Contact-related Response Analysis

- Overview -

AVES makes it possible to calculate vibration responses related to physical quantities on the contact surface.

Relative displacement and contact pressure can be calculated.
Normal and tangential components of the contact surface are output.

It supports frequency response and random response.

This technique may be useful in products such as connectors that require high contact reliability.

- Examples of use -

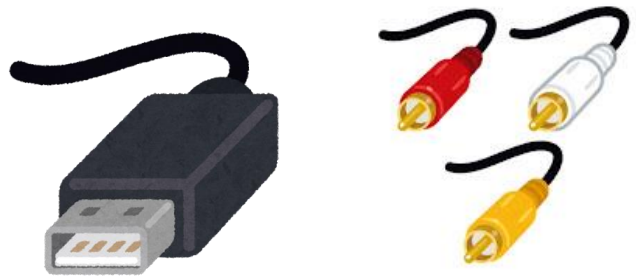
Connectors (Terminals)

Seals

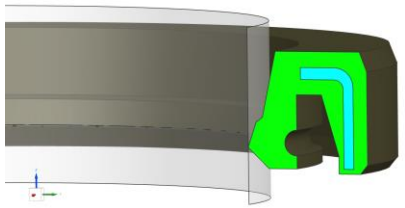
Snap fits

Other general contacts, ets.

Connectors (Terminals)



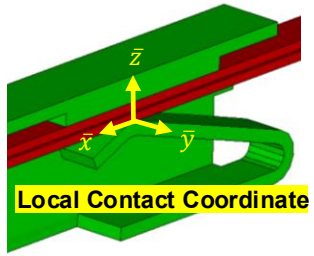
Seals



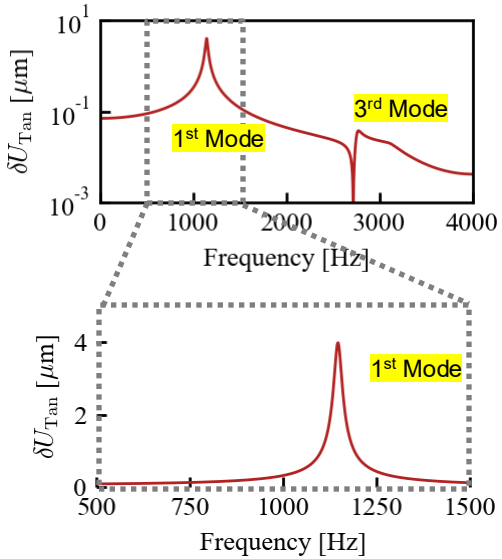
Contact-related Response Analysis

- Vibration response analysis and sliding prediction for connector terminals -

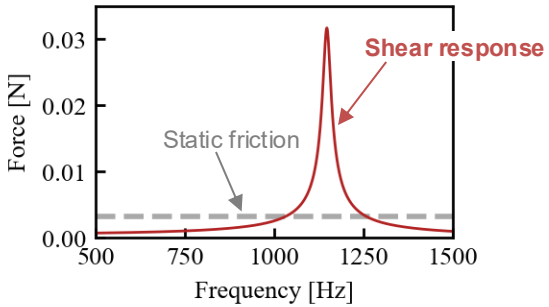
- **Vibration response function of contact point**
  - The vibration responses of relative displacement and contact pressure are calculated in a local coordinate system on the contact surface for each point.
  - They are output in the normal and tangential directions, respectively.
  - The tangential response may be useful for determining the occurrence of sliding.



Terminal contact point and its local coordinate

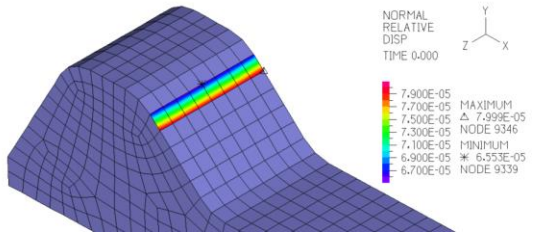


Relative tangential displacement response



Tangential contact pressure (shear) response

- **Distribution on the contact surface**
  - The distribution of response values at specific frequencies can be displayed as a contour.
  - This may be useful for predicting where sliding occurs.



Relative displacement distribution at evaluation frequency