

SMT-0827-S-2-R 8.5 x 8.5mm Transducer

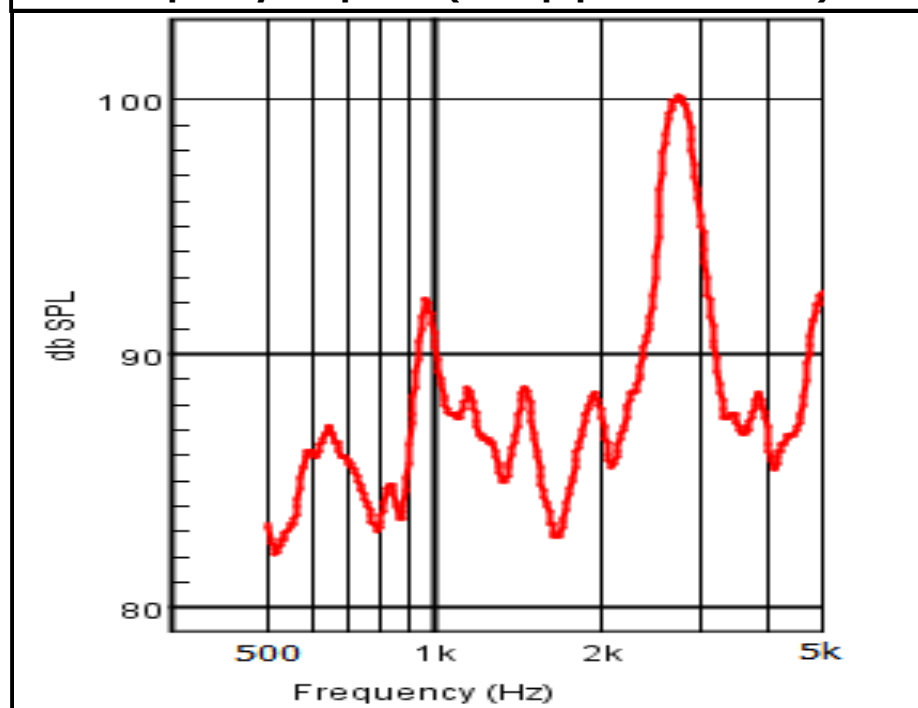
3541 Stop Eight Road • Dayton, Ohio 45414

Product Overview

- Side-firing electromechanical transducer designed for 2.5 to 4.5 Vp-p
- Small 8.5 x 8.5mm footprint and 4mm height for thin, modern devices
- 92 dBA minimum output (3.6Vp-p @ 10 cm) and 2.7 kHz resonant frequency
- Designed for reflow soldering using a lead-free profile

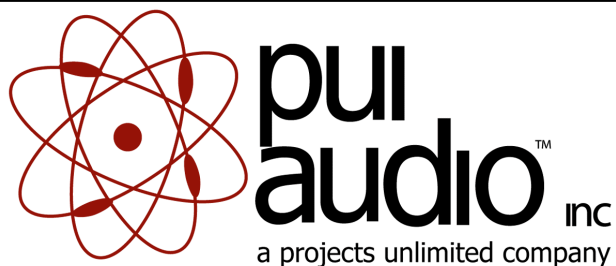


Frequency Response (3.6 Vp-p @ 0.1 meters)



Audio Products of the Future





SMT-0827-S-2-R

8.5 x 8.5mm

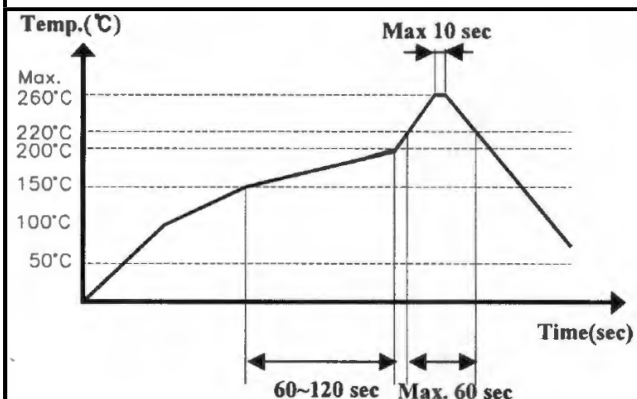
Transducer

Mechanical and Environment Testing

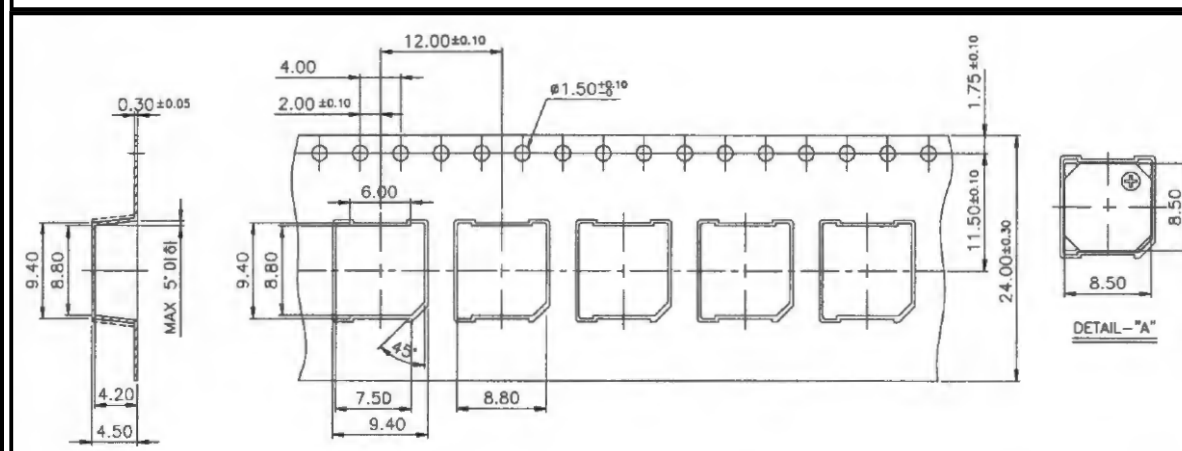
Test Description	Test Condition
High Temperature	85°C ($\pm 2^\circ\text{C}$) with random humidity for 96 hours
Low Temperature	-40°C ($\pm 2^\circ\text{C}$) with random humidity for 96 hours
Humidity	25°C to 60°C with 90% to 95% relative humidity for 12 hours, 10 cycles
Vibration	1.53 mm movement modulated 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

After testing, part shall rest for two hours and then be tested for a clean, pure tone.

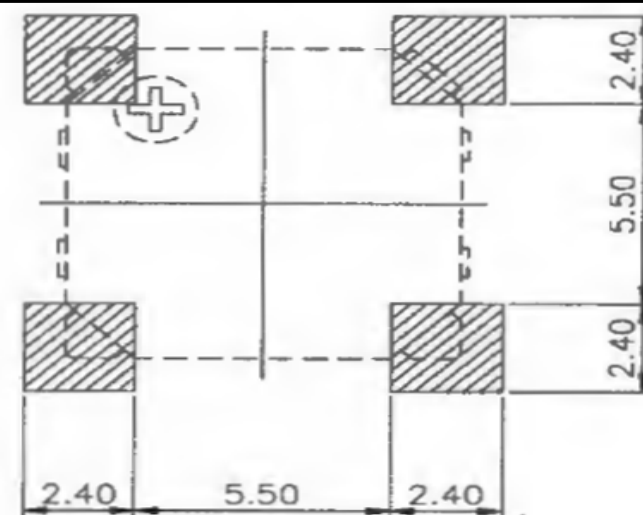
Recommended Reflow Profile



Tape Dimensions



Recommended Land Pattern



SPECIFICATIONS

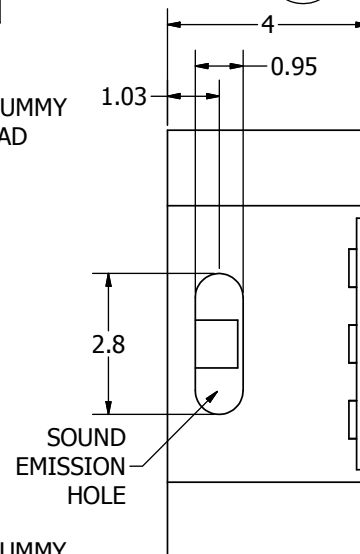
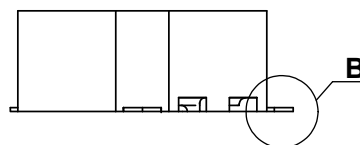
PARAMETERS	VALUES	UNIT
RATED VOLTAGE	3.6	Vp-p
OPERATING VOLTAGE RANGE	2.5 ~ 4.5	Vp-p
RATED CURRENT (MAX)	90	mA
COIL RESISTANCE	15 ± 3	OHM
MINIMUM SPL @ 10 CM	92	dB
RESONANT FREQUENCY	2,700 ± 500	Hz
OPERATING TEMPERATURE	-30 ~ +70	°C
STORAGE TEMPERATURE	-40 ~ +85	°C
HOUSING MATERIAL	LCP	-
TERMINAL MATERIAL	Sn PLATED PHOSPHOR BRONZE	-
WEIGHT	0.42	grams

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REVISION HISTORY

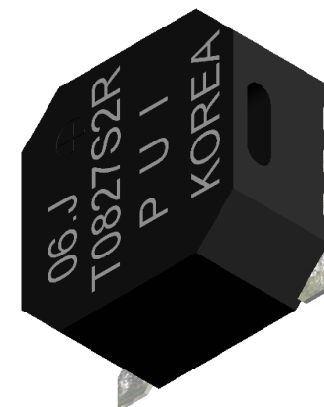
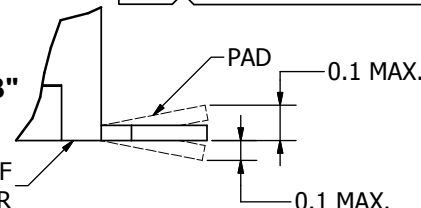
LTR	DESCRIPTION	DATE	APPROVED
-	RELEASED FROM ENGINEERING	4/1/2005	
A	ADDED RoHS COMPLIANCE NOTE	8/10/2005	
B	REVISED TO INVENTOR 3-D DRAWING TEMPLATE	5/4/2010	B.R.
C	REVISED SPL VALUE	10/28/2011	M.L.

A (5 : 1)



DETAIL "B"

BOTTOM OF TRANSDUCER



NOTES:

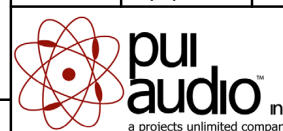
- ALL DIMENSIONS ARE IN MILLIMETERS.
- SPECIFICATIONS SUBJECT TO CHANGE OR WITHDRAWAL WITHOUT NOTICE.
- THIS PART IS RoHS 2002/95/EC COMPLIANT.

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN MILLIMETERS,
TOLERANCES ARE ±0.5 AND ANGLES ARE ±3°.

SIZE
A3

SMT-0827-S-2-R.idw

Designed by	Date	Checked by	Date	Approved by	Date	Drawn Date
G.V.	4/1/2005	E.P.	4/1/2005	R.W.	4/1/2005	5/4/2010



SMT-0827-S-2-R

Transducer (Electro-Mech)

Edition
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Sheet
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