The inductance nonlinearity L(i) varying with current i may contribute to the THD at higher frequencies. The distinct peak in THD at 2kHz is caused by a nonlinear vibration of the cone and surround after break-up. Unfortunately, harmonic distortion measurement does not give a comprehensive picture of the large signal performance of loudspeaker systems. At least a second tone is required to generate intermodulation products which occur at difference and sum frequencies in all possible combinations of the excitation frequencies. Increasing the number of fundamental components in multi-tone stimulus will generate more and more intermodulation components spreading over the complete audio band. Contrary to the THD response in Fig. 9, the nonlinear force factor Bl(x) and the inductance L(x) THD generate significant intermodulation distortion at higher frequencies as illustrated in Fig. 10.

Thus, harmonic distortion measurements using a single test tone are not sufficient for assessing loudspeakers comprehensively and predicting the large signal performance for complex stimuli like music.