

عنوان مقاله:

Improving the Performance in Delta Sigma Modulator Transmitter

محل انتشار:

هشتمین کنگره ملی تازه های مهندسی برق و کامپیوتر ایران (سال: 1400)

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خلاصه مقاله:

One of the major drawbacks in using delta sigma modulator (DSM)-transmitters is a large amount of quantization noise at the output of DSM which results on low efficiency for transmitter. In this paper the efficiency of DSM-transmitter is improved by reducing quantization noise from the DSM output signal while the signal to noise and distortion ratio (SNDR) is maintained. Simulation results show that by this technique and for 1.92 MHz long term evolution (LTE) input signal with oversampling ratio (OSR) of 16, the coding efficiency (CE) of DSM is improved from 9.7% to 23% while the SNDR is around 41dB.

کلمات کلیدی:

(Switch mode power amplifier (SMPA), Delta sigma modulator (DSM)

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