■ 论文摘要

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三元素集合中的自封闭加法与2^n系列伪随机信号编码

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摘　要：建立-1，0，1三元集合中的自封闭加法和2^n系列伪随机信号编码原理，据此得出包含任意个主频的随机信号。研究结果表明：各主频的振幅均匀，在对数坐标中等距离分布；2^n系列伪随机信号是地球物理探测、仪器测试、频率域雷达等的理想信号。

关键字：三元素集合；自封闭加法；2^n系列伪随机信号

Closed addition in a three-element set and 2^n sequence pseudo-random signal coding

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Abstract: The closed addition rules in three-element (-1, 0, 1) set and the 2^n sequence pseudo-random signal coding principles were established, from which the pseudo-random signals with any number of main frequencies were generated and characterized by similar amplitude and equal distance distribution in log coordinate for these main frequencies. The results show that the 2^n sequence pseudo-random signal is an ideal one for geophysical prospecting, equipment testing and frequency domain radar.

Key words:three-element set; closed addition; 2^n sequence pseudo-random signal