* 1dB compression point: $A_{in,1dB} = \sqrt{0.145 \left|\frac{\alpha_1}{\alpha_3}\right|}$

* 3rd intercept point: $A_{IIP3} = \sqrt{4/3 \left|\frac{\alpha_1}{\alpha_3}\right|}$

$$\therefore \frac{A_{IIP3}}{A_{in,1dB}} = \sqrt{\frac{4/3}{0.145}} = 3.0324$$

$$\therefore \underset{(dBm)}{P_{IIP3}} - \underset{(dBm)}{P_{in,1dB}} = 20\log(3.0324) = \underline{9.63571\ dB}$$