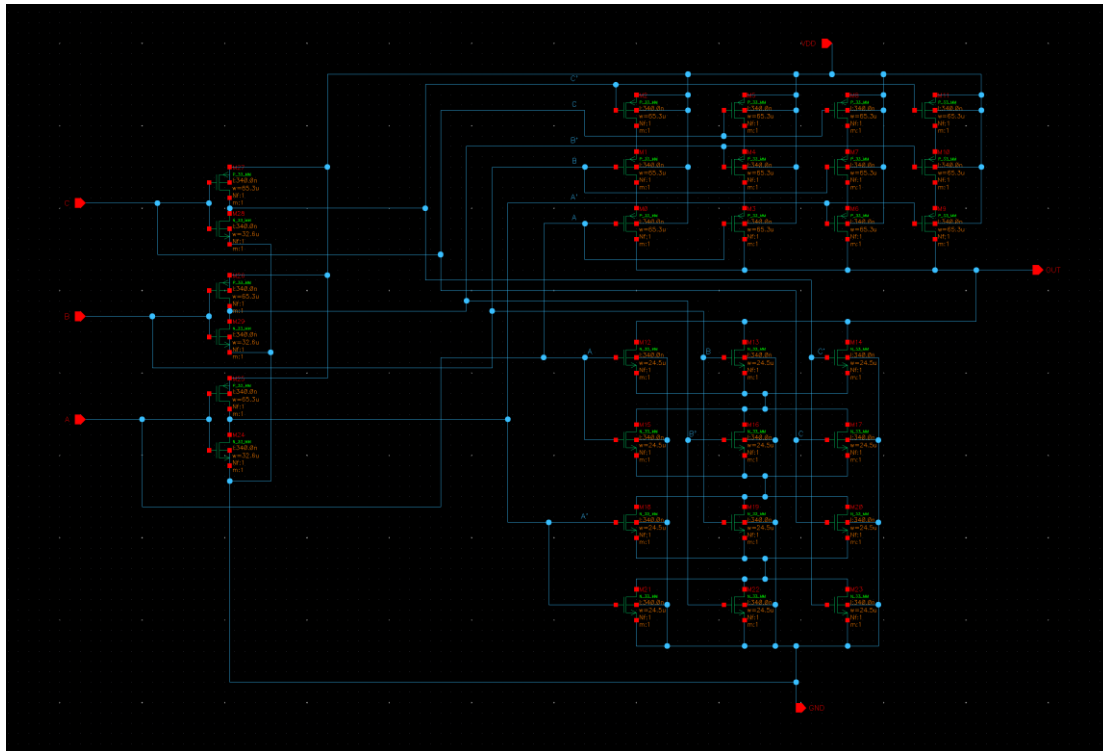


## ■PART1 XOR

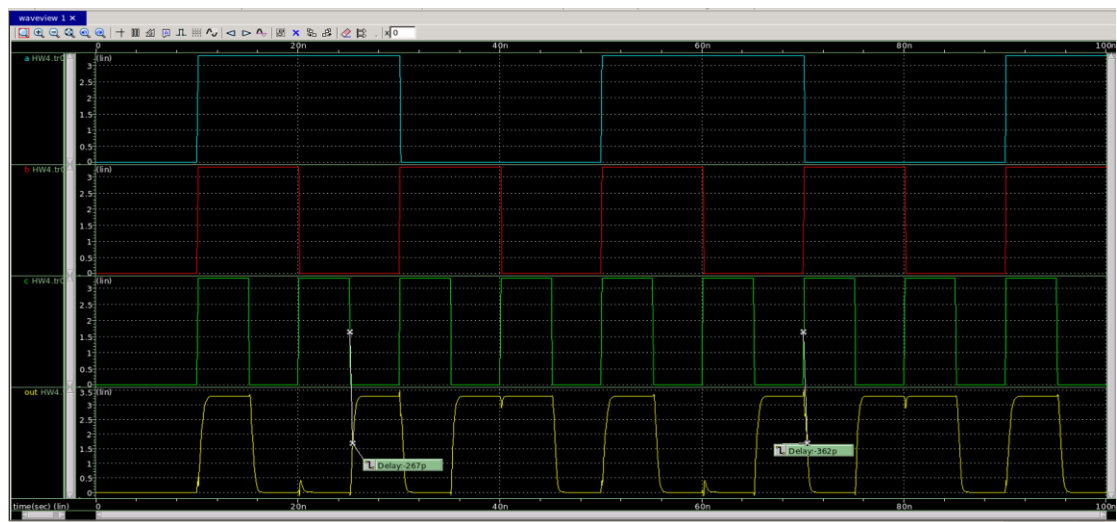
### 1. Schematic



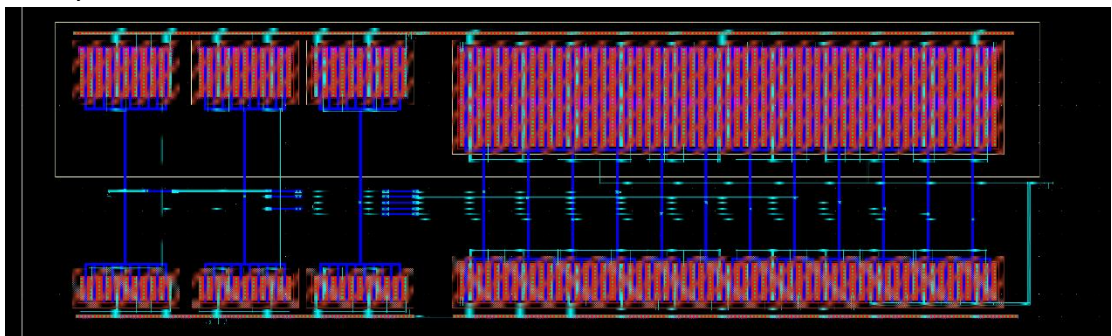
m0	p_33_mm	w=65.28e-6	l=340e-9
m1	p_33_mm	w=65.28e-6	l=340e-9
m2	p_33_mm	w=65.28e-6	l=340e-9
m3	p_33_mm	w=65.28e-6	l=340e-9
m4	p_33_mm	w=65.28e-6	l=340e-9
m5	p_33_mm	w=65.28e-6	l=340e-9
m6	p_33_mm	w=65.28e-6	l=340e-9
m7	p_33_mm	w=65.28e-6	l=340e-9
m8	p_33_mm	w=65.28e-6	l=340e-9
m9	p_33_mm	w=65.28e-6	l=340e-9
m10	p_33_mm	w=65.28e-6	l=340e-9
m11	p_33_mm	w=65.28e-6	l=340e-9
m12	n_33_mm	w=24.5e-6	l=340e-9
m13	n_33_mm	w=24.5e-6	l=340e-9
m14	n_33_mm	w=24.5e-6	l=340e-9
m15	n_33_mm	w=24.5e-6	l=340e-9
m16	n_33_mm	w=24.5e-6	l=340e-9
m17	n_33_mm	w=24.5e-6	l=340e-9
m18	n_33_mm	w=24.5e-6	l=340e-9
m19	n_33_mm	w=24.5e-6	l=340e-9

m20	n_33_mm	w=24.5e-6	l=340e-9
m21	n_33_mm	w=24.5e-6	l=340e-9
m22	n_33_mm	w=24.5e-6	l=340e-9
m23	n_33_mm	w=24.5e-6	l=340e-9
m24	n_33_mm	w=32.64e-6	l=340e-9
m25	p_33_mm	w=65.28e-6	l=340e-9
m26	p_33_mm	w=65.28e-6	l=340e-9
m27	p_33_mm	w=65.28e-6	l=340e-9
m28	n_33_mm	w=32.64e-6	l=340e-9
m29	n_33_mm	w=32.64e-6	l=340e-9

## 2. Waveform



## 3. layout



#### 4. DRC & ERC & LVS

##### A. DRC

Filter: Show All		XOR, 1017 Results (in 18 of 19 Checks)						
Check / Cell		1	2	3	4	5	6	7
✖ Check Off_Grid		39	40	41	42	43	44	45
✖ Check 4,29NOTICE		77	78	79	80	81	82	83
✖ Check 4,20F.NO_IND_M1		115	116	117	118	119	120	121
✖ Check 4,20G		153	154	155	156	157	158	159
✖ Check 4,22F.NO_IND_M2		191	192	193	194	195	196	197
✖ Check 4,22G		229	230	231	232	233	234	235
✖ Check 4,24F.NO_IND_M3		267	268	269	270	271	272	273
✖ Check 4,24G		305	306	307	308	309	310	311
✖ Check 4,26F.NO_IND_M4		343	344	345	346	347	348	349
✖ Check 4,26G		381	382	383	384	385	386	387
✖ Check 4,28F.NO_IND_M5		419	420	421	422	423	424	425
✖ Check 4,28G		457	458	459	460	461	462	463
✖ Check 4,31E.NO_IND_M6		495	496	497	498	499	500	501
✖ Check 4,31F		533	534	535	536	537	538	539
✖ Check 4,22C		571	572	573	574	575	576	577
✖ Check 4,24C		609	610	611	612	613	614	615
✖ Check 4,26C		647	648	649	650	651	652	653
✔ Check DENSITY_PRINT_FIL		685	686	687	688	689	690	691

##### B. LVS&ERC

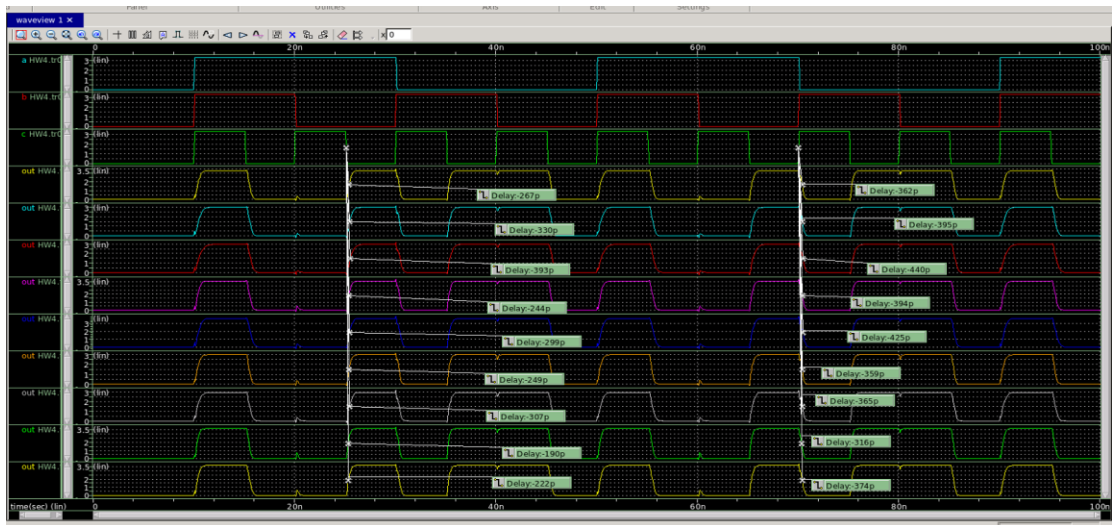
ApplicationsPlacesCalibre

Calibre - RVE v2019.4.16.9 : svdb XOR

zhWed 15:24

FileViewHighlightToolsWindowSetupHelp

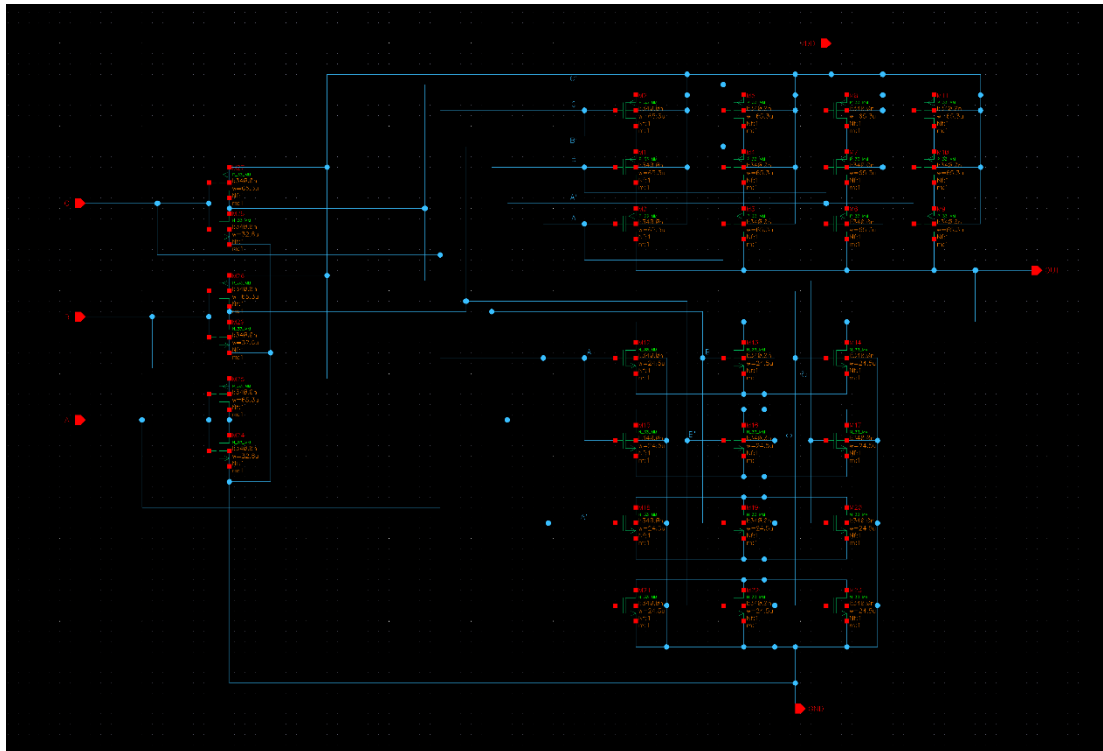
5. 8 corners waveform



mode	VDD	temp		rise	fall				
TT	3.3	25		267	362				
SS	2.97	0		330	395			24%	9%
SS	2.97	75		393	440			47%	22%
SS	3.63	0		244	394			9%	9%
SS	3.63	75		299	425			12%	17%
FF	2.97	0		249	359			7%	1%
FF	2.97	75		307	365			15%	1%
FF	3.63	0		190	316			29%	13%
FF	3.63	75		222	374			17%	3%

## ■PART2 XNOR

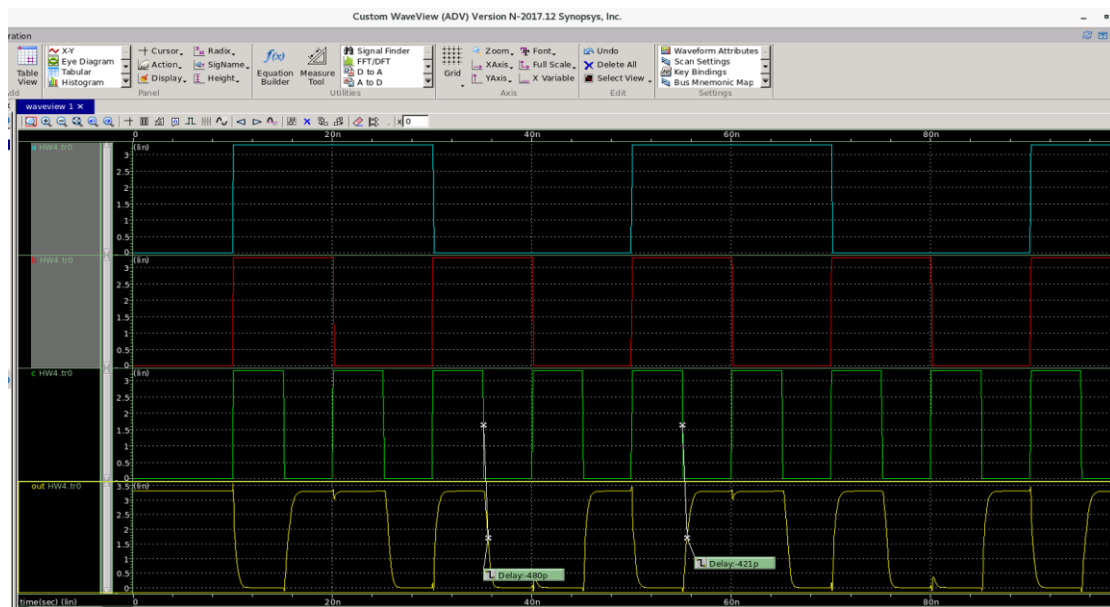
### 1. Schematic



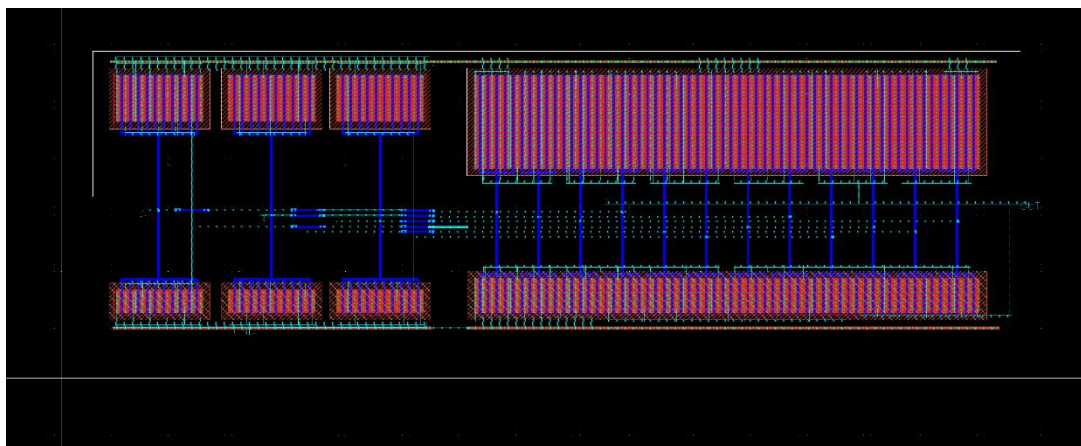
m0	p_33_mm	w=65.28e-6	l=340e-9
m1	p_33_mm	w=65.28e-6	l=340e-9
m2	p_33_mm	w=65.28e-6	l=340e-9
m3	p_33_mm	w=65.28e-6	l=340e-9
m4	p_33_mm	w=65.28e-6	l=340e-9
m5	p_33_mm	w=65.28e-6	l=340e-9
m6	p_33_mm	w=65.28e-6	l=340e-9
m7	p_33_mm	w=65.28e-6	l=340e-9
m8	p_33_mm	w=65.28e-6	l=340e-9
m9	p_33_mm	w=65.28e-6	l=340e-9
m10	p_33_mm	w=65.28e-6	l=340e-9
m11	p_33_mm	w=65.28e-6	l=340e-9
m12	n_33_mm	w=24.5e-6	l=340e-9
m13	n_33_mm	w=24.5e-6	l=340e-9
m14	n_33_mm	w=24.5e-6	l=340e-9
m15	n_33_mm	w=24.5e-6	l=340e-9
m16	n_33_mm	w=24.5e-6	l=340e-9
m17	n_33_mm	w=24.5e-6	l=340e-9
m18	n_33_mm	w=24.5e-6	l=340e-9
m19	n_33_mm	w=24.5e-6	l=340e-9

m20	n_33_mm	w=24.5e-6	l=340e-9
m21	n_33_mm	w=24.5e-6	l=340e-9
m22	n_33_mm	w=24.5e-6	l=340e-9
m23	n_33_mm	w=24.5e-6	l=340e-9
m24	n_33_mm	w=32.64e-6	l=340e-9
m25	p_33_mm	w=65.28e-6	l=340e-9
m26	p_33_mm	w=65.28e-6	l=340e-9
m27	p_33_mm	w=65.28e-6	l=340e-9
m28	n_33_mm	w=32.64e-6	l=340e-9
m29	n_33_mm	w=32.64e-6	l=340e-9

## 2. waveform



## 3. Layout



#### 4. DRC & ERC & LVS

##### A. DRC

Filter: Show All XNOR, 1017 Results (in 18 of 19 Checks)

1004

Check / Cell
Check Off_Grid
Check 4.29NOTICE
Check 4.20F.NO_IND_M1
Check 4.20G
Check 4.22F.NO_IND_M2
Check 4.22G
Check 4.24F.NO_IND_M3
Check 4.24G
Check 4.26F.NO_IND_M4
Check 4.26G
Check 4.28F.NO_IND_M5
Check 4.28G
Check 4.31E.NO_IND_M6
Check 4.31F
Check 4.22C
Check 4.24C
Check 4.26C
Check 4.28C
Check DENSITY_PRINT_FIL

##### B. LVS & ERC

Calibre - RVE v2019.4.16.9 : svdb XNOR

Results  
Extraction Results  
Conversion Results  
ERC  
ERC Results  
ERC Summary  
Reports  
1. Extraction Report  
2. LVS Report  
Rules  
2. Rules File  
View  
Info  
Finder  
Schematic  
Setup  
Options

Layout Cell / Type	Source Cell	Net	Instances	Parts
XNOR_01	XNOR	R_10	R_10	R_10

Cell: XNOR:Summary (Sheet)  
CELL COMPARISON RESULTS (TOP LEVEL)

\*\*\*\*\*  
\* CORRECT \*  
\*\*\*\*\*

LAYOUT CELL NAME: XNOR  
SOURCE CELL NAME: XNOR

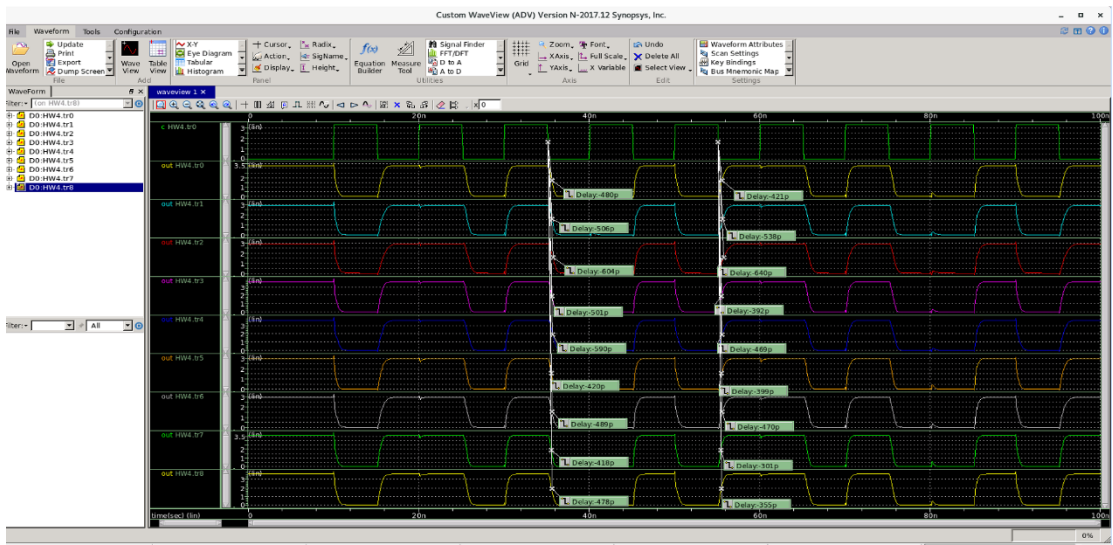
INITIAL NUMBERS OF OBJECTS

	Layout	Source	Component Type
Ports:	0	0	
Net:	20	20	
Instances:	30	30	00 (4 pins) 00 (4 pins)
Total Inst:	30	30	

NUMBERS OF OBJECTS AFTER TRANSFORMATION

	Layout	Source	Component Type
Ports:	0	0	
Net:	0	0	
Instances:	1	1	OPN_2_2_2_2 (15 pins) -Inst: 00 (4 pins) -Inst: 00 (4 pins)

5. 8 corners waveform



mode	VDD	temp		rise	fall				
TT	3.3	25		421	480				
SS	2.97	0		538	506		28%	5%	
SS	2.97	75		640	604		52%	26%	
SS	3.63	0		392	501		7%	4%	
SS	3.63	75		469	590		11%	23%	
FF	2.97	0		399	420		5%	13%	
FF	2.97	75		470	489		12%	2%	
FF	3.63	0		301	418		29%	13%	
FF	3.63	75		355	478		16%	0%	