

# Our New Linear Haptics Actuator

The new linear Actuator provides various benefits and advantages over traditional DC-based vibration technologies.

These new products provide tactile feedback more reliably than ever before. It operates using the same electromagnetic principles as a speaker - but instead of a paper cone moving air, a moving mass is used to deliver vibrations. Like a speaker, it offers incredibly quick response times over a wide frequency range. Response time and reliability are some of the most important considerations in choosing an actuator for your project. When choosing one of PUI Audio's Linear Resonant Actuators, look forward to at least a 2x improvement in response time compared to Eccentric Rotating Mass devices, with multiple dynamic, yet reliable feedback modes in one.

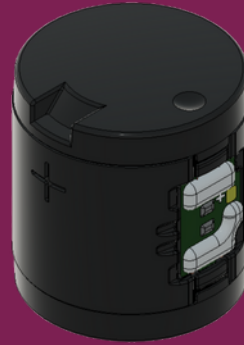
## HD-VA3222 Key Features:

- Dimensions: 32mm x 22mm
- Input Voltage: 0.5 Vrms
- Impedance: 8.4 $\Omega$  at 300Hz
- Acceleration: 2.5Gp-p @133Hz.
- Acceleration generated as shown above



## HD-VA2527 Key Features:

- Dimensions:  $\varnothing$ 25mm x 27mm
- Input Voltage: 1.0 Vrms at 200Hz.
- Impedance: 5.7 $\Omega$  at 200Hz
- Acceleration: 2.61Gp-p @65 Hz.
- Acceleration is generated to the top side when input positive voltage into the plus side pad



In applications where more flexible and complex vibrations are required, linear resonant Actuators are the perfect match. Acceleration can be freely controlled and change with a combination of frequency and voltage, to maximize the tactile effects.

Our new actuator is tested rigorously as noted in the specification.  
Other sizes will be available in the future.

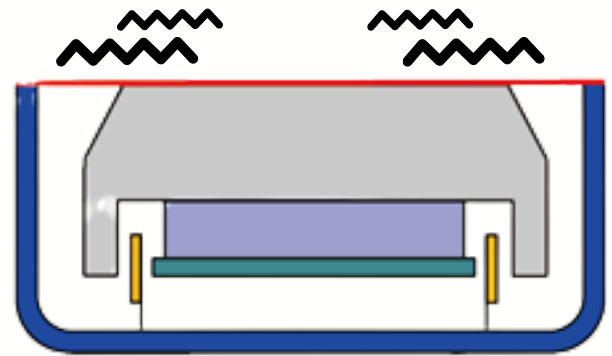
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## How to drive a linear actuator?

1. Getting signal to the device:  
Various signal patterns are delivered through a microcontroller
2. Power to the device: Drive Circuit or Haptic Controller.

Below representation is a generalized signal flow, as there are different ways to drive and different signal flow depending on the application



Input → Microcontroller

→ Drive Circuit  
or Haptic  
Controller



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