Abstracts

A statistical relationship for power spectral regrowth in digital cellular radio

A method is presented for calculating the spectral regrowth generated by a digitally modulated carrier passed through a nonlinear microwave circuit. Spectral regrowth is calculated from the probability density function (pdf) of the modulation amplitude and a complex power series nonlinear model based on measured AM-AM and AM-PM data of a nonlinear device. Calculation of spectral regrowth allows efficient evaluation of the impact of modulation format on spectral regrowth.

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