

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

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

$$f$$

$$R_{in}A_{\nu}$$

$$E_c$$

$$E_{FE}$$

$$E_V$$

$$qV_{BE}$$

$$\Delta E_G$$

$$E_{FB}$$

$$E_{FC}$$

$$n^+Si$$

$$p\text{-}^5Si_{1-x}Ge_x$$

$$qV_{BC}$$

$$\gamma~e^-~e^+$$

$$l_1~l_2~l_3~l_4~l_5~l_6$$

$$10^2~10^3~10^4~10^5$$

$$(a)~[m_a,g_{aWW}]=[0.165,1.8\cdot10^{-4}]$$

$$(b)~[m_a,g_{aWW}]=[0.208,1.0\cdot10^{-4}]$$

$$(c)~[m_a,g_{aWW}]=[0.320,3.2\cdot10^{-5}]$$

$$\mathbf{DUT\ 0:}\ P_{\mathrm{density}}=0.08\,\mathrm{W/cm^2}\text{ - HV}=160\,\mathrm{V}$$

$$^{109}\mathbf{Cd}\text{ Source measurement}$$

$$\mathrm{Peak_1:}\ (51.66\pm0.03)\,\mathrm{mV}$$

$$\mathrm{Peak_2:}\ (57.98\pm0.10)\,\mathrm{mV}$$

$$P_{\mathrm{density}}=1.8\,\mathrm{W/cm^2}\text{ - }V_{th}=6\sigma_{\mathrm{V}}$$

CERN SPS test beam with 180 GeV/c pions

V_{ccA} $V_{dd-disc}$ V_{thr}