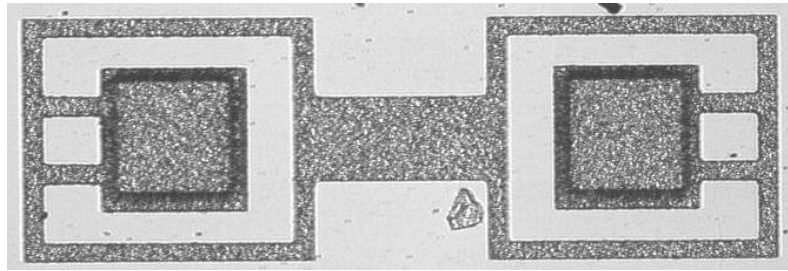
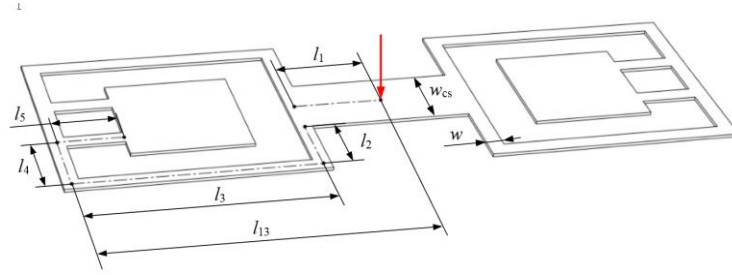


Micromembrană susținută de articulații în formă de paletă



Rigiditatea micromembranei:

$$\delta_{1z} = \frac{F}{3} \left[K_{b_{cs}} l_1^3 + K_b (l_{13}^3 - l_1^3 + 3l_{13}^2 l_5 - 3l_{13} l_5^2 + l_5^3) + K_t 3(l_1^2 l_2 + l_{13}^2 l_4) \right]$$

$$- \frac{M_0}{2} \left[K_{b_{cs}} l_1^2 + K_b (l_{13}^2 - l_1^2 + 2l_{13} l_5 - l_5^2) + K_t 2(l_1 l_2 + l_{13} l_4) \right]$$

$$M_0 = F \frac{K_{b_{cs}} l_1^2 + K_b (l_{13}^2 - l_1^2 + 2l_{13} l_5 - l_5^2) + K_t 2(l_1 l_2 + l_{13} l_4)}{K_{b_{cs}} 2l_1 + K_b 2(l_3 + l_5) + K_t 2(l_2 + l_4)}$$

$$K_{b_{cs}} = \frac{1}{EI_{z_{cs}}} = \frac{1}{E \frac{w_{cs} t^3}{12}}; K_b = \frac{1}{E2I_z} = \frac{1}{E2 \frac{wt^3}{12}}; K_t = \frac{1}{G2I_p} = \frac{1}{G2\beta wt^3}, (\beta = \beta(w/t))$$

$$\beta = \beta(w/t); t = 3\mu m; \beta = \begin{cases} 0,293 - \text{for } w = 16\mu m; w/t = 5,3 \\ 0,313 - \text{for } w = 32\mu m; w/t = 10,6 \end{cases}$$