

Rectangular Piezoelectric Actuators with Through Holes



Features

- AC lifetime: 10^9 cycles
- Compact structure
- Microsecond-level response
- Vacuum compatible up to 10^{-6} Pa
- Sub-nanometer resolution
- Curie temperature: 230°C
- Operating voltage: -20 to $+150\text{V}$

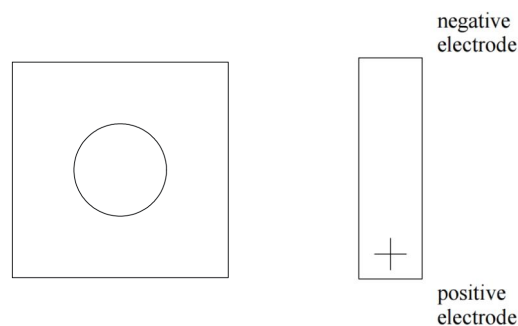
Description

The Piezo Chip Actuator consists of multiple ceramic layers and electrode layers stacked and intersected internally, with external electrodes printed on both sides to lead out the internal electrodes. Through precision grinding processes, the height tolerance of each piezoelectric ceramic is controlled to be smaller than $\pm 5\mu\text{m}$. The company has achieved seamless integration from piezoelectric ceramic powder to the finished actuator, and mass production has been implemented. Currently, the products are applied in the fields of nanoscale positioning, precision manufacturing, and dispensing valve technology.

Applications

- Laser tuning
- Life Science
- Micro-jetting

Interface Definition



General dimension, Unit: mm

Technical Specifications

	PAA-S73-2W	Unit	Tolerance
Active axes	Z		
Max. displacement	3.0	μm	±15%
Displacement hysteresis	<15%		
Load capacity	720	N	Max. value
Blocking force (150 V)	1800	N	Max. value
Electrical properties			
Operating voltage	-20~150	V	
Resonant frequency	177	kHz	±15%
Resonant impedance	200	mΩ	±15%
Antiresonant frequency	195	kHz	±15%
Dielectric loss	<2.0%		
Electrical capacitance	520	nF	±15%
Miscellaneous			
Operating temperature range	-25~130	°C	
Electrode	Silver		
Cable length	75	mm	±5 mm
Curie temperature	230	°C	
Dimensions			
∅	3	mm	±0.1 mm
A	7	mm	±0.1 mm
B	7	mm	±0.1 mm
L	2	mm	±0.1 mm