

Overview npn13g2v

- In previous releases low-frequency noise parameters included only in VBIC model
 - Parameter (kfn, afn) based on old measurement data (2011)
 - Q4/18 new 1/f noise measurement system installed (ProPlus)

Summary:

- Noise measurements performed on current qualification wafer
 - Operating points: $V_{BE}=0.7...0.85V$ (g2v), $V_{CE}=1V$, $f=1Hz...10kHz$
- Model parameters extracted for
 - npn13g2v: VBIC

Example: npn13g2v, Nx=4, El=5.0 μm

- Simulation with new VBIC parameters shows good agreement with measurement up to 0.825V
 - At 0.85V simulated S_{IB} reduces contrary to measurements! \rightarrow noise model not valid then

