



STUDY AND CONSTRUCTION ON MEMORYLESS NONLINEAR MODEL OF DOHERTY AMPLIFIER

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Abstract- OFDM technology has become the core technology of DTMB system. The high Doherty power amplifier can effectively improve the peak-average power ratio of OFDM system, but with poor linear performance. This paper starts with improving linear performance of Doherty power amplifier, analyzes the nonlinear model of power amplifier, presents a construction method of nonlinear performance model of Doherty power amplifier, gets the corresponding nonlinear performance curve, and then presents a design of pre-distorter which can improve system linear performance. The nonlinear performance curve is used to do the simulation. The result shows that the system linear performance is improved greatly.

Index terms: Doherty power amplifier, nonlinear, nonlinear model, pre-distortion, linearization