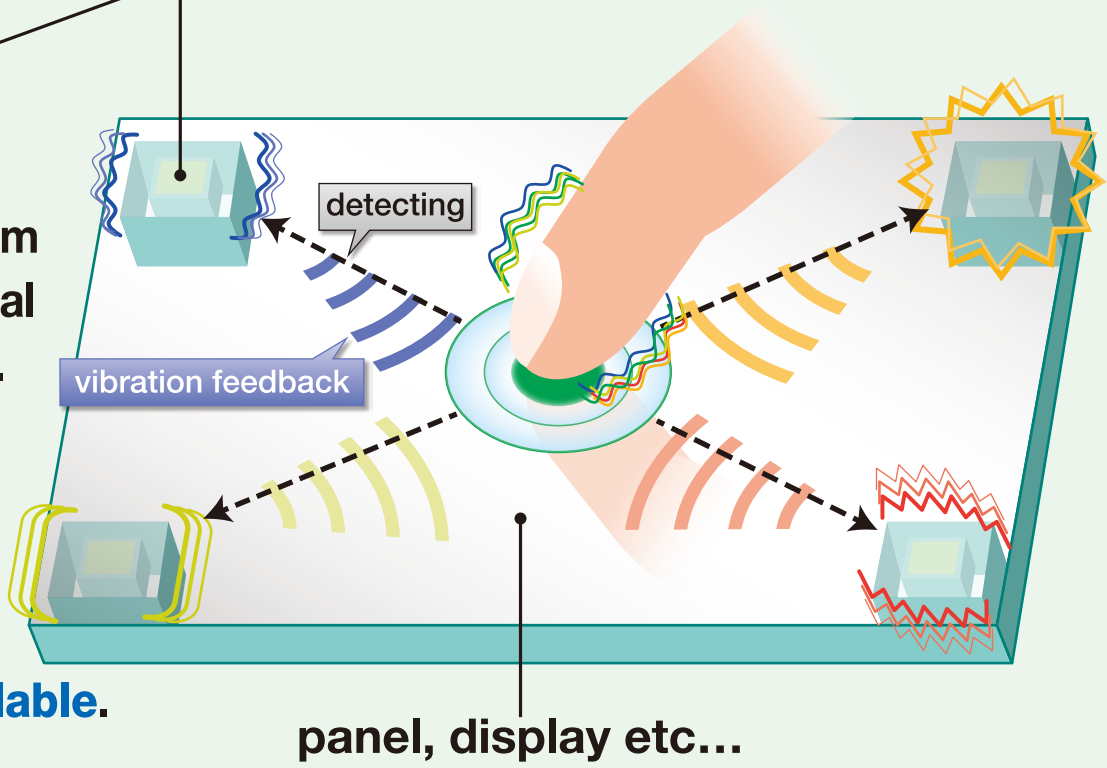
Haptics Interface

SUMITOMO RIKO

Outline

- **Artificial Muscle Actuator(AMA)** is made from **Smart Rubber(SR)**. It is made from the special elastic material which is soft and conductive.
- Giving expression ; **rich sense of touch**, and realizing a variety of feedbacks
- **Thin** and **Compact**
- **All-in-one with the pressure sensor is available**.
  ⇒**Detecting** a touch(by a pressure sensor), and also providing **feedbacks** at the same time(by AMA)



What's SR ?

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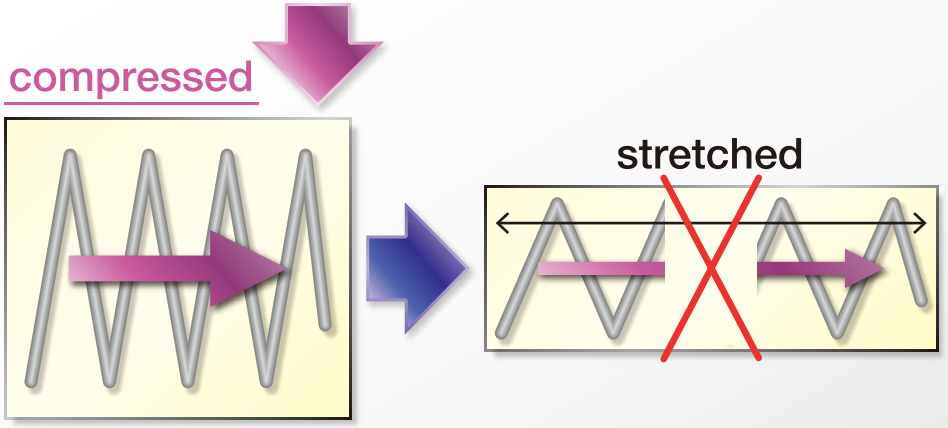
SR(Smart Rubber)is our new developed elastomer which is soft and conductive. It maintains the electrical conductivity even if it is stretched.

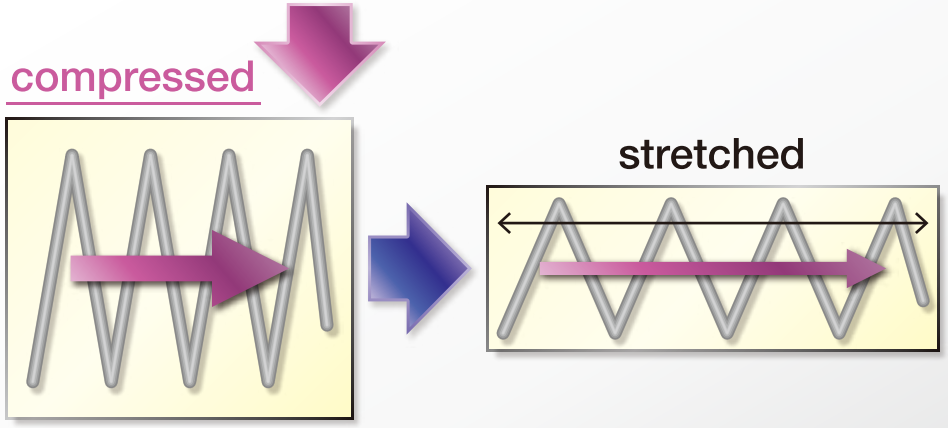
Conventional

Breakdown of the conductive paths



SR

Conductive paths are maintained



Principle of Actuator

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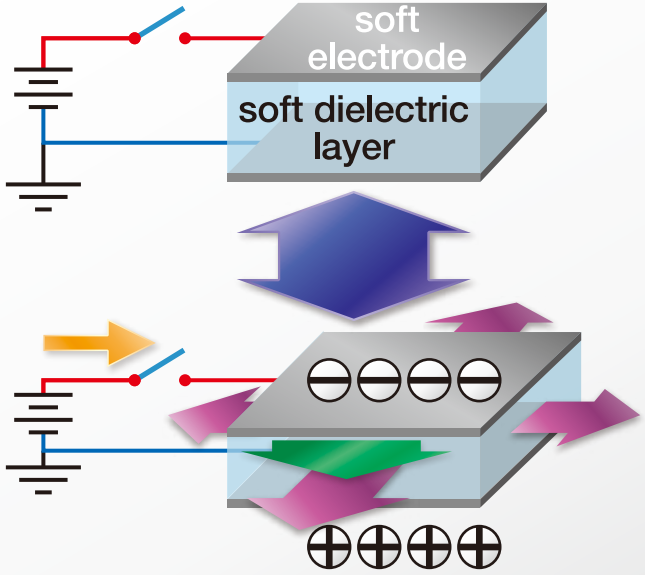
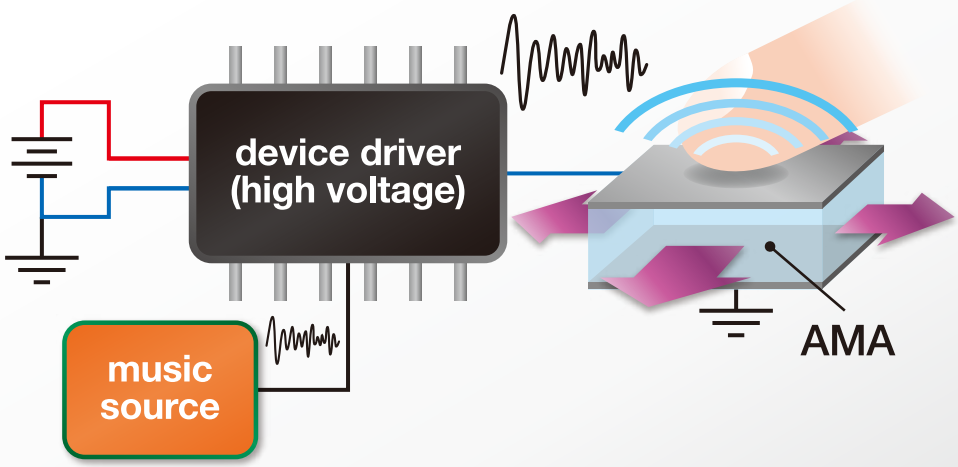
When applied a voltage, AMA(Artificial Muscle Actuator) stretches.

Operating Principle

The electrostatic attractive force between electrodes stretches a dielectric layer



outline



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Aspects of this Actuator

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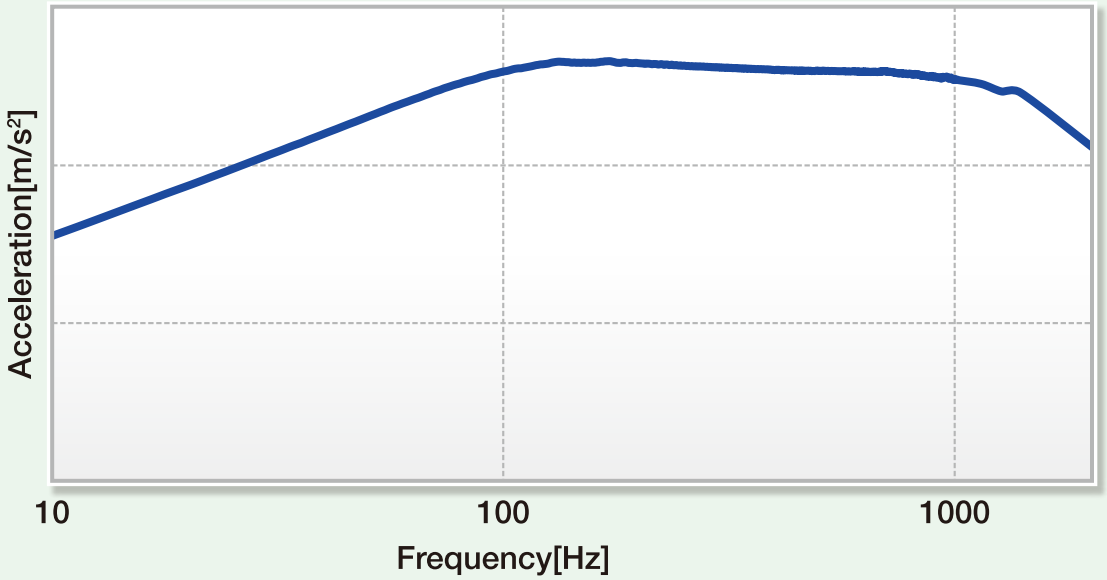
- The rich and varied expressiveness
  ⇒**Broadband vibration control is available**
- Thin and Compact
  ⇒Having **a high degree of freedom for drawing** because of the soft elastomer
- Providing the feel that you push a switch
  ⇒**By the structure monolithically with the pressure sensor**



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