一种快速计算z_{p^k}上码字的深度的算法

朱士信 童宏玺
（合肥工业大学应用数学系，合肥，230009）

摘要：码字深度是研究码字复杂性的一个重要工具，文献[1]和[2]分别给出了域F_2和域F_q上码字的深度的快速计算方法，本文定义了环Z_{p^k}上码字的深度，给出了一种快速计算环Z_{p^k}上码字的深度的算法。

关键词：环Z_{p^k}；码；码字的深度；码的深度分布。

中国分类号：TN911.22

A Fast Algorithm for Calculating the Depth of a Codeword on Ring Z_{p^k}

Zhu shixin, Tong Hongxi
(Department of Applied Mathematics, Hefei University of Techmology, Hefei, 230009)

Abstract: The depth of a codeword is an important tool for studing complexity of a codeword. Fast algorithms for calculating the depth of a codeword over field F_2 and F_q are separately given in [1] and [2]. In this paper, we define the depth of a codeword over Ring Z_{p^k}, and give a fast algorithm for calculating the depth of a codeword over ring Z_{p^k}.

Key words: Ring Z_{p^k}; Code; Depth of a codeword; Depth distribution of a code.