

# Harmonic and Intermodulation Performance of Mach-Zehnder Quadratic Electro-Optic

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## **Abstract:**

This paper discusses the large signal performance of Mach-Zehnder quadratic electro-optic intensity modulator. Simple, easy-to-evaluate algebraic expressions are obtained for the amplitudes of the fundamental, harmonic, and intermodulation components at the output of the modulator when excited by a multisinusoidal input signal. Special cases are considered and the feasibility of minimizing the amplitudes of the output harmonics and intermodulation products is explored.