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Title

Josephson spin valve for cryogenic memory

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The invention relates to the field of design of base elements for novel supercomputers, but more specifically - to the construction and application of extra low energy consuming switching elements.

It is elaborated Josephson spin valve with a weak link in form of a periodic structure composed from ferromagnetic (F) layers spaced by thin superconductor layers (S).

Description

EN

Applications: the utilization of the competition and coexistence of

superconducting (S) and ferromagnetic (F) correlations in constructed Josephson spin valve provide an increase in the performance and degree of integration of cryogenic memory storage devices and artificial synaptic elements for design of superconducting non-von Neumann computers, such as quantum computers and neuromorphic systems.