

Performance of QDPSK signals with postdetection equal gain diversity combining in arbitrarily correlated Nakagami-m fading channels

Murad Abusubaih , Ibrahim Ghareeb

murads@ppu.edu

Abstract

This letter derives a bit-error probability (BEP) expression for quadrature differential phase-shift keying (QDPSK) signals with post-detection equal gain combining (EGC) in additive white Gaussian noise and slow frequency-nonsselective arbitrarily correlated Nakagami-m fading channels. Unlike previous work, the effects of arbitrary values of fading severity parameter m and the arbitrary correlation between the L diversity channels are considered. The derived expression can be easily computed via numerical integration routines, and hence, can be usefully exploited in the performance evaluation of digital mobile radio systems.