

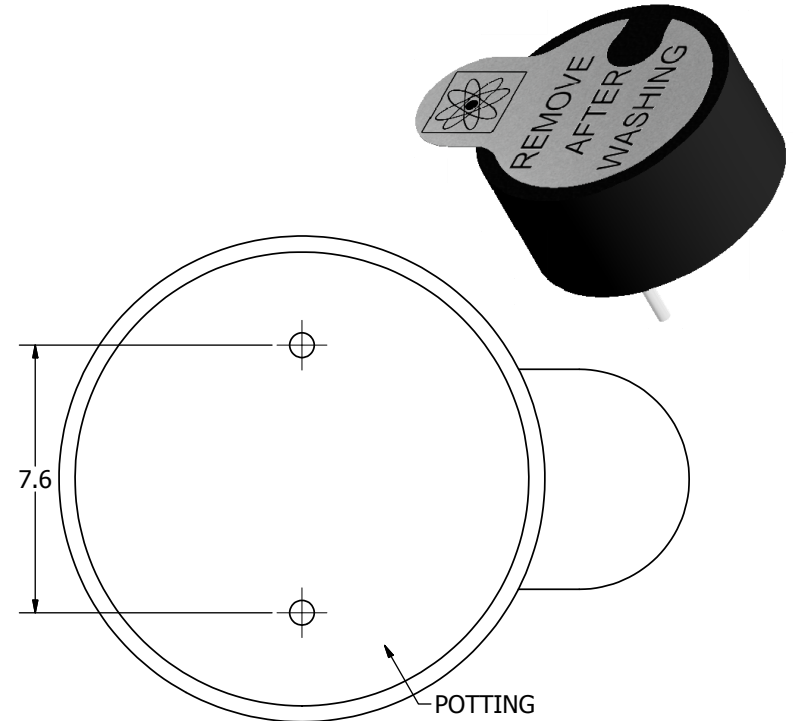
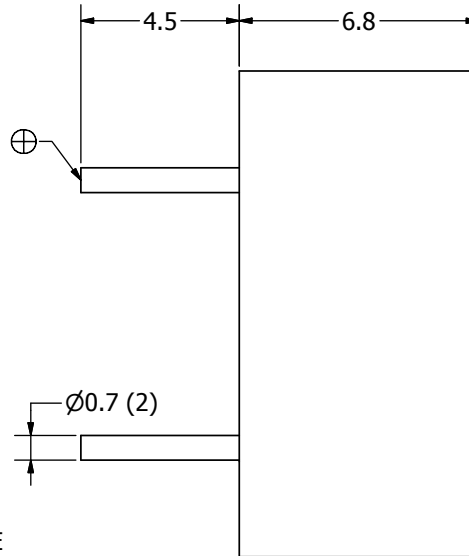
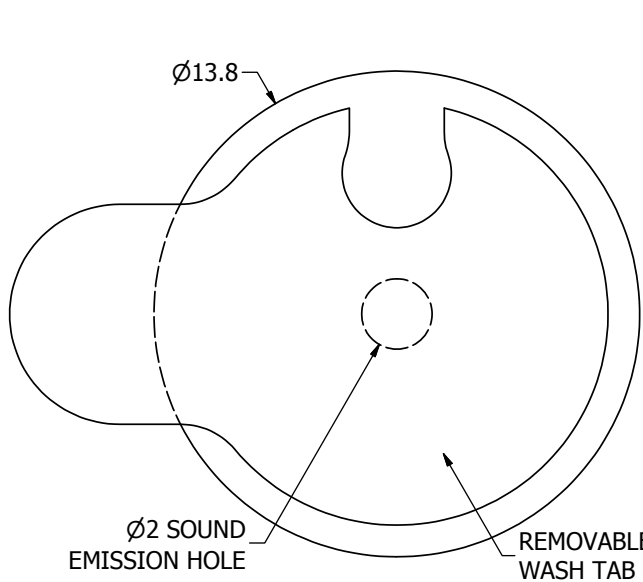
# SPECIFICATIONS

| PARAMETERS              | VALUES                  | UNITS |
|-------------------------|-------------------------|-------|
| RATED VOLTAGE           | 5                       | Vp-p  |
| OPERATING VOLTAGE RANGE | 1 ~ 20                  | Vp-p  |
| RATED CURRENT (MAX)     | 1                       | mA    |
| CAPACITANCE             | 13,000 ± 30%            | pF    |
| MINIMUM SPL @ 10 CM     | 80                      | dBA   |
| RESONANT FREQUENCY      | 3,800 ± 500             | Hz    |
| OPERATING TEMPERATURE   | -30 ~ +80               | °C    |
| STORAGE TEMPERATURE     | -30 ~ +80               | °C    |
| HOUSING MATERIAL        | NORYL                   | -     |
| TERMINAL MATERIAL       | Sn PLATED<br>RED COPPER | -     |
| WEIGHT                  | 1                       | grams |

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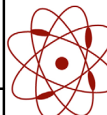
# REVISION HISTORY

| LTR | DESCRIPTION                              | DATE       | APPROVED |
|-----|------------------------------------------|------------|----------|
| -   | RELEASED FROM ENGINEERING                | 8/17/2004  |          |
| A   | REMOVED LEAD FREE ADDE RoHS NOTE         | 8/10/2005  |          |
| B   | REVISED TERMINAL MATERIAL                | 1/24/2006  | B.R.     |
| C   | REVISED HOUSING MATERIAL                 | 11/13/2006 | B.R.     |
| D   | ADDED LABEL & POLARITY MARKING           | 11/22/2006 | B.R.     |
| E   | REVISED TO INVENTOR 3-D DRAWING TEMPLATE | 4/16/2008  | B.R.     |



### NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWL WITHOUT NOTICE.
3. THIS PART IS RoHS 2002/95/EC COMPLIANT.

|                                                                                                          |                   |                                                                                                                                        |           |                                            |      |             |           |            |
|----------------------------------------------------------------------------------------------------------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------------------------------------|------|-------------|-----------|------------|
| UNLESS OTHERWISE SPECIFIED:<br>DIMENSIONS ARE IN MILLIMETERS,<br>TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°. | SIZE<br><b>A3</b> | Designed by                                                                                                                            | Date      | Checked by                                 | Date | Approved by | Date      | Drawn Date |
|                                                                                                          |                   | R.A.C.                                                                                                                                 | 8/17/2004 |                                            |      | R.W.        | 8/17/2004 | 4/16/2008  |
| AT-1438-TWT-R.idw                                                                                        |                   |  <b>pui audio</b><br>a projects unlimited company |           | <b>AT-1438-TWT-R</b><br>Transducer (Piezo) |      |             | Edition   | Sheet      |
|                                                                                                          |                   |                                                                                                                                        |           |                                            |      |             | -         | 1 / 1      |