$f_P = \frac{1}{2\pi Z_{in}(1+A_\nu)C_f}$

$\frac{v_{out}}{i_{in}}$

f

$R_{in}A_\nu$

E_c

E_{FE}

E_V

qV_{BE}

ΔE_G

E_{FB}

E_{FC}

n^+Si

p-$5Si_{1-x}Ge_x$

qV_{BC}

γ e^- e^+

l_1 l_2 l_3 l_4 l_5 l_6

10^2 10^3 10^4 10^5

(a) $[m_a, g_{aWW}] = [0.165, 1.8 \cdot 10^{-4}]$

(b) $[m_a, g_{aWW}] = [0.208, 1.0 \cdot 10^{-4}]$

(c) $[m_a, g_{aWW}] = [0.320, 3.2 \cdot 10^{-5}]$