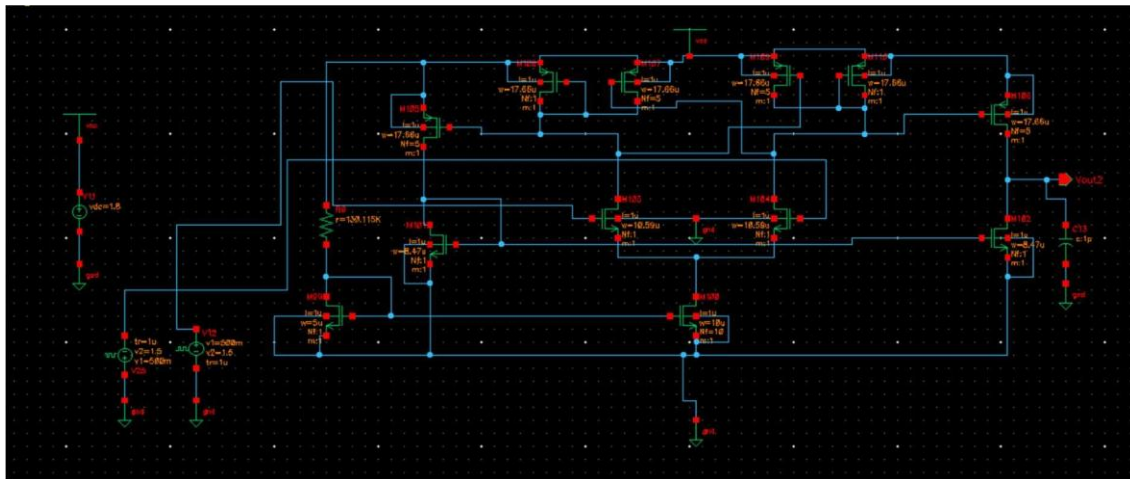


Comparator with hysteresis(Technology – UMC 180)

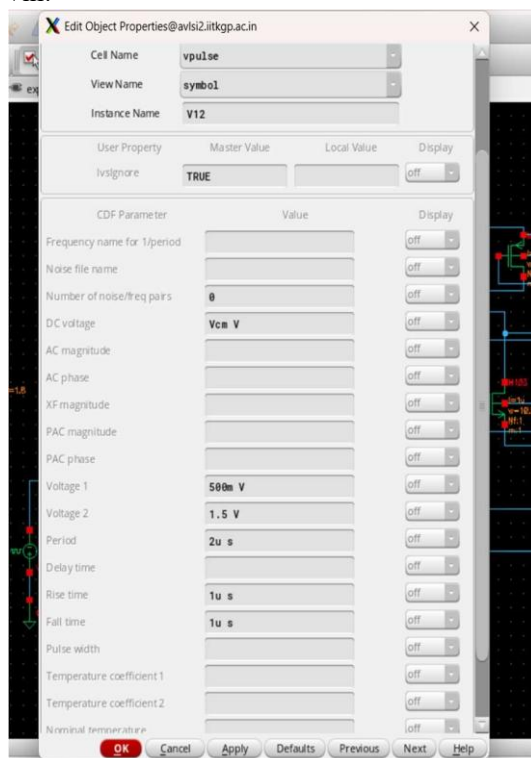
Schematic:



Plots:

Varying the common mode voltage Vcm

Vin:



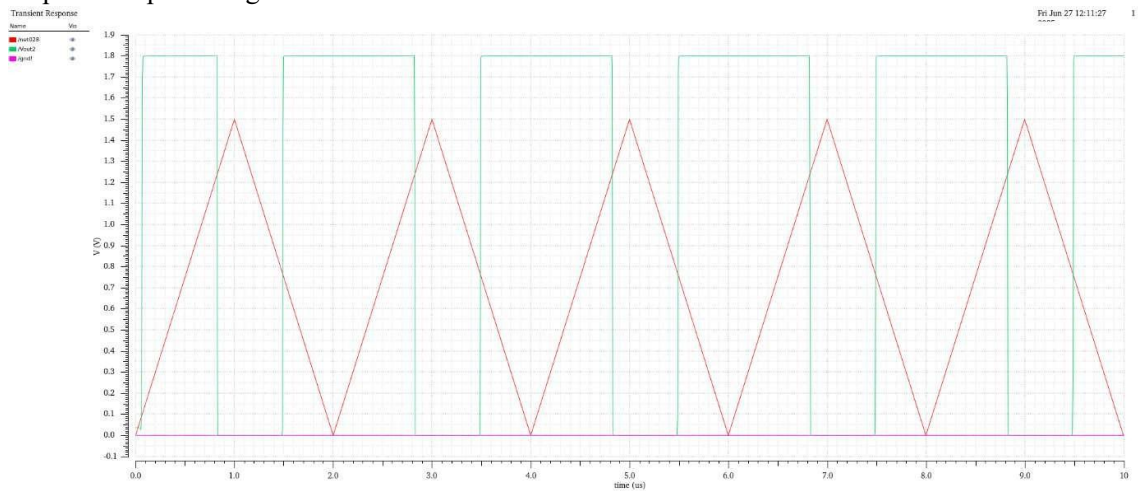
1.Simulating at 27oC, VDD = 1.8 V, and TT corner

Hysteresis plot:



$V_{hys} = 188.4303\text{mV}$ at 27 degree Celcius, TT corner, $V_{dd} = 1.8\text{V}$, $V_{cm} = 1\text{V}$

Output v/s input voltage:



2. Simulating at 125oC, VDD = 1.62 V, and SS corner, $V_{cm} = 1\text{V}$ Hysteresis

plot:



3. Simulating at -40°C , $V_{DD} = 1.98\text{ V}$, FF corner, $V_{cm} = 1\text{ V}$

Hysteresis plot:

