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**ABOUT FEATURES OF PATTERN GENERATOR SYNTHESIS WITH WEIGHTED TRANSITIONS SUMMATION**

Classical sum codes (Berger codes) and their modifications are often used when building reliable discrete systems and solving a task of technical diagnostics. The sum code of weighted transitions is one of such modifications. This article offers a method of generator synthesis (coder) of place value of its check vectors based on properties of sum codes with weighted transitions. We described a way of building generator that can control its technical condition and use self-dual Boolean functions.

**Keywords:** Berger code; code with summation of weighted transitions; generator; decomposition of functions by variables; multiplexer; self-dual function; self-dual function check.

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