

New Type of Semiconductor Storage Microcircuit

1. A design of a new type of a semiconductor storage is offered. The present design can be implemented in challenging developments of computer storage chips - permanent and operating storage systems. The new technology allows to decrease several times an average time of access to general matrix memory with saving of challenge signals standard parameters and reading of information.

2. Increase of response speed is achieved owing to possibility of independent address to the general memory field of the microcircuit simultaneously via eight input ports and independent reading of information via eight input buses. As this takes place, in addition to increase of response speed procedure of control is simplified, because creation of priority scheme in appearance of conflict situations is unnecessary.

3. The present work is developed to creation of an electric circuit of the storage system. Simulation of the system is carried out with the aim of checking of working capacity of the technical decision and estimation of time characteristics. As a result of it a circuit of the basic modulus of the storage system is developed, on the basis of which a memory chip with any volume of information can be created, which also has an independent number of address ports and output ones (up to 8). With the same memory volume of the microcircuits of the new type compared to the ordinary structure average time of memory access is decreased more than by four times, although duration of one access cycle (request-reading, request-recording) is increased by 10-15%.

4. The main technical advantage of the new type of storage chips could be expected when they are used in the structure of highly productive computation complexes with a big amount of conflict situations.

5. The technical decision of the storage system is protected by a patent in 1999.