

Lec 24 -- Linearity Roundup

What are the four major types of distortion we have discussed, what expressions relate them to Taylor expansions of an amplifier, and what frequencies do they appear at?

Make a table listing distortion metrics, their definitions, expressions relating them to Taylor expansions of an amplifier, and their relations (in dB) to one another.

Draw a log-log plot of input power vs. tone power at an amplifier output and draw curves indicating the fundamental, the 2IM product and the 3IM product. Label, IP_2 , IIP_2 , OIP_2 , IP_3 , IIP_3 and OIP_3 on the plot

How do you calculate the power of second order distortion products given input power and IIP_2 ?

How do you calculate the power of third order distortion products given input power and IIP_3 ?

What is the effect of higher order distortion terms?