

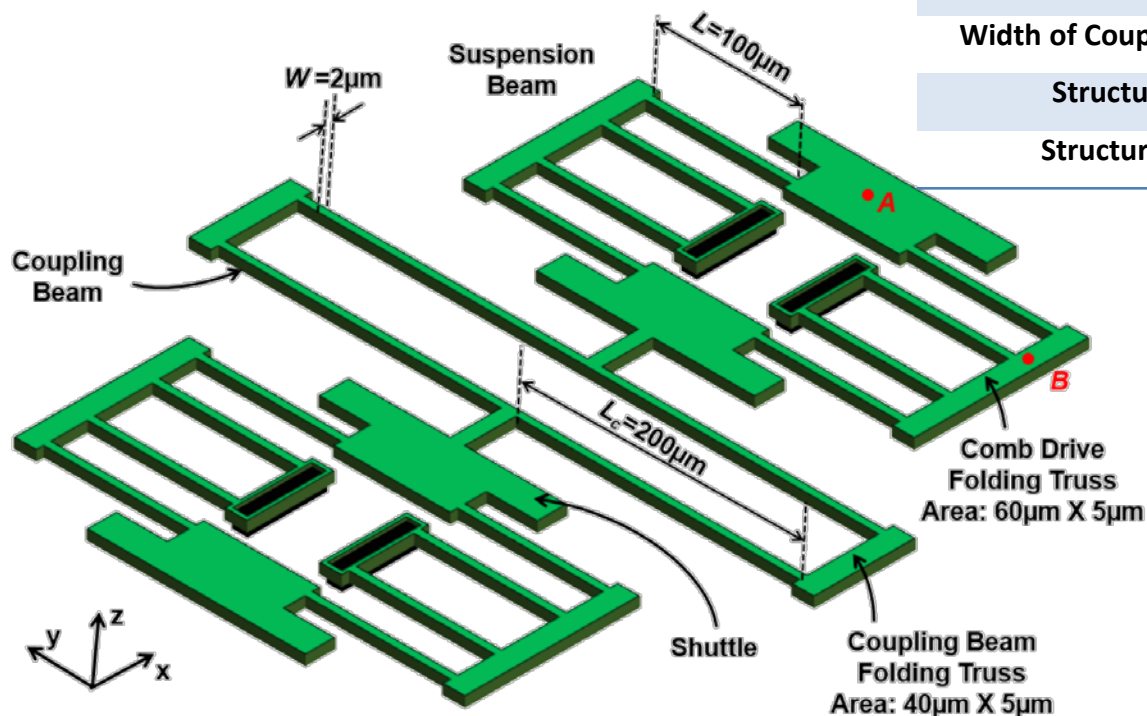
# EE 247B / ME 218 Discussion 8

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# Spring Combos

| PARAMETER                                 | POLY-Si                | UNIT              |
|---|------------------------|-------------------|
| Young's Modulus, $E$                      | 150                    | GPa               |
| Poisson's Ratio, $\nu$                    | 0.226                  | -                 |
| Density, $\rho$                           | 2,300                  | kg/m <sup>3</sup> |
| DI Water Contact Angle, $\theta_c$        | 85                     | °                 |
| DI Water Contact Angle, $\gamma$          | $72.75 \times 10^{-3}$ | N/m               |
| Width of Coupling/Suspension Beams, $W_b$ | 2                      | $\mu\text{m}$     |
| Structural Layer Thickness, $h$           | 2                      | $\mu\text{m}$     |
| Structure to Substrate Gap, $d_o$         | 2                      | $\mu\text{m}$     |



- What's the x-directed stiffness at point A?
- What's the x-directed stiffness at point B?
- If the shuttles are stuck, will coupling beam folding trusses be stuck?

# Spring Combos (cont.)

