

AAST
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Sixth term
EC233: Electronic Circuits I
Year: 2004/2005
Sheet:6

Calculate the high frequency cut-off, f_H , for the 2N3904 transistor. Assume that a CE amplifier is used and that $\beta = 200$, $I_{CQ} = 10\text{mA}$, $R_B = 5\text{k}\Omega$, $R_s = 1\text{k}\Omega$, and $R_L = R_C = 1\text{k}\Omega$. Further assume that you have checked the data sheet and found out that $f_T = 0.25\text{GHz}$, and that $C_{OB} = 45\text{pF}$.