

Theoretical Analysis of Intermodulation Distortion of Reflection-Type IMPATT Amplifiers

M. El-Gabaly and M.E. El-Shandwily. "Theoretical Analysis of Intermodulation Distortion of Reflection-Type IMPATT Amplifiers." 1984 Transactions on Microwave Theory and Techniques 32.4 (Apr. 1984 [T-MTT]): 394-399.

The basic equations for a reflection-type IMPATT amplifier are used to derive expressions for the output when the amplifier is driven by a multifrequency input signal. The third-order intermodulation distortion is expressed and graphically presented for various diode, circuit, and signal parameters. The results provide a guideline for designing amplifiers with minimum intermodulation distortion or prescribed distortion level.

 [Return to main document.](#)