

1 Comparison ADS/NGspice

In this document the ngspice HICUM/L2.4.3 model in ngspice is compared against ADS simulations. The modelcard is taken from the ngspice examples directory. This document is auto-generated using Pylatex. The shown f_T are calculated from simulated Y-parameters.

1.1 Example Modelcard Characteristics

First, the transfer characteristics and transit frequency as a function of I_C are shown:

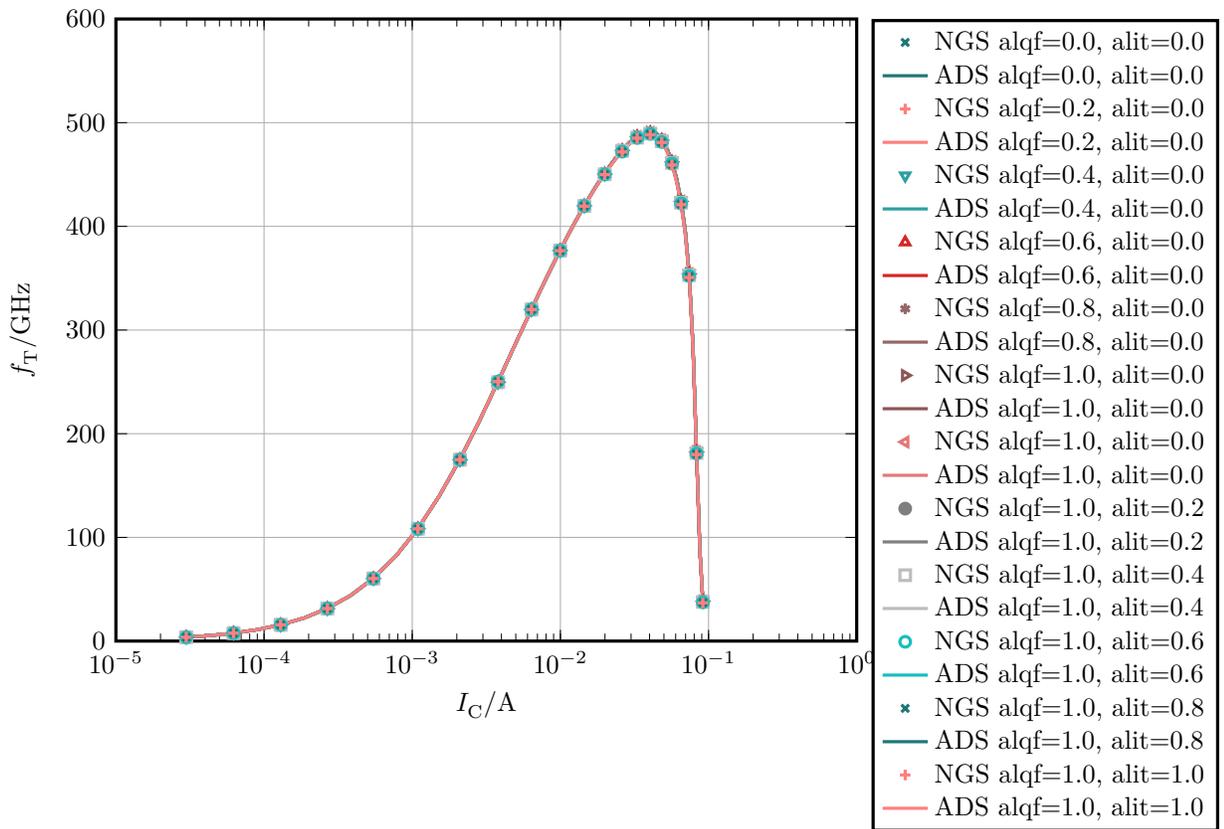


Figure 1: $f_T(VBE)$

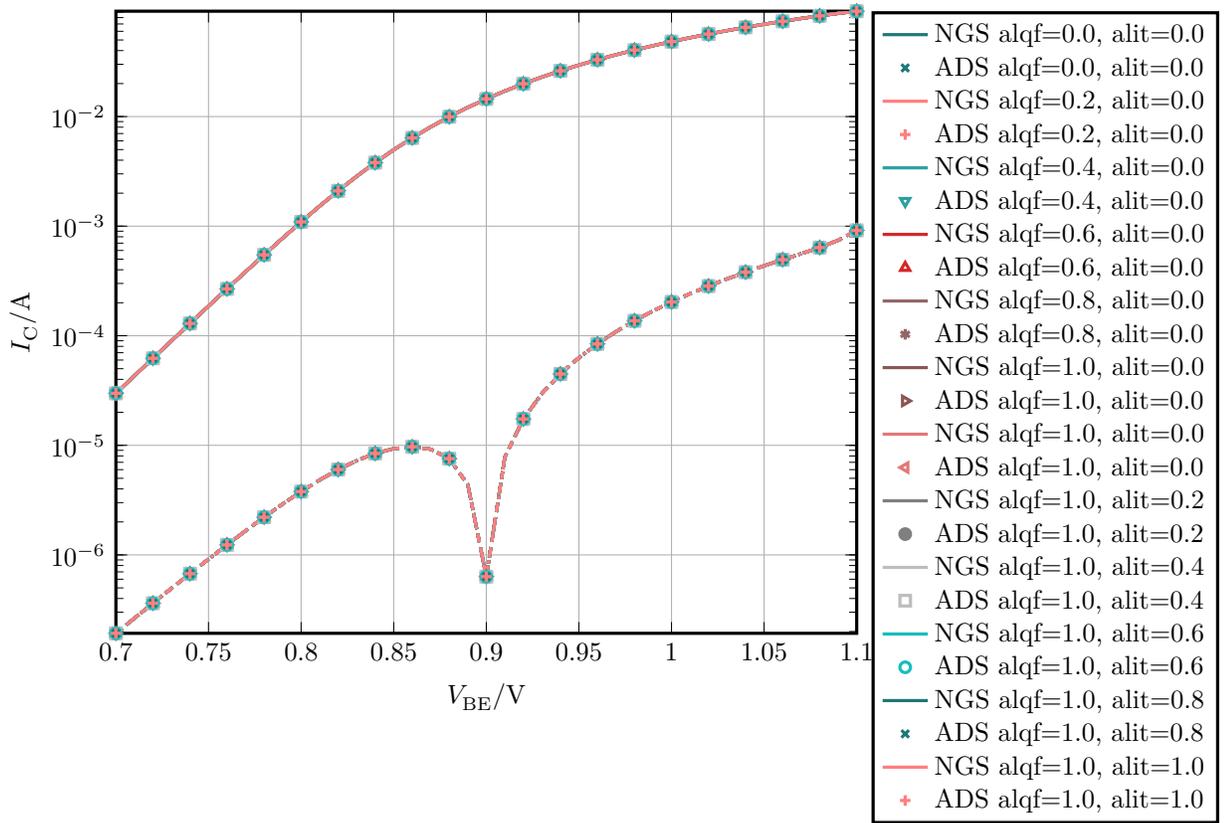


Figure 2: $I(V_{BE})$

1.2 Frequency Dependence Y21

Next, the frequency dependence of Y21 at peak ft are shown:

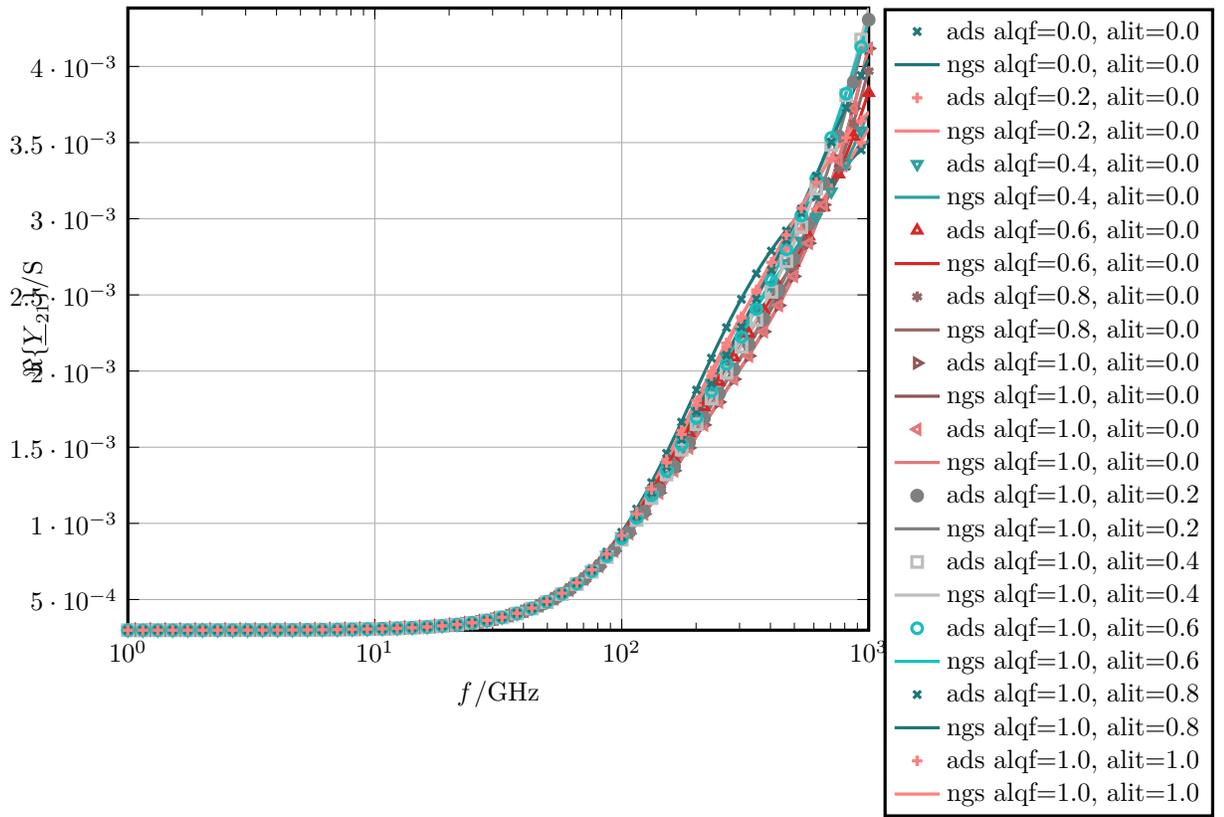


Figure 3: $\Re Y_{21}(f)$

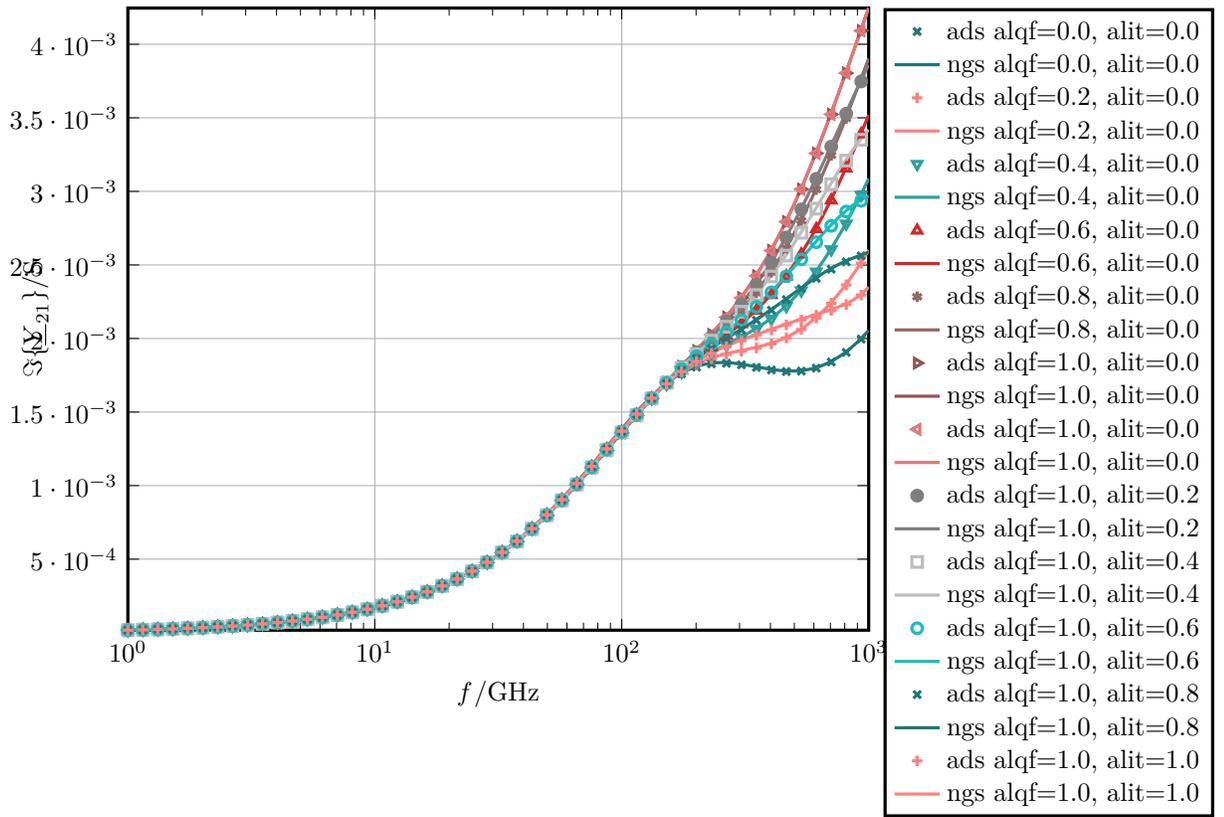


Figure 4: $\text{Im}Y_{21}(f)$

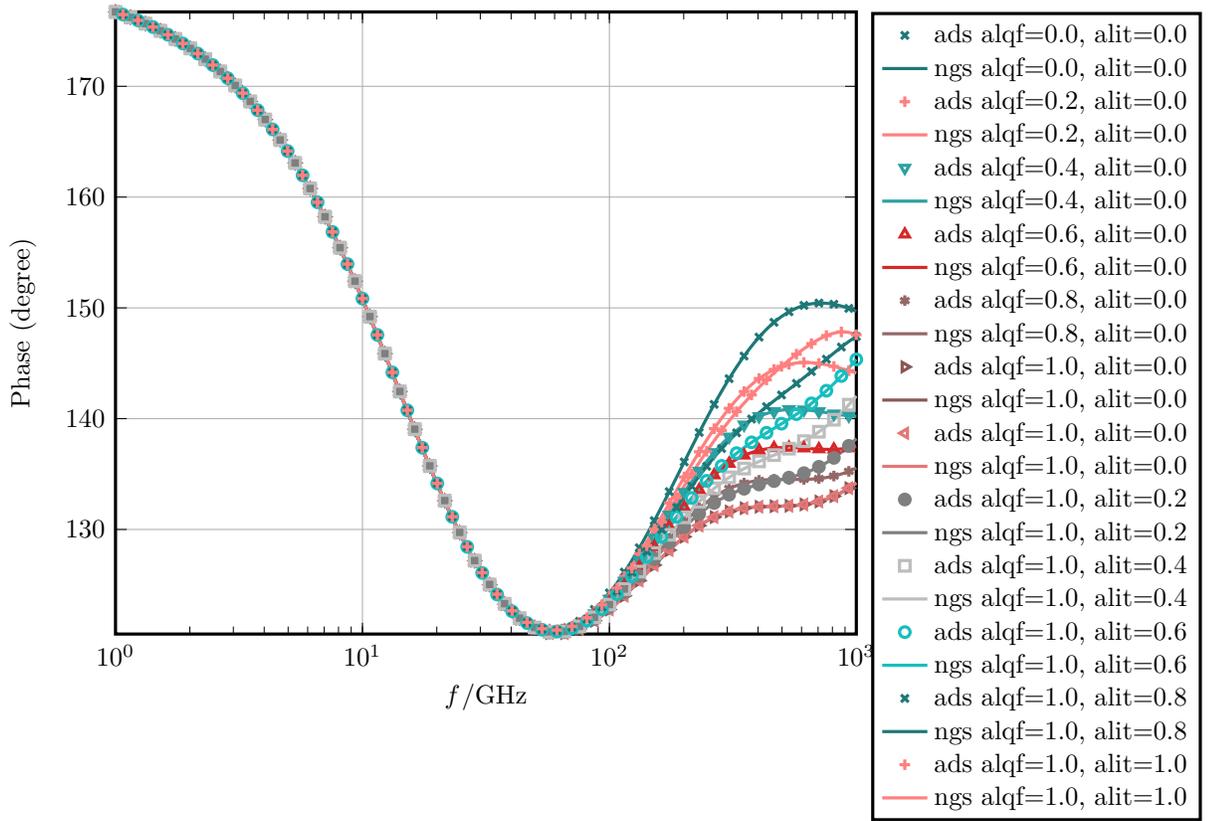


Figure 5: PhaseY21(f)

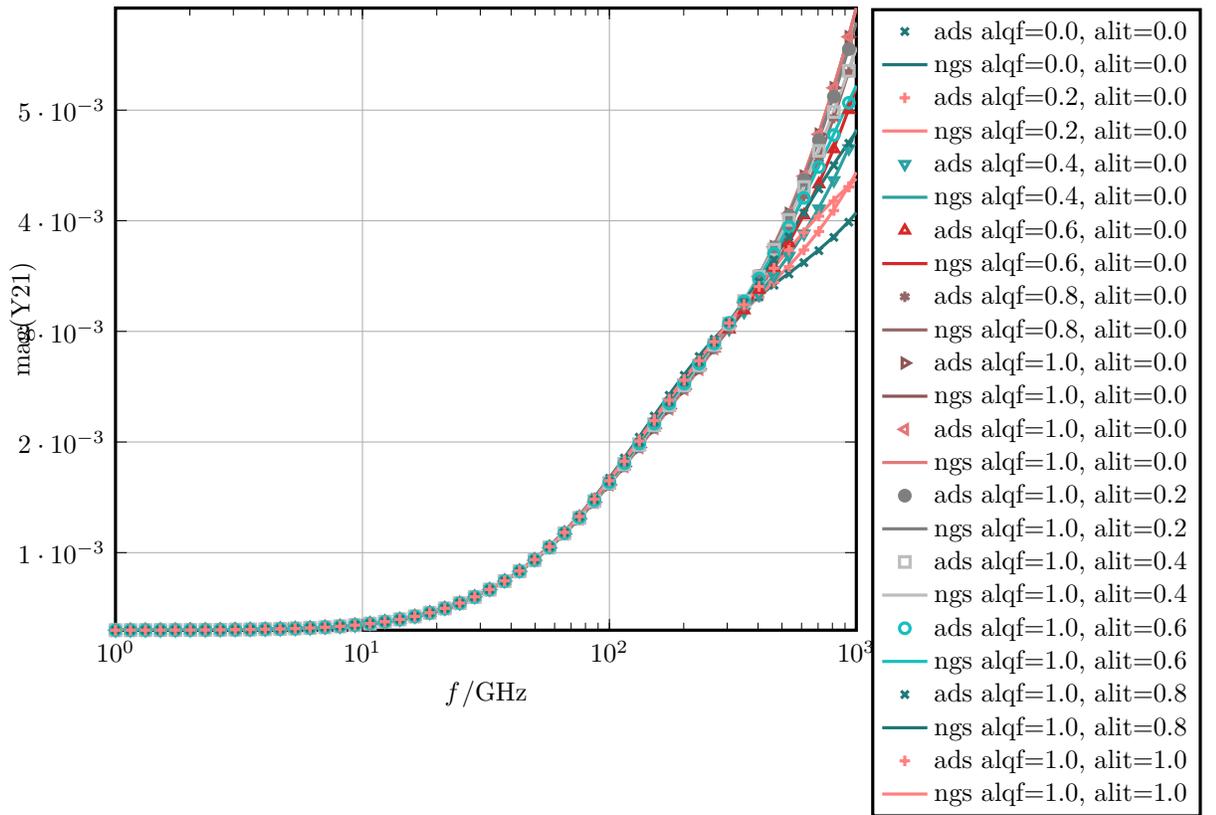


Figure 6: MagY21(f)