

$$\begin{aligned}
 \Delta I &= (I_{C3-5}) - (I_{C4-6}) \\
 &= I_{C3} + I_{C5} - (I_{C4} + I_{C6}) \\
 &\Rightarrow (I_{C3} - I_{C6}) - (I_{C4} - I_{C5}) \\
 &\Rightarrow \boxed{I_{EE} \tanh(V_i / 2V_T)} \\
 &= \tanh(V_i / 2V_T) I_{EE}
 \end{aligned}$$

Diagrammatic representation of multiplier.

