SkyWater SKY130 PDK’s documentation!

Summary

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Q&A:

1-What is the pdk Content ?

❖ Libraries

- Creating New Libraries
- Primitive Library (Foundary Provided)
- Digital Standard Cell Library (Foundary Provided standard cell library ”SKY WATER” / Third Party Provided Digital Standard Cell Libraries)
- Build Space Libraries (Foundary Provided)
- IO and Periphery Libraries (SKY 130 / Third Party)

❖ File Types:

- Parmeterized cell generator
- Drc Deck / Lvs Deck
- Gds Generator
- Library Exchange Format Macros
- Timing Files
- Netlists
- Device Models
- Schematic / Schematic symbols
- Verilog Testbench
- Xspice / Parameterized Cell

2-How many layers does this technology has?

- 5

3-what is the devices that this technology supports?

- MIM Capacitor MiM Capacitor
- Varactors
- Vertical Parallel Plate (VPP) capacitors
- Diodes
- NMOS ESD FET
- 5.0V/10.5V NMOS FET
- 11V/16V NMOS FET
- 1.8V low-VT NMOS FET
- 1.8V NMOS FET
- 3.0V native NMOS FET
- 5.0V native NMOS FET
- 20V NMOS FET
- 20V isolated NMOS FET
- 20V native NMOS FET
- 20V NMOS zero-VT FET
- Bipolar (NPN)
- 5.0V/10.5V PMOS FET
- 10V/16V PMOS FET
- 1.8V high-VT PMOS FET
- 1.8V low-VT PMOS FET

- 1.8V PMOS FET
- 20V PMOS FET
- Bipolar (PNP)
- Generic Resistors
- P+ poly precision resistors
- P- poly precision resistors
- SONOS cells
- SRAM cells

4-what are the rule that are available in the drc?

- Antenna Rules

5- what is the usage of each layer and short description about each layer?

- Metal 1 : Power,Vdd,Vss
- Metal 2 : I/O ports
- Metal 3,4,5 : For large designs and decreasing chip resistance