

By Using of LCR and AFD Criteria for Studying the Dual Branch SC Schemes in Specified Fading Channels

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ABSTRACT

In this paper we proposed the results of average LCR (level crossing rate) and AFD (average fading duration) criterions applied to evaluate the performance of dual-branch SC (selection combining) reception in the specified fading channels characterized as statistical distributions with correlated-Rayleigh and correlated-Ricemodels. Moreover, in order to unify and clarify the criterions of performance formulas with average LCR and AFD for SC diversity over different kinds of fadingmodels, include such as Rayleigh, Rice, Nakagami-m, and Weibull distributions etc., almost all of the ever researched and published results from discussing about the LCR and AFD of SC diversity are comprehensively collected in this report. On the otherhand, for the purpose of comparison, there are a large number of LCR and AFD performance formulas for SC diversity and the generalized fading statistic models are extracted and tabulated together, in which the cases of correlated and independent proprieties between diversity branches are taken into consideration too (some of the formulas are illustrated by the assumption of dual-branch SC diversity).

Keywords : SC reception、LCR、AFD、Rayleigh、Rice、Weibull、Nakagami-m distributed.

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