



Multilayer Piezoelectric Actuators

AE & ASB Series



Why Choose KEMET

KEMET Electronics Corporation is a leading global supplier of electronic components. We offer our customers the broadest selection of capacitor technologies in the industry, along with an expanding range of electromechanical devices, electromagnetic compatibility solutions and supercapacitors. Our vision is to be the preferred supplier of electronic component solutions for customers demanding the highest standards of quality, delivery and service.

Features & Benefits

- Accurate nanometer positioning
- Space-saving designs
- High-speed response
- Large generation of force
- High reliability
- Low power consumption
- Long operational life
- High electrostrictive factor
- Operating temperature range of -25°C to +85°C
- Maximum driving voltage of 150 VDC
- RoHS/REACH compliant

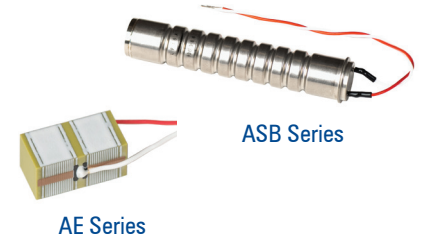
Product Checklist

- What force and displacement does your design require?
- What driving voltage(s) are available?
- What is the ambient temperature and humidity?
- What are the size constraints?
- Are you using electromagnetic actuators for new design needs?
- How fast is the ideal displacement response time?
- What kind of displacement accuracy does your application need?

For more information, samples and engineering kits, please visit us at www.kemet.com or call 1.877.myKEMET.

Applications

- Semiconductor manufacturing systems
- Precision machinery & mechatronics
- Mass-flow valves
- Medical equipment
- Measuring & analytical instrumentation
- Optical instrumentation



Ordering Information

AE Series

AE	0505	D44	H40	D	F
Series	Ceramic Cross Section (mm)	Nominal Displacement (μm)	Overall Length (mm)	Thin Coating Type	Environmental Compliance
AE = Resin coated type	0505 = 5 X 5 *Coating area is not included	The last two digits specify the displacement values. Example: D44 = 44 μm	Blank = Standard overall lengths of 5, 10 or 20 H40 = 40	D = Thin coating type	F = RoHS/REACH Compliant (See detailed "Environmental Compliance" information on product datasheet)

ASB Series

AS	B	170	C	801	N	D	0	LF
Series	Housing Construction & Operating Temperature Range	Nominal Displacement (μm)	Maximum Voltage (VDC)	Generated Force (N)	Mount Configuration	Drive Block Configuration	New Design	Environmental Compliance
AS = Encapsulated in metal case	B = Bellows (pre-load), maximum operating temperature of 85°C	The first two digits specify the displacement values. The last digit is an exponent of 10. Example: 170 = 17 μm	C = 150	The first two digits specify the values. The last digit is an exponent of 10. Example: 801 = 800 N = 80 kgf	N = Female thread type F = Flange type	D = V groove	Sequentially numbered starting from zero.	LF = RoHS/REACH Compliant (See detailed "Environmental Compliance" information on product datasheet)



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Electrical/Physical Characteristics

AE Series	Electrical	Energy/Power		Physical	
Part Number	Capacitance (μ F)	Generated Force (N)	Cross Section (mm)	Overall Length (mm)	Displacement (μ m) at Maximum Voltage of 150 VDC
AE0203D04DF	0.09	200	2 x 3	5	4.6 \pm 1.5
AE0203D08DF	0.18			10	9.1 \pm 1.5
AE0203D16DF	0.35			20	17.4 \pm 2.0
AE0203D44H40DF	0.82			40	42.0 \pm 6.6
AE0505D08DF	0.75	850	5 x 5	10	9.1 \pm 1.5
AE0505D16DF	1.4			20	17.4 \pm 2.0
AE0505D44H40DF	3.4			40	42.0 \pm 6.6
AE1010D16DF	5.4			3,500	10 x 10
AE1010D44H40DF	13.6	40	42.0 \pm 6.6		

ASB Series	Electrical	Energy/Power	Physical
Part Number	Capacitance (μ F)	Generated Force (N)	Displacement (μ m) at Maximum Voltage of 150 VDC
ASB170C801FD0LF	1.5	800	17.0 \pm 3
ASB170C801ND0LF			
ASB340C801FD0LF	3		34.0 \pm 6
ASB340C801ND0LF			
ASB510C801FD0LF	4.5		51.0 \pm 9
ASB510C801ND0LF			
ASB680C801FD0LF	6		68.0 \pm 12
ASB680C801ND0LF			