

Lecture 23 -- Distortion metrics and sources

What is harmonic distortion and what causes it?

How is distortion related to DC offsets?

What is gain compression and what causes it?

What is P_{-1dB} and what input voltage does it happen at in terms of the Taylor expansion of an amplifier?

What is a one tone non-linearity test?

Define HD2 and relate it to the input voltage applied to an amplifier

Define HD3 and relate it to the input voltage applied to an amplifier

What is a dBc?

What is THD? Relate it to HD2 and HD3

What is intermodulation? Under what conditions can you observe it?

What is a two tone non-linearity test? What is the relationship between the powers of the input tones?

Define IM2, relate it to the input power applied to an amplifier, and articulate the biggest issue it causes

Define IM3, relate it to the input power applied to an amplifier, and articulate the biggest issue it causes.