                                                                                                                                                                                                                                                                                                                             |                           |                          |                 |
| Volume Control                                                                                                                                                                                                                                                                                                                                                                                                                                      | Maximum Sound Pressure Level can be restricted up to 20 dB from maximum output. (Note, The Volume Control Rotor may reduce maximum loudness)<br>To install, simply, push the ROTOR onto the front of alarm until it snapped in place<br>To attenuate sound, while alarm is turned on, rotate the ROTOR until maximum desired sound is achieved |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Typical Operating Current                                                                                                                                                                                                                                                                                                                                                                                                                           | At Minimum Voltage                                                                                                                                                                                                                                                                                                                             | 5 mA at 5 Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                | At Maximum Voltage        | 25 mA at 30 Vdc          |                 |
| Operating Temperature                                                                                                                                                                                                                                                                                                                                                                                                                               | -30°C to +65°C                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Storage Temperature       | -40°C to +105°C          |                 |
| Surge Voltage                                                                                                                                                                                                                                                                                                                                                                                                                                       | 20% over maximum Operating Voltage for less than 5 minutes                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Materials                                                                                                                                                                                                                                                                                                                                                                                                                                           | Alarm Case                                                                                                                                                                                                                                                                                                                                     | Plastic, "A" Case, NORYL™, PX9406 or equal, flame retardant UL 94-V0, Black                                                                                                                                                                                                                                                                                                                                                                                                  |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Diaphragm                                                                                                                                                                                                                                                                                                                                      | Stainless Steel 304                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Encapsulation                                                                                                                                                                                                                                                                                                                                  | Two parts epoxy resign or silicone potting, Black                                                                                                                                                                                                                                                                                                                                                                                                                            |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Termination                                                                                                                                                                                                                                                                                                                                    | Three, 0.25 (6.4 mm) Quick Connect Blades, 0.032Ø (0.8Ø mm) Wide, Brass, Electro-Tin plated                                                                                                                                                                                                                                                                                                                                                                                  |                           |                          |                 |
| Physical Dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                 | Length or Diameter (L /D)                                                                                                                                                                                                                                                                                                                      | 1.46" (37.1 mm) Ø                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Width (W)                 | Height (H)               | 1.46" (37.1 mm) |
| Approximate Weight                                                                                                                                                                                                                                                                                                                                                                                                                                  | 41 grams                                                                                                                                                                                                                                                                                                                                       | Removable Washing Label                                                                                                                                                                                                                                                                                                                                                                                                                                                      | No                        | Compliance               | RoHS            |
| Available Options                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| RELIABILITY                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Thermal Operating Temperature Test                                                                                                                                                                                                                                                                                                                                                                                                                  | 240 hours continuous operation at <b>Rated Power</b> , at <b>Maximum Rated Operating Temperature</b> *                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Thermal Storage Temperature Test                                                                                                                                                                                                                                                                                                                                                                                                                    | 240 hours continuous operation at <b>Rated Power</b> , at <b>Minimum Rated Operating Temperature</b> *                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Thermal Shock Test                                                                                                                                                                                                                                                                                                                                                                                                                                  | 96 hours storage at <b>Maximum Rated Storage Temperatures</b> *                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 96 hours storage at <b>Minimum Rated Storage Temperatures</b> *                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Thermal Shock Test                                                                                                                                                                                                                                                                                                                                                                                                                                  | 5 cycles of <b>Minimum and Maximum Operating Temperature</b><br>Each cycle shall be set per diagram below and is 3 hours long *                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Humidity Test                                                                                                                                                                                                                                                                                                                                                                                                                                       | 120 Hours at +60°C±2°C. 90-95% RH *                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Salt Spray                                                                                                                                                                                                                                                                                                                                                                                                                                          | Withstand exposure to salt spray per ASTM B117 for a period of 300 hours *                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Water & Dust Exposure                                                                                                                                                                                                                                                                                                                                                                                                                               | Withstands water submergence and dust exposure per IP-68 *                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Vibration Test                                                                                                                                                                                                                                                                                                                                                                                                                                      | 2 Hours at 1.5 mm with 10 to 55 Hz. of vibration frequency to each of 3 perpendicular direction *                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Drop Test                                                                                                                                                                                                                                                                                                                                                                                                                                           | Dropped naturally from 1 meter height onto the surface of 10mm wooden board, 2 directions upper and side of the part are applied *                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Termination Strength                                                                                                                                                                                                                                                                                                                                                                                                                                | Maximum of 15 pounds (6.8 Kg) load pull test                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| * Reliability Test Performance                                                                                                                                                                                                                                                                                                                                                                                                                      | Parts should conform to original performance within ±3dB, after 3 hours of recovery and dry period                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |
| Life Test                                                                                                                                                                                                                                                                                                                                                                                                                                           | Intermittent                                                                                                                                                                                                                                                                                                                                   | 1,000 hours of a 1 minute on 4 minutes off cycle at room temperature and <b>maximum rated voltage</b>                                                                                                                                                                                                                                                                                                                                                                        |                           |                          |                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Continuous                                                                                                                                                                                                                                                                                                                                     | 250 hours continuous operation at <b>maximum rated Voltage</b> 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                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                           |                          |                 |

The information contained herein is believed to be correct, but no guarantee or warranty, express or implied, with respect to accuracy, completeness or results is extended and no liability is assumed.  
Challenge Electronics reserves the right to make changes in any specification, data or material contained herein.



### PACKAGING

**ONE TRAY:** X1, Y1

**TWO BUNDLE**

**ONE BUNDLE:** X2, Y2

**SHIPPING BOX** X3, Y3, Z3

ITEM: C/NO: MADE IN CHINA

|   |    |
|---|----|
| 6 | ↑↑ |
| ↑ | ↑  |
| ↑ | ↑  |
| ↑ | ↑  |

|        |     |
|--------|-----|
| MODEL  | PCS |
| QTY    | PCS |
| N.W    | KG  |
| G.W    | KG  |
| SIZE   |     |
| LOT NO |     |

| MARKING                | TRAY                |         |
|------------------------|---------------------|---------|
| Bundle                 | X1                  | 34.7 cm |
| Customer PN            | Y1                  | 34.7 cm |
| Other PN if required   | Z1                  | 21.2 cm |
| Quantity               | 42                  |         |
| Lot and/or Date Code   | <b>BUNDLE</b>       |         |
| Bundle Number          | X2                  | cm      |
| Shipping Box           | Y2                  | cm      |
| Customer Part Number   | Z2                  | cm      |
| Other PN (if required) | Quantity            |         |
| Quantity               | <b>SHIPPING BOX</b> |         |
| Lot and/or Date Code   | X3                  | 35 cm   |
| PO Number              | Y3                  | 35 cm   |
| Net Weight             | Z3                  | 22.5 cm |
| Gross Weight           | Number of Bundles   | 1       |
| Box Number             | Quantity            | 250     |
| of Number of Boxes     | Approximate Weight  | 11 Kg.  |
| <b>Made in China</b>   |                     |         |

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