

## SMT-0540-T-7-R 5x5mm Transducer

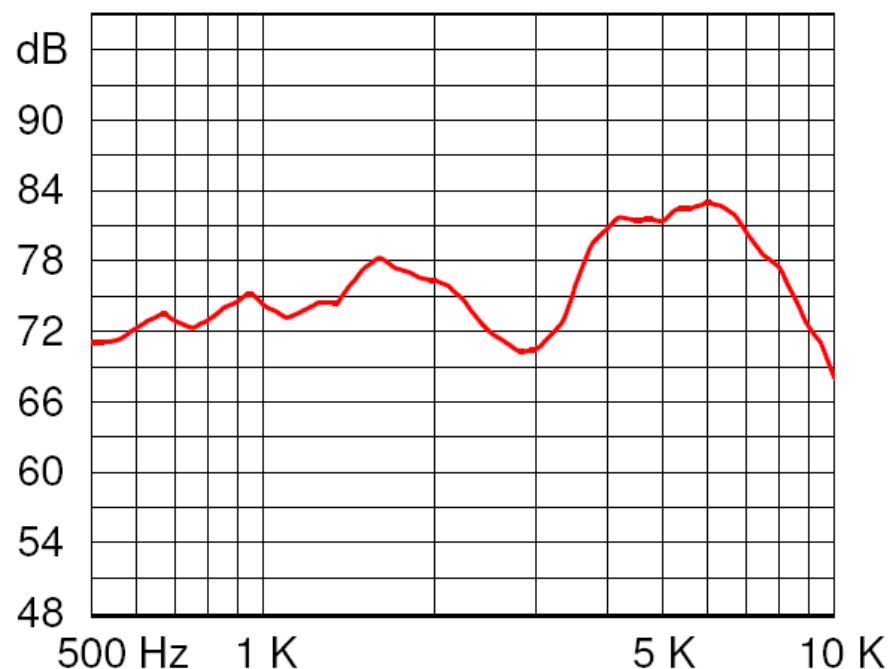
3541 Stop Eight Road • Dayton, Ohio 45414

### Product Overview

- Top-firing electromechanical transducer designed for 2 to 4 Vp-p
- Tiny 5 x 5mm footprint and 2mm height for thinner devices
- 78 dBA minimum output (3Vp-p @ 10 cm) and 4 kHz resonant frequency
- Designed for reflow soldering using a lead-free profile

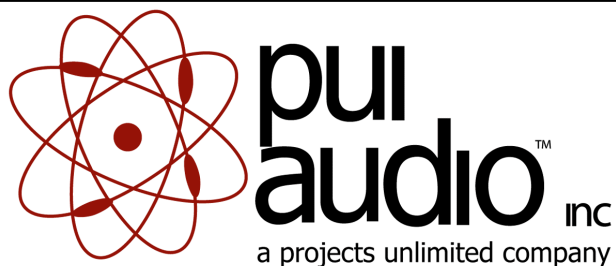


Frequency Response (3 Vp-p @ 0.1 meters)



RoHS COMPLIANT BY DESIGN





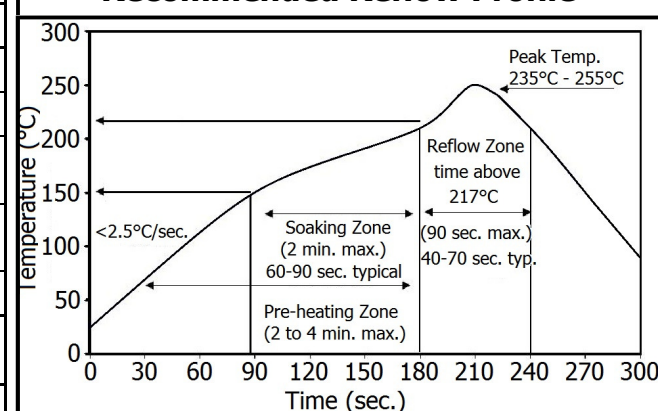
# SMT-0540-T-7-R

## 5x5mm Transducer

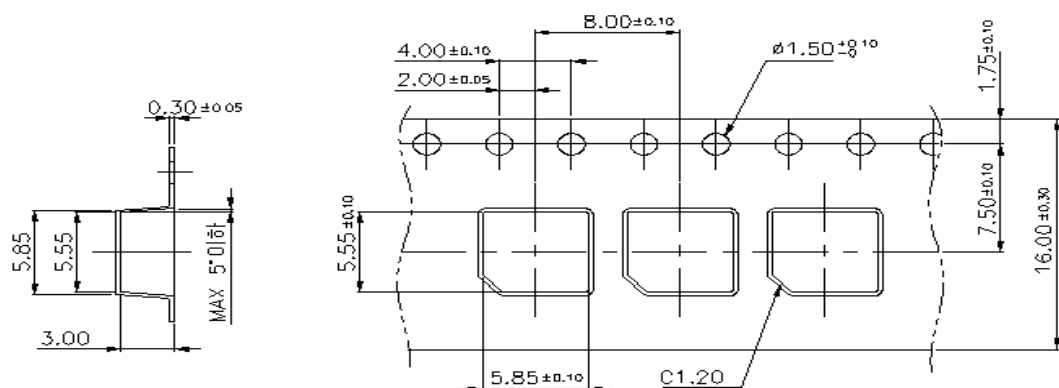
### Mechanical and Environment Testing

| Test Description       | Test Condition                                                         |
|------------------------|------------------------------------------------------------------------|
| High Temperature       | 85°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours       |
| Low Temperature        | -40°C ( $\pm 2^\circ\text{C}$ ) with random humidity for 96 hours      |
| Humidity               | 25°C to 60°C with 90% to 95% relative humidity for 12 hours, 10 cycles |
| Vibration              | 1.53 mm movement modulated at 10-55 Hz in 3 directions for 6 hours     |
| Drop Test              | 120 cm free fall in six directions, 3 cycles                           |
| Temperature Cycle Test | -30°C to 70°C, five 90 minute cycles                                   |

### Recommended Reflow Profile

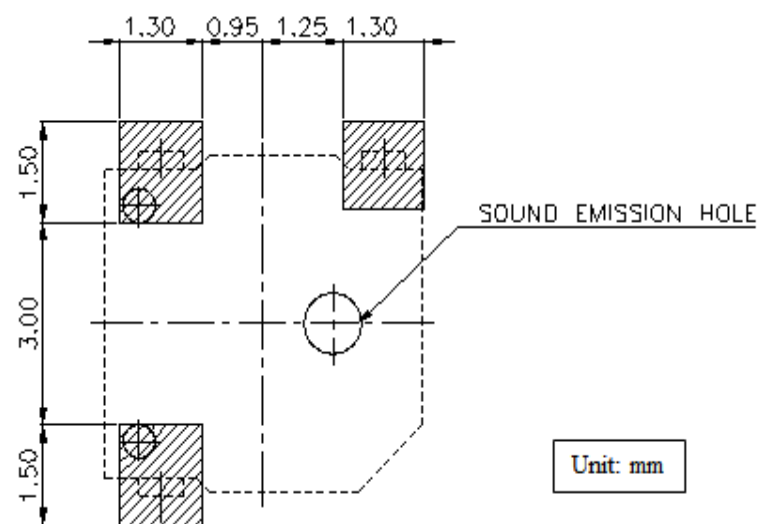


### Tape Dimensions



SMT-0540-T-7-R  
Tape Dimensions  
2,000 PCS/Reel

### Recommended Land Pattern



## SPECIFICATIONS

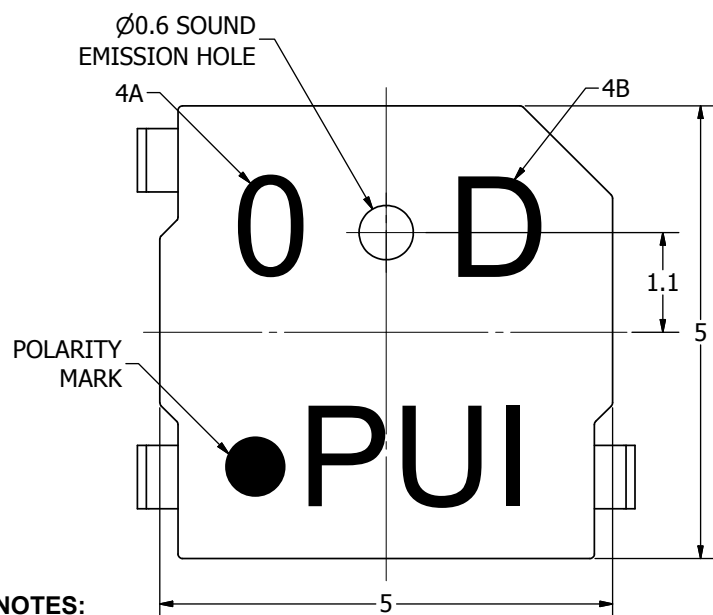
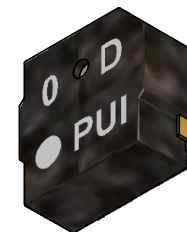
| PARAMETERS              | VALUES                       | UNIT  |
|-------------------------|------------------------------|-------|
| RATED VOLTAGE           | 3                            | Vp-p  |
| OPERATING VOLTAGE RANGE | 2 ~ 4                        | Vp-p  |
| RATED CURRENT (MAX)     | 100                          | mA    |
| COIL RESISTANCE         | 12 ± 2                       | OHM   |
| MINIMUM SPL @ 10 CM     | 78                           | dBA   |
| RESONANT FREQUENCY      | 4,000 ± 500                  | Hz    |
| OPERATING TEMPERATURE   | -30 ~ +70                    | °C    |
| STORAGE TEMPERATURE     | -40 ~ +85                    | °C    |
| HOUSING MATERIAL        | LCP                          | -     |
| TERMINAL MATERIAL       | Au PLATED<br>PHOSPHOR BRONZE | -     |
| WEIGHT                  | 0.25                         | grams |

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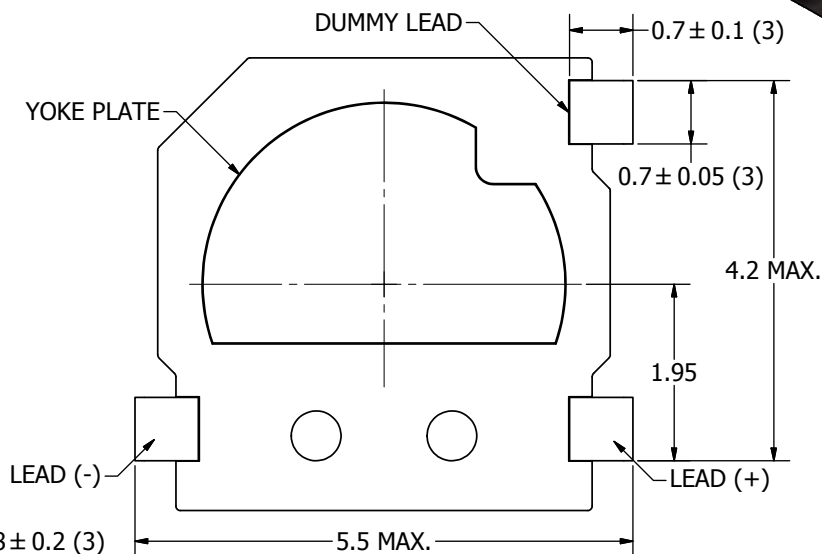
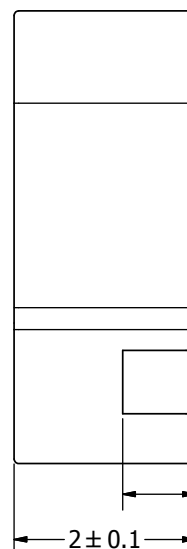
## REVISION HISTORY

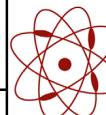
| LTR | DESCRIPTION                              | DATE      | APPROVED |
|-----|------------------------------------------|-----------|----------|
| -   | RELEASED FROM ENGINEERING                | 6/18/2008 |          |
| A   | REVISED TO INVENTOR 3-D DRAWING TEMPLATE | 6/4/2010  | B.R.     |



### NOTES:

- ALL DIMENSIONS ARE IN MILLIMETERS.
- SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
- THIS PART IS RoHS 2002/95/EC COMPLIANT.
- DATE CODE:  
A. FIRST DIGIT REPRESENTS THE NO. OF THE YEAR.  
B. LAST DIGIT REPRESENTS THE MONTH. (A-JAN~L-DEC.)



|                                                                                                                  |      |                                                                                                                                              |           |            |                |             |           |            |
|------------------------------------------------------------------------------------------------------------------|------|----------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------|----------------|-------------|-----------|------------|
| UNLESS OTHERWISE SPECIFIED:<br><br>DIMENSIONS ARE IN MILLIMETERS,<br><br>TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°. | SIZE | Designed by                                                                                                                                  | Date      | Checked by | Date           | Approved by | Date      | Drawn Date |
|                                                                                                                  |      | J.D.                                                                                                                                         | 6/18/2008 | C.W.       | 6/18/2008      | B.R.        | 6/18/2008 | 6/4/2010   |
|                                                                                                                  | A3   |  <b>pui audio</b> ™ inc<br>a projects unlimited company |           |            | SMT-0540-T-7-R |             |           |            |
| SMT-0540-T-7-R.idw                                                                                               |      | Transducer (Electro-Mech)                                                                                                                    |           |            |                | Edition     | Sheet     |            |
|                                                                                                                  |      |                                                                                                                                              |           |            |                | -           | 1 / 1     |            |

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