Abstracts

Comparison of different adaptation algorithms for adaptive digital predistortion based on EDGE standard

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Radio Frequency (RF) power amplifiers require linearization in order to reduce adjacent channel intermodulation (IM) distortion. Adaptive digital predistortion is one promising linearization technique that can be employed. There are, however, a lot of adaptation algorithms involved with this technique, namely polynomial and look-up table. This paper assesses four methods, which are the combination of least square curve fitting and least mean square (polynomial) and also polar, secant and linear (look-up table). Their convergence time and mean magnitude of error improvement achieved by using the standard set by EDGE system are compared.

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