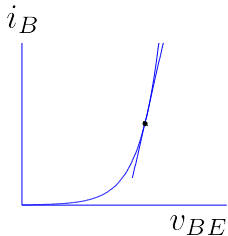


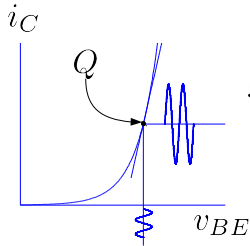
(ب)

$$r_{be} = \left. \frac{\partial i_B}{\partial v_{BE}} \right|_Q^{-1}$$

داخلی باریک  
اشاراتی مزاحمت



(ا)



$$g_m = \left. \frac{\partial i_C}{\partial v_{BE}} \right|_Q$$

باریک اشاراتی  
موصل-نما