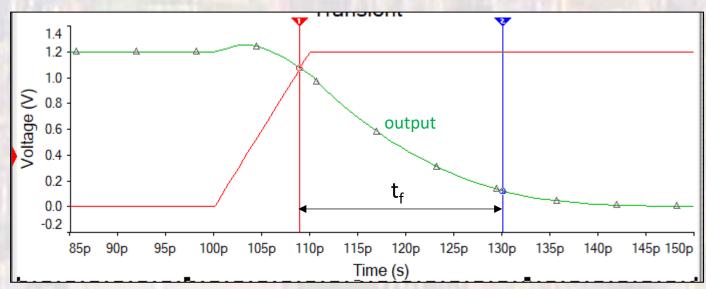
# Common Waveform Measurements

## Last modified 1/13/25

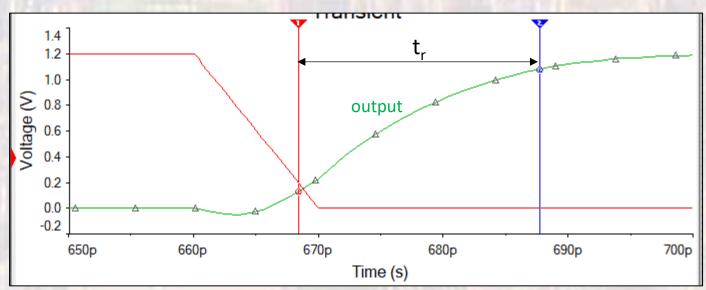
## Fall Time

- t<sub>f</sub>
  - t<sub>f</sub> measure from 90% of "high" value to 10% of "high" value
  - Intended to exclude any ripple or overshoot



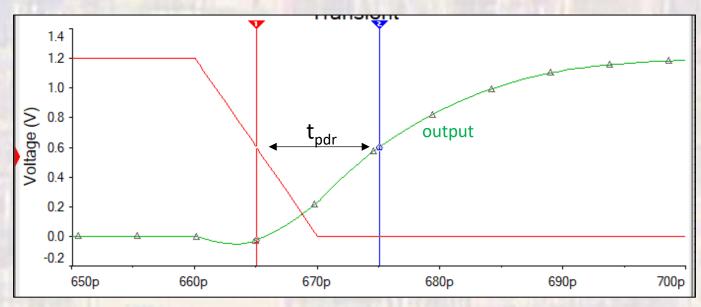
#### **Rise Time**

- t<sub>r</sub> measure from 10% of "high" value to 90% of "high" value
- Intended to exclude any ripple or overshoot



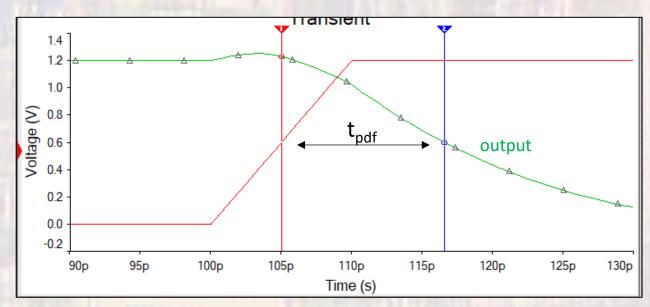
### **Propagation Delay - Rising**

- t<sub>pdr</sub>
  - t<sub>pdr</sub> measure from 50% of input "high" value to 50% of output "high" value on an output rising edge



## **Propagation Delay - Falling**

- t<sub>pdf</sub>
  - t<sub>pdf</sub> measure from 50% of input "high" value to 50% of output "high" value on an output falling edge



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