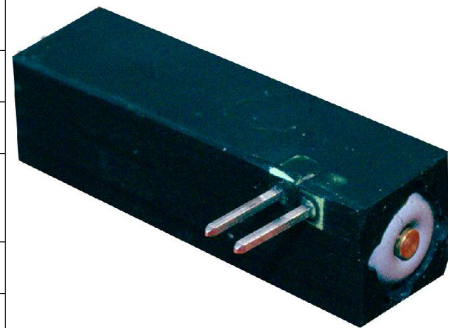


Haptuator Mark II

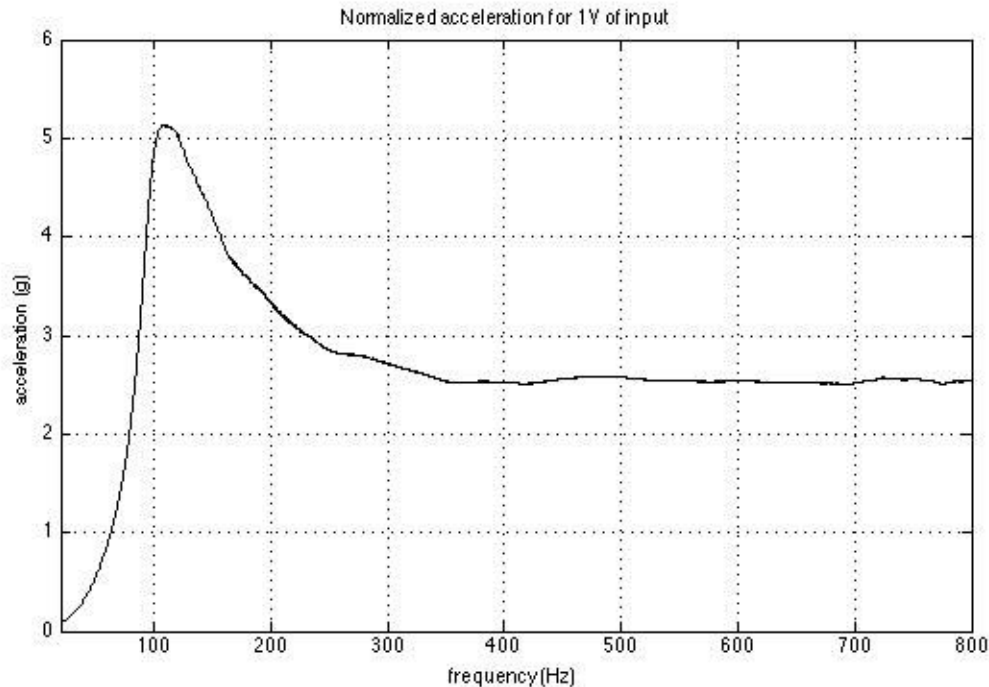
The *Haptuator Mark II* is a variation of the original Haptuator with a larger rated bandwidth, a higher acceleration output while being smaller in size. Like the original *Haptuator*, it also can be driven as a common loudspeaker and is compatible with most audio amplifiers.

Model Number	TL002-09-A
Outer Dimension	32 x 9 x 9 mm
Weight	9.5 grams
Acceleration @ 3V input, 125 Hz	7.5 G 73 m/s ²
Rated Bandwidth	90 - 1000 Hz
Typical Impedance	5.5 Ω
Maximum Input Voltage	3.0 V
Maximum Input Current	0.5 A



TL002-09-A

Output Acceleration



To calculate the output acceleration for a given input voltage of V_i (rms):

1. For the desired operating frequency, find the normalized acceleration value A_n from the above figure. For example, at 300 Hz, $A_n = 2.7g$.
2. Perform the following calculation:
$$Acceleration(G) = V_i \times A_n.$$

Notes:

1. The Haptuator Mark II can be driven as a 4-8 Ω loudspeaker by most audio amplifiers if the input current and voltage are within the recommended operating conditions. The Haptuator Mark II should be AC-coupled to avoid driving a DC current into the unit.
2. It is not recommended to drive the Haptuator under 50Hz: the output acceleration would not be optimal. Driving at a minimum of 10 Hz or above 1000 Hz should not damage the actuator. However, for frequencies above 500 Hz, the signal output becomes audible, hence not as optimal for haptic applications.

Mechanical Dimensions

it is recommended to leave a 2mm clearance at both end of the Haptuator unit due to the movement of the internal assembly.

