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On the epsilon-entropy of one class of ellipsoids in a Hamming space. (English. Russian original)

[Zbl 1027.94003](#)

Probl. Inf. Transm. 38, No. 2, 113-125 (2002); translation from Probl. Peredachi Inf. 38, No. 2, 19-32 (2002).

Summary: The asymptotic behavior of the ε -entropy of ellipsoids in an n -dimensional Hamming space whose coefficients take only two different values is investigated as $n \rightarrow \infty$. Explicit expressions for the main terms of the asymptotic expansion of ε -entropy of such ellipsoids are obtained under various relations between ε and parameters that define these ellipsoids. See also [Zbl 1027.94002](#).

MSC:

[94A17](#) Measures of information, entropy

[11H06](#) Lattices and convex bodies (number-theoretic aspects)

[94B75](#) Applications of the theory of convex sets and geometry of numbers (covering radius, etc.) to coding theory

Cited in 1 Review

Keywords:

covering codes; epsilon entropy; ellipsoids; Hamming space

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