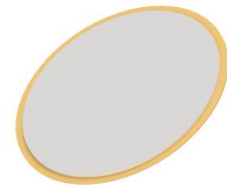




PUIaudio



Data Sheet

HD-PAB2701

Features:

- 27mm large displacement actuator
- Ideal for micropump applications

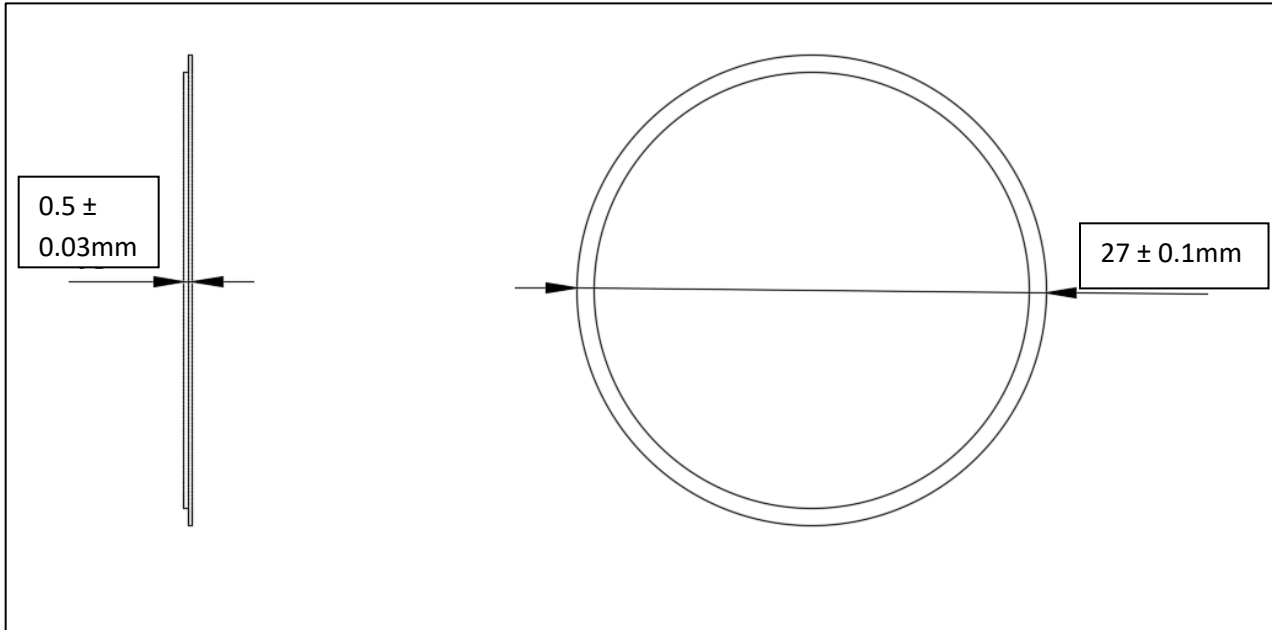
Design:

- RoHS/REACH exempt PZT ceramics
- Actuator dimensions: Ø27 x 0.5 (mm)

Specifications

Parameters	Values	Units
Maximum Input Voltage	155	V _{P-P}
Working Voltage Range	-55 ~ +55	-V _P ~ +V _P
Resonant Frequency	5 ± 0.5	kHz
Resonant Impedance	≤ 200	Ω
Nominal Displacement	65 ± 15	μM (at 155 V _{P-P})
Capacitance	55 ± 15%	nF (at 1V, 100Hz)
Weight	2	Grams
Storage Temperature	-40 ~ +70	°C
Operating Temperature	-24 ~ +60	°C
Operating Humidity	≤ 70%	Relative Humidity
Ceramic Material	Lead Zirconium Titanate	PZT-5H
Metal Plate Material	Yellow Brass Alloy	UNS C26800
Environmental Compliances	RoHS/REACH	Exempt 7c-1
Soldering Methods	Lead-free silver tin solder, ≤ 280°C	

Dimensions (PZT Ceramic (+), Brass Substrate (-))



Precautions

Operation:

- 1) Piezoelectric components may generate an impulse voltage when subjected to mechanical or thermal shock.
- 2) During the installation of piezoelectric components, the use of sulfur or sulfide should be avoided as much as possible, which may cause product failure due to corrosion of the surface of the ceramic.
- 3) During the use of piezoelectric components, it is necessary to avoid loading a DC bias voltage exceeding 0.3v (the loading direction should be consistent with the polarization direction, and the time should not exceed 168h) to avoid failure.
- 4) It is recommended to close the piezoelectric components through CRC to protect the sensor during use.
- 5) Piezoelectric components are not moisture absorbing components, and the humidity sensitivity level is Level 1.
- 6) Pb in piezoelectric ceramics is exempt from RoHS within clause 7 (c) - 1.
- 7) Piezoelectric components cannot be repaired during post processing.

Storage:

- 1) Piezoelectric components should be avoided from being used or stored in corrosive gases such as chlorine, sulfur, acid, and alkaline gases. When storing at room temperature and normal humidity, try to avoid direct sunlight and sudden changes in temperature and humidity, which may cause sensor failure.
- 2) The storage of piezoelectric components should be avoided as much as possible under conditions of severe dust and high humidity.
- 3) The recommended storage temperature for the piezoelectric components is $25 \pm 5^\circ\text{C}$, humidity is 25-65%RH.
- 4) It is recommended to use the piezoelectric components within 7 days after opening the package. If they are not used up, it is necessary to replace the desiccant in the packaging tray and vacuumize the packaging.

Transportation:

- 1) During transportation, piezoelectric components should be protected from sunlight and damp environments.
- 2) Avoid strong impact and vibration on the product during transportation.

Packaging:

Quantity per roll	Quantity per carton
50pcs / ROLL	750 pcs / BOX

Specifications Revisions

Revision	Description	Date
A	RELEASED FROM ENGINEERING	6/16/2023
B	Updated Units on Resonant Frequency	2/21/2025

Note:

1. Unless otherwise specified:
 - A. All dimensions are in millimeters.
 - B. Default tolerances are $\pm 0.5\text{mm}$ and angles are $\pm 3^\circ$.
2. Specifications subject to change or withdrawal without notice.
3. Environmental Compliances: RoHS/REACH Exempt 7c-1