



Security C –
TSMC Secret

SELF_HEATING_EFFECT_EXTRACTION

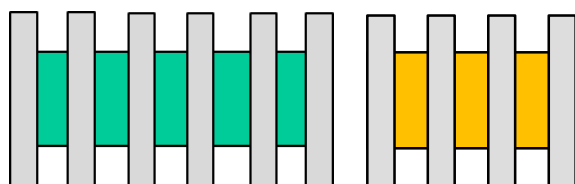
LVSRC
2020/09/04

SELF_HEATING_EFFECT_EXTRACTION

- Turn on "SELF_HEATING_EFFECT_EXTRACTION" switch will enable "odind", "gpocrdx" and "gpocrdy" instance parameter extraction for post-layout simulation to reflect SHE multi-finger effect.

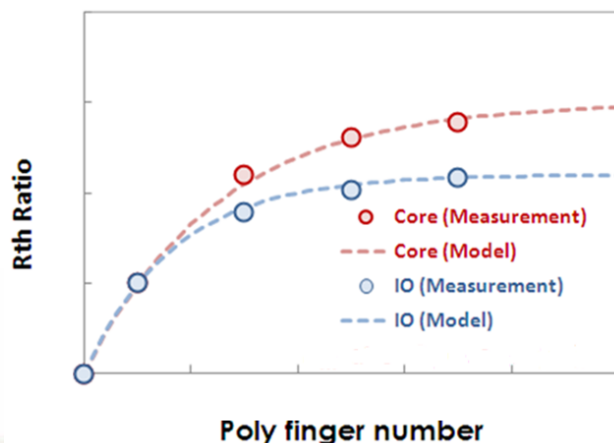
- ◆ odind: index for each OD
- ◆ gpocrdx, gpocrdy: x, y coordinate of each device center.

Example: pre-layout simulation



x0 4 3 2 1 nch_A l=L1 w=W1 nf=4
x1 8 7 6 5 nch_A l=L1 w=W1 nf=2

SHE multi-finger effect



post-layout simulation

x0 4 3 2 1 nch_A l=L1 w=W1 nf=1 odind=1
gpocrdx=1.06075e-05 gpocrdy=3.816e-05

x1 4 3 2 1 nch_A l=L1 w=W1 nf=1 odind=1
gpocrdx= 1.06735e-05 gpocrdy=3.816e-05

x2 4 3 2 1 nch_A l=L1 w=W1 nf=1 odind=1
gpocrdx=1.07395e-05 gpocrdy=3.816e-05

x3 4 3 2 1 nch_A l=L1 w=W1 nf=1 odind=1
gpocrdx=1.08055e-05 gpocrdy=3.816e-05

x4 8 7 6 5 nch_A l=L1 w=W1 nf=1 odind=2
pocrdx=1.10035e-05 gpocrdy=3.816e-05

x5 8 7 6 5 nch_A l=L1 w=W1 nf=1 odind=2
pocrdx=1.10695e-05 gpocrdy=3.816e-05