

## Piezo Stack Actuator



### Features

- Operating voltage: -20 to +150V
- 2 to 100 $\mu$ m travel range
- Vacuum compatible up to 10<sup>-6</sup> Pa
- Sub-nanometer resolution
- Curie temperature: 230°C

### Description

Piezo Stack Actuator adopts structure of stacked piezoelectric ceramic sheets, which achieves the superposition output of multi-layer ceramic response displacement under electrical signal excitation, with sub millisecond level response time and maximum displacement exceeding 100 $\mu$ m. Our company has various kinds of piezoelectric ceramic actuators. The performance of our products can reach the advanced level of similar products of international companies. Currently, our piezoelectric ceramic actuator has achieved mass production.

### Applications

- Scientific research
- Precision optical adjustment equipment
- Industrial automation
- Semiconductor equipment
- Precision motion control
- Precision inspection equipment

## Technical Specifications

Unit	Dimensions	Displacement*	Push force**	Electrical capacitance***	Resonant frequency
	mm×mm×mm	μm	N	μF	kHz
Tolerance			Max. value		
PAB-S3-5	3×3×5	5	360	0.14	250
PAB-S3-9	3×3×9	10	360	0.25	140
PAB-S5-5	5×5×5	5	1000	0.45	250
PAB-S5-9	5×5×9	10	1000	0.85	140
PAB-S5-20	5×5×20	20	1000	1.6	70
PAB-S5-36	5×5×36	40	1000	3.2	34
PAB-S5-45	5×5×45	50	1000	3.8	27
PAB-S7-9	7×7×9	10	2000	1.5	140
PAB-S7-20	7×7×20	20	2000	3	70
PAB-S7-36	7×7×36	40	2000	6	34
PAB-S7-45	7×7×45	50	2000	9	27
PAB-S7-60	7×7×60	66	2000	11.2	21
PAB-S7-90	7×7×90	100	2000	16	14
PAB-S10-18	10×10×18	20	4000	6	70
PAB-S10-36	10×10×36	40	4000	13	34

The cross-sectional dimensions within  $\pm 0.1\text{mm}$  tolerance, and the length dimension within standard tolerance of  $\pm 0.1\text{mm}$ .

Tolerance can be reduced to  $\pm 10\mu\text{m}$  for special request

Displacement dimensions within  $\pm 20\%$  tolerance

Optional soldering of standard wiring harness available, length 75mm, AWG32, PTFE insulation, followed by 'W' in the product code

\*Displacement test: drive voltage range 0 to 150V, tolerance  $\pm 20\%$

\*\*Thrust test: drive voltage range 0 to 150V

\*\*\*Capacitance test conditions: ambient temperature environment, 1Vpp, 1kHz, tolerance  $\pm 20\%$

Other specifications can be customized on request