This current is not $I_1$ due to $d$.

\[ d = \frac{W_{M_6}}{W_{M_4}} \]
Vbias

V_{pp}

V_{cm}

V_{cm}/2

Knob

Use a Triode device

Pull down

Large W to keep in triode

R_k

\[ R_T \approx \frac{1}{V_{aj} - V_{thr}} \]

\[ g_m = \frac{g_m}{1 + g_m R_T} \]
At high frequencies, "Cc" acts like a short.
ignore M5 diode

Ensure that

g_{mt} > g_{m8} + \text{ for the resistance}

\[ i_T = (g_{mt} - g_{m8}) \frac{v_T}{v_T} \]

\[ g_{mt} = g_{m8} \Rightarrow i_T = 0 \]

\[ R_{in} = \infty \]