# Abstracts

## Improvement of third-order intermodulation product of RF and microwave amplifiers by injection

*C.S. Aitchison, M. Mbabele, M.R. Moazzam, D. Budimir and F. Ali. "Improvement of third-order intermodulation product of RF and microwave amplifiers by injection." 2001 Transactions on Microwave Theory and Techniques 49.6 (Jun. 2001, Part II [T-MTT] (Special Issue on RF Power Amplification)): 1148-1154.*

This paper discusses the improvement in the third-order intermodulation product (IM3) performance obtainable from RF and microwave amplifiers by two alternative injection techniques. The first is the addition to the amplifier input of the second harmonics of the input spectrum and the second is the addition to the amplifier input of the difference frequencies between the spectral components of the input signal. Both techniques are considered in theory, by simulation and in practice. Both techniques give useful improvements in two-tone IM3 performance. The second harmonic technique reduced the IM3 level by 43 dB in an amplifier at 835 MHz. The difference-frequency technique gave a reduction of 48 dB in an amplifier at 880 MHz. The difference-frequency technique also gives a greater improvement for complex spectra signals.

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