ANNEX I. Formulas

| Value	Description	Units
Cmax	Maximum capacity, obtained as an average of the last five values of the curve in accumulation situation, equivalent to the capacity of the oxide (C_{ox}).	pF
Cmin	Minimum capacity, obtained as the minimum value of the curve.	pF
Dox	Oxide thickness. $$d_{ox} = \frac{\varepsilon_0 \cdot \varepsilon_{ox} \cdot S}{C_{max}}$$	Å
Na	Substrate doping. $$ln\left(\frac{Na}{n_i}\right) - \frac{q2 \cdot ni \cdot W_m^2}{4 \cdot \varepsilon_S \cdot k \cdot T}\left(\frac{Na}{n_i}\right) = 0$$ $$W_m = \varepsilon_S \cdot \left(\frac{1}{C_{min}^{HF}} - \frac{1}{C_{max}}\right)$$	cm^{-3}
V$_{FB}$	Flat band voltage is the voltage for which the capacity is equal to the capacity of flat band (C_{FB}). $$C_{FB} = \frac{1}{\frac{1}{C_{ox}} + \frac{1}{Cs_{FB}}} \qquad Cs_{FB} = \sqrt{\frac{q^2 \cdot \varepsilon_S \cdot N_A}{k \cdot T}}$$	V
Nss	Total charge density on the insulator. $$Nss = (\Phi_{MS} - V_{FB}) \cdot \frac{C_{ox}}{q \cdot S}$$	cm^{-2}
Rs	Serial resistance. $$R_S = \frac{G_{acc}}{G_{acc}^2 + w^2 \cdot C_{acc}^2}$$ G_{acc}, C_{acc} = Accumulation conductance and capacitance Then the measured capacitance (C_m) and the measured conductance (G_m) are compensated for this obtained value of R_S according to the following equations: $$C_C = \frac{(G_m^2 + w^2 \cdot C_m^2) \cdot C_m}{a^2 + w^2 \cdot C_m^2} \qquad G_C = \frac{(G_m^2 + w^2 \cdot C_m^2) \cdot a}{a^2 + w^2 \cdot C_m^2}$$ $$a = G_m - (G_m^2 + w^2 \cdot C_m^2) \cdot R_s$$	Ω

ANNEX II. Layout information CNM1075
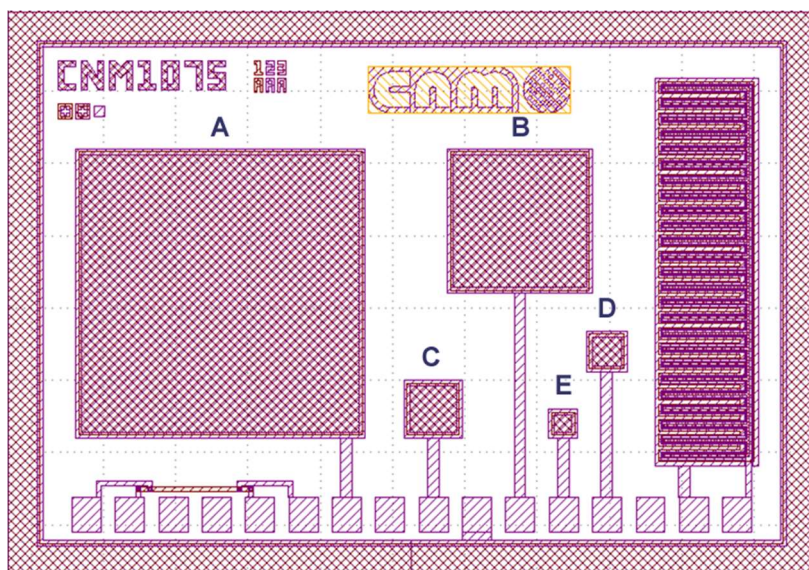
Layout capacitance chip
Chip overall dimensions are X=2790 μm, Y=1950 μm.

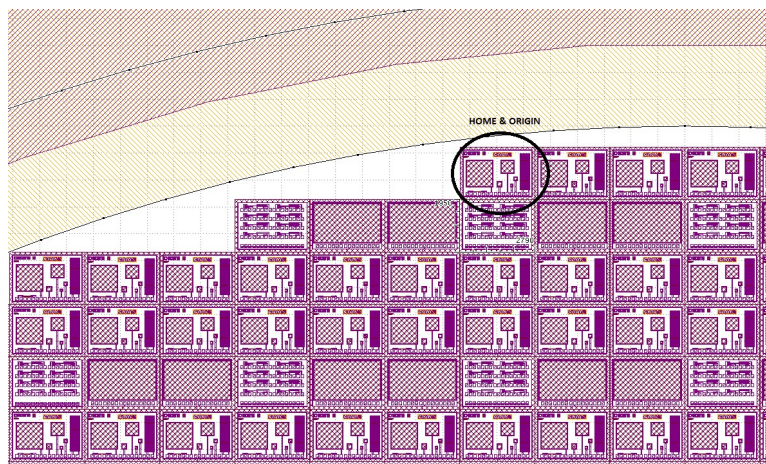| CAP	Area (μm²)
A	980x980
B	480x480
C	180x180
D	120x120
E	80x80
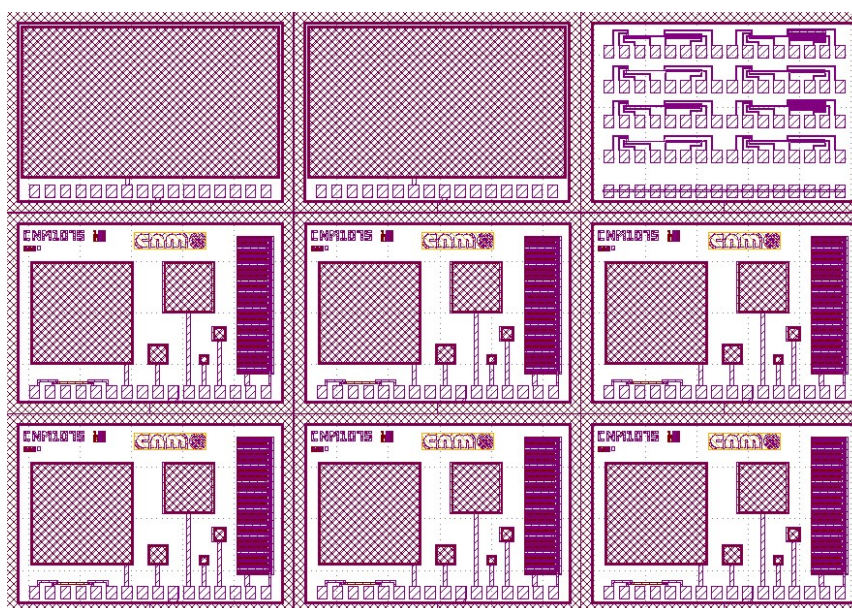
Die CNM1075 with 6 capacitance chip, 2 diodes chip and 1 CBR metal chip
Die overall dimensions are X=8370 μm, Y=5850 μm.

ANNEX III. Wafermap file
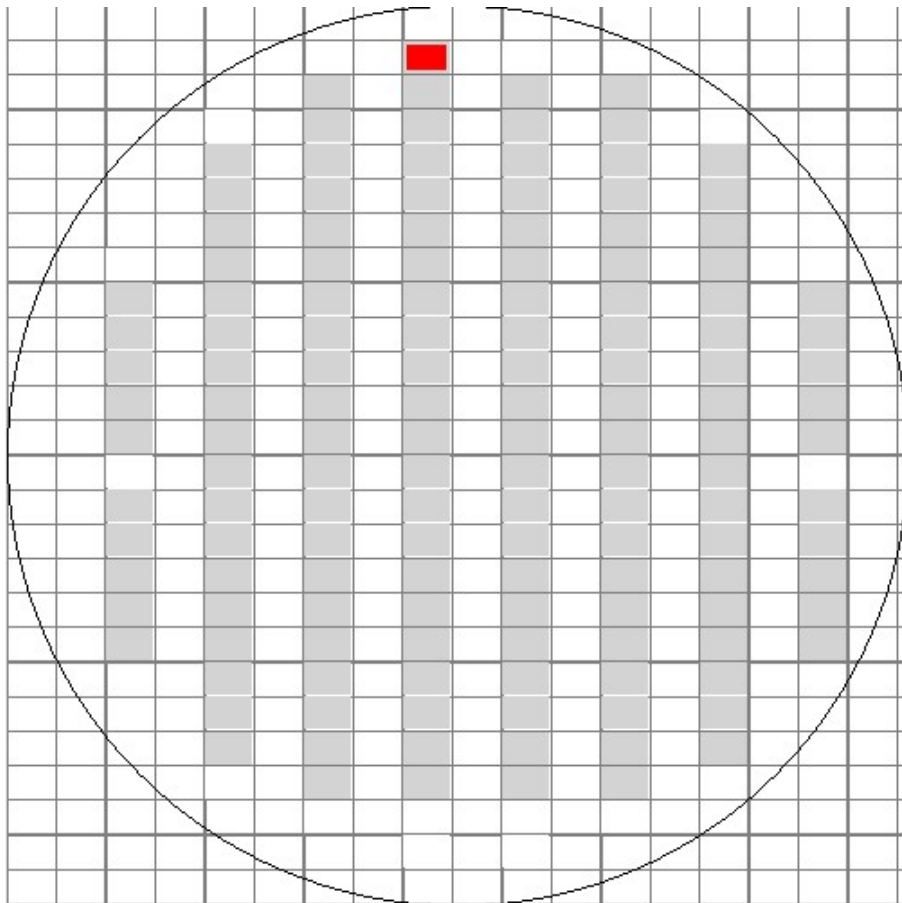
Wafermap used in cartography

Total of 141 capacitances

Home and origin detail

2790um x 1950um, DIE: 8370um x 5850um, 141 Chips , home & origin (X=8, Y=1)