



When set to 0, you are assuming all the signal power falls in a single frequency bin

With a value of 0, you are referencing all signal measurements to  $\pm 1.0$  V (2 Vpp) or 0.707 V rms

The Total Harmonic Distortion will be computed using 14 *harmonics* of the fundamental frequency – it will not include any tonal components that are not harmonically related to the fundamental frequency by an integer

From this measurement, and knowing the Spectral Assistant chose the  $\approx 5$  MHz tone as the fundamental signal, you can determine your total power exclusive of the DC term since you know the power of the 5 MHz tone. As shown on page 2, I compute an rms voltage of 0.061 mVrms

From this measurement, the Spectral Assistant chose the  $\approx 5$  MHz tone as the fundamental signal...the THD will only include the power of the tones at 10 MHz, 15 MHz,... 14\*5 MHz

Reference: [https://community.cadence.com/cadence\\_technology\\_forums/f/mixed-signal-design/57725/spectrummeasurement-for-a-dc-signal](https://community.cadence.com/cadence_technology_forums/f/mixed-signal-design/57725/spectrummeasurement-for-a-dc-signal)

$$SINAD = \frac{SI(\text{signal power})}{NAD(\text{noise and distortion power})} = 10^{4.193/10}$$

$$= \frac{(0.707)^2 * 10^{\frac{-82.69}{10}}}{NAD}$$

$$NAD = \frac{(0.707)^2 * 10^{\frac{-82.69}{10}}}{10^{4.193/10}}$$

$$Total\ power = SI + NAD = (0.707)^2 * 10^{\frac{-82.69}{10}} \left[ 1 + \frac{1}{10^{4.193/10}} \right] V^2$$

$$= 3.7151E - 09 V^2$$

$$= 0.0610\ mV_{rms}$$