capacitance=$\frac{ϵΑ}{d\pm X}$

A= overlap area of fingers ( 1000 µm^2)

d= distance b/w fingers (5 µm)

x=displacement (it is 7.7621\*10^-4 µm for 1 g), $ϵ=$8.85\*10^-12

Fixed fingers are taken as terminals (voltage=1v) & Movable as ground

Capacitance obtained for 1 g acceleration

|  |  |
| --- | --- |
| Capacitance(Simulation) F | Capacitance(Theoretical) F |
| C11=2.135\*10^-10 | C11=1.770\*10^-15 |
| C22=2.023\*10^-10 | C22=1.769\*10^-15 |